



## **TRWC Board of Directors Meeting**

March 3rd, 2016 - 9AM  
Phoenix-Mesa Gateway Airport (PMGA)  
Administration Building, Board Room  
5835 S. Sossaman Road  
Mesa, Arizona 85212

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. There is a time limit of three minutes for comments.

### **Agenda**

#### 1) Call to Order & Opening Comments

- a. Materials & Sign-in Sheet
- b. Speaker Cards
- c. Audio Recording
- d. Fort McDowell Yavapai Nation Welcome

#### 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 turn it in to the Executive Director 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

October 26th, 2015 TRWC Board Meeting Minutes

#### 4) Discussion and Possible Action on Committee & Working Group Updates

- a. Executive Committee Update - Bob Badgett (Co-chair)
  - Recognition of outgoing Executive Committee Co-chair Dave Hagar
  - Introduction to new Executive Committee Co-chair Bill Peters
  - Overview of recent activity
- b. User Group Update - Dale Crogan (Chairman)
- c. Governance Working Group - Gary Bradbury & Dale Shaw

#### 5) Discussion and Possible Action on Recommended 2016/2017 TRWC Budget - Dale Shaw

- a. TRWC 2016-2017 Budget Presentation - Sherry McGlade & Randy Thompson
- b. TRWC 2016-2017 Budget Adoption Consideration (\$2,748,953)

6) Discussion and Possible Action on Network Administrator Updates:

- a. Current Fiscal Year Budget & Finance Overview - Sherry McGlade
- b. Network Updates & Performance Overview - Randy Thompson
- c. Fire Hazard Zone Communications System Project Update (VHF) - Motorola, Norm Folger

7) Next TRWC Board Meeting(s):

- March 29, 2016, 9:00 a.m. (if necessary) - Teleconference
- June 9, 2016, 9:00 a.m. - PMGA
- September 29, 2016, 9:00 a.m. - PMGA
- December 15, 2016, 9:00 a.m. - PMGA

8) Adjournment

## **TRWC Board of Directors Meeting**

October 26, 2015 at 11:00 a.m. via teleconference

Public access at: 50 E Civic Center, Room 233

Gilbert, AZ 85296

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). There is a time limit of three minutes for comments.

### **Directors and Staff Attendees**

John Kross, Gary Bradbury, John Pombier, Dale Shaw, Marc Skocypec, Randy Thompson, Bill Anger, Sherry McGlade, and Melanie Humphries.

### **Minutes**

#### 1) Call to Order and Opening Comments – Chairman Kross

- a. Roll call, Materials and Sign-in Sheet
- b. Speaker Cards
- c. Audio recording

Chairman Kross called the meeting to order and Dale Shaw conducted a roll call. Once a quorum was present for the meeting, Chairman Kross welcomed the attendees, provided instruction on the process for public comment, and reminded participants the meeting audio is recorded.

#### 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 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.

No Public Comment requests were received.

#### 3) Discussion and Possible Action on Board Meeting Minutes – Chairman Kross

September 22, 2015 TRWC Board Meeting Minutes

Bill Anger asked to make amendments to the meeting minutes. On page 2, in the paragraph that starts with "John Pombier", the phrase "as amended identifying the

attendees” goes after the word “minutes” and before the word “and”. Mr. Anger explains the next amendments are on page 7 in the first paragraph and then the next paragraph on that same page. (Please note: The amended paragraphs are on page 6, and include the next to last and the last paragraphs on that page). In the next to last paragraph on page 6, “the authority” should be “their authority” and the phrase “they could have” should be deleted. This paragraph starts with “Bill Anger” and should read: “Bill Anger stated the general answer is if Verizon is going beyond the scope of their authority a temporary restraining order or a preliminary injunction could stop them.” In the last paragraph on page 6, a “j” needs to be added between the “n” and “u” to correctly spell the word “injunction”.

John Pombier motioned to approve the 09/22/15 TRWC Board Meeting Minutes with the amendments as presented by Mr. Anger and Gary Bradbury seconded. All were in favor; the motion passed.

4) Discussion and Action on Chairman Election – Dale Shaw

Election and Chairman position for a new 2-year term

Dale Shaw explained there is a new Chairman term that will be commencing in early November. Mr. Shaw solicited nominations or interest from the Board. All the nominations received were for the current Chair, Mr. John Kross from Queen Creek.

Gary Bradbury motioned to nominate John Kross to continue as the Board Chair for the TRWC and John Pombier seconded. All were in favor; the motion passed.

5) Discussion and Action on Partner Requests – Dale Shaw

a. Fort McDowell Yavapai Nation Membership Approval

Dale Shaw explained, as discussed at the last Board meeting, the Fort McDowell Yavapai Nation has applied for consideration for membership with the TRWC. During the last meeting, Mr. Shaw outlined some of the basic items that are included as part of the process of admission, which are covered in more detail in the materials provided.

Mr. Shaw explained an amendment has been made to the existing Intergovernmental Agreement (IGA) to add them as a member and this has been forwarded to everyone’s legal departments for review. As of the date of this meeting, Mr. Shaw has heard from all agencies except the City of Apache Junction and feels comfortable that an amendment exists that is acceptable, although there is still one agency to hear back from.

Chairman Kross asked if the final IGA's would be sent out to the member boards and councils within a couple of weeks for ratification by the respective boards and councils.

Mr. Shaw explained that assuming Fort McDowell is in a position to have their governing board approve moving forward, in concert with the action the TRWC Board will be taking today, and assuming it would be affirmative, then a clean version of the amendment will be immediately provided for processing with each respective agency. Mr. Shaw will provide this to the Board members so they can take whatever steps within their organization for execution.

Chairman Kross wanted to be certain that they will be waiting to see something from Mr. Shaw before their individual boards take further action.

Mr. Shaw explained he will give the official package which will probably be the Board report as a sample as well as the actual amendment, and the Board members can move forward individually at that point.

John Pombier motioned to approve the admission of the Fort McDowell Yavapai Nation to the TRWC as a member subject to the execution of the IGA and any other related agreements and Jerry Ward seconded. The motion passed unanimously.

b. AMR Associate Membership Request – Dale Shaw

Chairman Kross referred to the brief staff report and letter as provided in the materials.

Dale Shaw explained AMR would be added as an associate member, very much like Southwest Ambulance previously. This would position AMR to use the network in the performance of their duties under contract with member agencies in the TRWC. AMR is in the process of working with some of the TRWC members to provide ambulance services or medical response. There is a template, and with the Board's direction, an agreement will be executed with AMR.

Gary Bradbury motioned to approve and Marc Skocypec seconded. The motion passed.

6) Discussion and Possible Action on Network Administrator Updates:

Verizon Testing Update – Randy Thompson

Randy Thompson provided an update from the discussion that took place at the September 22<sup>nd</sup> Board meeting regarding Verizon's plan to do testing that might interfere with the communications used by the members of the TRWC. After that meeting, and with input from the Board, Bill Anger drafted two letters. One letter was sent to the Verizon test engineer who sent the notice that Verizon was planning to begin testing in mid-October and into November. The other letter was sent to the Chairman of the Federal Communications Commission (FCC) with a copy to the Chief Executive Office of Verizon Communications. In working with the City of Mesa Government Relations Deputy City Manager, a meeting was arranged and held with Verizon Communications on October 12<sup>th</sup>. At that time, Verizon announced they were not planning to do the testing they had proposed anywhere in Arizona. Their plans are not clear at this time, as far as where they may do any of this testing. Subsequent to that, Dale Shaw received an e-mail from the FCC that since Verizon was planning to discontinue their plan--not do any testing in Gilbert—that they were going to cancel the special temporary authority experimental license that had been granted. For now, there are not foreseen concerns with Verizon and that testing, and the letters and other actions that were going on at the time were effective in getting people's attention. Mr. Thompson said what they were actually asking for was some modification in their testing plans, but having Verizon decide they were not going to do the testing certainly will avoid the issue of any possible interference.

Mr. Kross asked if there was any idea if Verizon was going to pursue testing in the future—if there has been any indication to us.

Mr. Thompson explained that Verizon was not forthcoming where they might do this testing. In the meeting on October 12<sup>th</sup>, they pointed out to Verizon that the National Institute of Standards and Technology has a lab in Boulder, Colorado where they do this type of work. Verizon was encouraged to go that route or follow a similar path for future testing. It was also pointed out to Verizon that had they approached the TRWC in a different manner about what they were intending to do, we would have worked with them earlier on so we could have avoided some of the steps we had to take. Mr. Thompson said he thinks Verizon will be working on changing the FCC rules to try to permit the higher power levels they are talking about doing. He said we will be on the alert for that and most likely file objections if that were to come up because of some of the research and prior FCC filings on this topic, but will deal with those at the time.

Chairman Kross asked that the Board be kept posted on any changes to the rules that requires some action or additional action by the Board.

7) Next Meeting(s):

TRWC Board Meeting – December 9, 2015 9:00 a.m. (PMGA)

8) Adjournment – Chairman Kross

Chairman Kross thanked everyone and adjourned the meeting.



# Governance Working Group

Progress Update

March 2016

# 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.

# Same Goals - New Solution

- The GWG will develop a “Master IGA” which will incorporate high level principles to maintain or establish regional system(s) compatibility, cooperation and inter-operational and operational roaming.
- A “coordinating council” will be established to ensure the parties to the Master IGA demonstrate accountability and progress.
- A phased approach will be utilized as follows:
  1. Develop and approve the Master IGA
  2. Upon approval of the Master IGA, develop working group structure, participation, schedules and goals
- Other regional system participation in the Master IGA development process will be evaluated:
  - Upon completion of a “rough draft” form of the Master IGA
  - GWG meeting-to-meeting evaluation discussion
- Continuing to work toward the 2017 implementation timeframe

# Prior GWG Produced Governance Material

- Previous effort produced governance material changes/improvements
- Material to be reviewed by the TRWC Executive Committee
- Possible partial inclusion or total replacement of TRWC governance
- Will report progress at upcoming Board Meetings
- Final recommendations for Board action will follow



## FY2016/17 Proposed Budget

Endorsed by the TRWC Executive Committee February 9, 2016

## FY2016/17 Proposed Budget

	<u>FY 15/16 APPROVED</u>	<u>FY 16/17 PROPOSED</u>	<u>Change</u>
<b>1. LABOR</b>			
Cost	\$ 476,955	\$ 492,000	\$ 15,045
<b>2. NON LABOR</b>	1,107,400	1,138,125	30,725
<b>4. TOTAL OPERATING &amp; MAINTENANCE BUDGET</b>	<u>\$ 1,584,355</u>	<u>\$ 1,630,125</u>	<u>\$ 45,770</u>
<b>5. MONTHLY AIRTIME HOURS</b>	1,000	1,019	
<b>6. RECONCILIATION OF BUDGET INCREASE:</b>			
a. Projected increase in benefits/salaries			\$ 15,045
b. Reduce consulting			(90,000)
c. Florence Gardens Rent			9,600
d. Motorola Contract additional services			16,000
e. Purchase of spare parts/batteries for upgraded system			30,000
f. . Warranty savings on upgrade			<u>(12,500)</u>
SubTotal Budget Changes:			(31,855)
Add: Proposed Contingency at 5%			<u>77,625</u>
<b>TOTAL VARIANCE:</b>			<u><u>\$ 45,770</u></u>

## FY2016/17 Proposed Budget

### O&M - AIRTIME PERCENTAGE (1)

MESA	72.37%
GILBERT	16.88%
SUPERSTITION FIRE & ME	0.42%
APACHE JUNCTION	7.16%
FT MCDOWELL (2)	2.04%
QUEEN CREEK	0.30%
SOUTHWEST AMBULANCE	0.65%
AMR	0.16%
RIO VERDE	0.02%
<b>TOTAL</b>	<u>100.00%</u>

### VHF SPECIAL ASSESSMENT (3)

MESA FIRE & MEDICAL	66.85%
GILBERT FIRE	18.81%
SUPERSTITION FIRE & ME	8.11%
QUEEN CREEK FIRE	5.73%
RIO VERDE FIRE	0.50%
<b>TOTAL</b>	<u>100.00%</u>

- (1) Normal partner assessments are allocated based on recent rolling 6 month airtime averages and are subject to change based on actual monthly data. (9/30/15)
- (2) Ft McDowell share of costs is base on airtime estimate provided by the partner.
- (3) Agency cost distribution for the Hazard Zone Communication VHF Special Assessment is based on 12 months average Airtime as of March 31, 2015.

## FY2016/17 Proposed Budget

### ANNUAL ESTIMATED REVENUE: OPERATING & MAINTENANCE

MESA	\$ 1,179,722
GILBERT	275,165
SUPERSTITION FIRE & MEDICAL	6,847
APACHE JUNCTION	116,717
FT MCDOWELL (2)	33,255
QUEEN CREEK	4,890
SOUTHWEST AMBULANCE	10,596
AMR	2,608
RIO VERDE	326
<b>TOTAL</b>	<u>\$ 1,630,126</u>

# FY2016/17 Recommended Budget

	FY2015/16	FY 2016/17	FY 17/18	FY 18/19	FY 19/20	
<b>CAPITAL IMPROVEMENT COSTS</b>						
<b>NETWORK RELIABILITY IMPROVEMENTS:</b>						
A. Fire VHF (CP0305)	\$ 900,000	\$ 685,000	\$496,168	\$ -	\$ -	
B. TOPAZ Voice Radio Network Upgrade (CP0090) (Funds provided by Sprint)	3,633,828	433,828 (564,320)	433,828	433,828	433,828	
C. Radio Sites Emergency Power Upgrade (CP0094)				-	198,298	
D. Regional Communications Authority (CP0438)				750,000		
E. Wireless Backhaul (Microwave) Network Upgrade (CP0093)				1,209,798	1,253,003	
F. TOPAZ Voice Radio Network Coverage Improvements (CP0091)				-	724,946	
<b>TOTAL to Partners</b>	<b>\$3,969,508</b>	<b>\$1,118,828</b>	<b>\$929,996</b>	<b>\$2,393,626</b>	<b>\$2,610,075</b>	
<b>NORMAL ASSESSMENT TO PARTNERS(1)</b>						
MESA	74.18%	\$2,288,741	\$ 316,525	\$316,525	\$1,746,413	\$1,904,336
GILBERT	17.64%	527,528	73,828	73,828	407,344	444,179
SUPERSTITION FIRE & MEDICAL	0.48%	14,860	1,837	1,837	10,135	11,052
APACHE JUNCTION	7.39%	226,614	31,316	31,316	172,783	188,407
FT MCDOWELL(2)	0.00%	-	8,922	8,922	49,229	53,680
QUEEN CREEK	0.28%	10,835	1,312	1,312	7,240	7,894
RIO VERDE	0.03%	929	87	87	483	526
<b>TOTAL</b>	<b>100.00%</b>	<b>\$3,069,507</b>	<b>\$ 433,828</b>	<b>\$433,828</b>	<b>\$2,393,626</b>	<b>\$2,610,075</b>
<b>SPECIAL ASSESSMENT TO PARTNERS (VHF)(3)</b>						
MESA FIRE & MEDICAL	66.85%	\$ 601,662	\$ 457,923	\$331,688	\$ -	\$ -
GILBERT FIRE	18.81%	169,249	128,849	93,329	-	-
SUPERSTITION FIRE & MEDICAL	8.11%	73,028	55,554	40,239	-	-
QUEEN CREEK FIRE	5.73%	51,598	39,251	28,430	-	-
RIO VERDE FIRE	0.50%	4,463	3,425	2,481	-	-
<b>TOTAL</b>	<b>100.00%</b>	<b>\$ 900,000</b>	<b>\$ 685,000</b>	<b>\$496,168</b>	<b>\$ -</b>	<b>\$ -</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) Ft McDowell share of costs is based on airtime estimate provided by the partner.
- (3) Agency cost distribution for the Hazard Zone Communication VHF Special Assessment is based on 12 months average Airtime as of March 31, 2015.

# FY2016/17 Proposed Budget

MONTH	MESA	GILBERT	SFM	CAJ	FT MCDOWELL	QUEEN CREEK	SWA	AMR	RIO VERDE
July	\$ 526,198	\$ 122,733	\$ 3,054	\$ 52,060	\$ 14,833	\$ 2,181	\$ 4,726	\$ 1,163	\$ 145
August	59,411	13,857	345	5,878	1,675	246	534	131	16
September	59,411	13,857	345	5,878	1,675	246	534	131	16
October	59,411	13,857	345	5,878	1,675	246	534	131	16
November	59,411	13,857	345	5,878	1,675	246	534	131	16
December	59,411	13,857	345	5,878	1,675	246	534	131	16
January	59,411	13,857	345	5,878	1,675	246	534	131	16
February	59,411	13,857	345	5,878	1,675	246	534	131	16
March	59,411	13,857	345	5,878	1,675	246	534	131	16
April	59,411	13,857	345	5,878	1,675	246	534	131	16
May	59,411	13,857	345	5,878	1,675	246	534	131	16
June	59,411	13,857	345	5,878	1,675	246	534	131	16
<b>Total</b>	<b>\$ 1,179,722</b>	<b>\$ 275,165</b>	<b>\$ 6,847</b>	<b>\$ 116,717</b>	<b>\$ 33,255</b>	<b>\$ 4,890</b>	<b>\$ 10,596</b>	<b>\$ 2,608</b>	<b>\$ 326</b>
Total O&M Project Cash Flow									<b>\$1,630,126</b>

MONTH	MESA	GILBERT	SFM	CAJ	FT MCDOWELL	QUEEN CREEK	RIO VERDE
July	\$ 727,098	\$ 189,352	\$ 51,645	\$ 31,316	\$ 8,922	\$ 36,503	\$ 3,157
August	9,470	2,665	1,149	-	-	812	71
September	9,470	2,665	1,149	-	-	812	71
October	9,470	2,665	1,149	-	-	812	71
November	9,470	2,665	1,149	-	-	812	71
December	9,470	2,665	1,149	-	-	812	71
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 774,448</b>	<b>\$ 202,677</b>	<b>\$ 57,390</b>	<b>\$ 31,316</b>	<b>\$ 8,922</b>	<b>\$ 40,563</b>	<b>\$ 3,512</b>
Total Capital Projected Cash Flow							<b>\$ 1,118,828</b>



	<b>FY 16/17 PROPOSED</b>
<b>Total Operating &amp; Maintenance Budget</b>	<u>\$ 1,630,125</u>
<b>Capital Network Reliability Improvements</b>	<u>1,118,828</u>
<b>PROPOSED BUDGET (O&amp;M + Capital)</b>	<b><u>\$ 2,748,953</u></b>



**Date:** March 3, 2016  
**To:** Topaz Regional Wireless Cooperative (TRWC) Board of Directors  
**From:** Dale Shaw, TRWC Executive Director  
Bob Badgett, TRWC Executive Committee Co-chairman  
David Hagar, TRWC Executive Committee Co-chairman  
**Subject:** Fiscal Year 2016/2017 Budget

### **Recommendation**

The TRWC Executive Director and Executive Committee recommend the approval of the Proposed TRWC Budget (attached) in the amount of \$2,748,953 for Fiscal Year 2016/2017.

### **Background & Discussion**

The attached Proposed Budget for Fiscal Year 2015/2016 has been under review and endorsed by the TRWC Executive Committee. When compared to the current 2015/2016 Fiscal Year Budget, the proposed Operating & Maintenance expenses will increase by \$45,770 (primarily due to benefits/salaries, rent, Motorola contract services, spare parts, and the addition of a 5% contingency) and Capital will decrease by \$2,850,679 - with a net overall Budget decrease of \$2,804,909.

### **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.



**PROPOSED FISCAL YEAR 2016 / 2017 BUDGET**

**DETAIL OF OPERATIONS, MAINTENANCE AND CAPITAL**

**Endorsed by the TRWC Executive Committee February 9, 2016**

**PRESENTED TO THE BOARD OF DIRECTORS**

**March 3, 2016**

**TRWC Operating & Maintenance Budget And Capital Improvement Costs  
RECONCILIATION BETWEEN FY 15/16 APPROVED AND 16/17 PROPOSED BUDGET**

	<u>FY 15/16 APPROVED</u>	<u>FY 16/17 PROPOSED</u>	<u>Change</u>
<b>1. LABOR</b>	\$ 476,955	\$ 492,000	\$ 15,045
<b>2. NON LABOR</b>	1,107,400	1,138,125	30,725
<b>4. TOTAL OPERATING &amp; MAINTENANCE BUDGET</b>	<u>\$ 1,584,355</u>	<u>\$ 1,630,125</u>	<u>\$ 45,770</u>
<b>5. MONTHLY AIRTIME HOURS</b>	1,000	1,019	
<b>6. RECONCILIATION OF BUDGET INCREASE:</b>			
a. Projected increase in benefits/salaries			\$ 15,045
b. Reduce consulting			(90,000)
c. Florence Garden Rent			9,600
d. Motorola Contract additional services			16,000
e. Purchase of spare parts/batteries for upgraded system			30,000
f. . Warranty savings on upgrade			<u>(12,500)</u>
SubTotal Budget Changes:			(31,855)
Add: Proposed Contingency at 5%			<u>77,625</u>
TOTAL VARIANCE:			<u>\$ 45,770</u>
<b>7. O&amp;M Cost Per Airtime Hour</b>	<b>\$132</b>	<b>\$133</b>	<b>\$1</b>
<b>8. Capital Network Reliability Improvements</b>	<u>\$ 3,969,507</u>	<u>\$ 1,118,828</u>	<u>\$ (2,850,679)</u>
<b>Cost Per Airtime Hour</b>	<b>\$331</b>	<b>\$92</b>	<b>-\$239</b>
<b>PROPOSED BUDGET (O&amp;M + Capital)</b>		<u><b>\$ 2,748,953</b></u>	<u><b>\$ (2,804,909)</b></u>

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

Description		FY2015-16	FY 16/17	FORECAST					
		APPROVED	PROPOSED	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23
<b>ESCALATION FACTOR</b>				2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
<b>Labor</b>	Salaries and Wages	\$ 476,955	\$ 492,000	\$ 503,316	\$ 514,892	\$ 526,735	\$ 538,850	\$ 551,243	\$ 563,922
	<b>Total Labor</b>	<u>\$ 476,955</u>	<u>\$ 492,000</u>	<u>\$ 503,316</u>	<u>\$ 514,892</u>	<u>\$ 526,735</u>	<u>\$ 538,850</u>	<u>\$ 551,243</u>	<u>\$ 563,922</u>
<b>ESCALATION FACTOR</b>				2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
<b>GENERAL &amp; ADMINISTRATIVE - OTHER SERVICES</b>									
	Prof Services - Consulting	\$ 90,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Ins. Premiums - Agencies	10,600	10,600	10,844	11,093	11,348	11,609	11,876	12,150
	Prof Services - Legal	37,000	37,000	37,851	38,722	39,612	40,523	41,455	42,409
	Temp Services	90,000	90,000	92,070	94,188	96,354	98,570	100,837	103,156
	Prof Services - Other	13,100	13,100	13,401	13,710	14,025	14,347	14,677	15,015
	Prof Services - Grant Writing	10,000	10,000	10,230	10,465	10,706	10,952	11,204	11,462
	Utilities-Communications Bldg	31,500	31,500	32,225	32,966	33,724	34,500	35,293	36,105
	Utilities-Sites(50%TOPAZ,25%MW)	41,000	41,000	41,943	42,908	43,895	44,904	45,937	46,993
	Telephone - Local	5,700	5,700	5,831	5,965	6,102	6,243	6,386	6,533
	Repairs & Maint Outside	10,400	10,400	10,639	10,884	11,134	11,390	11,652	11,920
	Equipment Usage (Vehicles)	20,000	20,000	20,460	20,931	21,412	21,904	22,408	22,924
	Shaw Butte & Florence Gardens	15,000	24,600	25,166	25,745	26,337	26,942	27,562	28,196
	All Other Services	2,000	2,000	2,046	2,093	2,141	2,190	2,241	2,292
	<b>TOTAL OTHER SERVICES</b>	<u>\$ 376,300</u>	<u>\$ 295,900</u>	<u>\$ 302,706</u>	<u>\$ 309,668</u>	<u>\$ 316,790</u>	<u>\$ 324,076</u>	<u>\$ 331,530</u>	<u>\$ 339,155</u>
<b>GENERAL &amp; ADMINISTRATIVE - COMMODITIES</b>									
	Non Cap Assets	\$ 50,000	\$ 60,000	\$ 61,380	\$ 62,792	\$ 64,236	\$ 65,713	\$ 67,225	\$ 68,771
	Contract - Preventative Motorola	629,000	645,000	659,835	675,011	690,536	706,419	722,666	739,288
	Software Maint-Mainsaver,Juniper	21,000	21,000	21,483	21,977	22,483	23,000	23,529	24,070
	Materials & Repair Parts - Outside	17,600	37,600	18,005	18,419	18,843	19,276	19,719	20,173
	All Other Commodities	1,000	1,000	1,023	1,047	1,071	1,095	1,120	1,146
	<b>TOTAL COMMODITIES</b>	<u>\$ 718,600</u>	<u>\$ 764,600</u>	<u>\$ 761,726</u>	<u>\$ 779,245</u>	<u>\$ 797,168</u>	<u>\$ 815,503</u>	<u>\$ 834,260</u>	<u>\$ 853,448</u>
<b>OTHER BUDGET ITEMS</b>									
	<b>PROPOSED CONTINGENCY - 5%</b>	\$ -	\$ 77,625	\$ 78,387	\$ 80,190	\$ 82,035	\$ 83,921	\$ 85,852	\$ 87,826
	<b>VHF OPERATIONS (special assessment)</b>	12,500	-	93,452	96,255	99,143	102,117	105,181	105,182
	<b>TOTAL OTHER BUDGET ITEMS</b>	<u>\$ 12,500</u>	<u>\$ 77,625</u>	<u>\$ 171,839</u>	<u>\$ 176,445</u>	<u>\$ 181,178</u>	<u>\$ 186,038</u>	<u>\$ 191,033</u>	<u>\$ 193,008</u>
	<b>Total Operating &amp; Maintenance</b>	<u>\$ 1,584,355</u>	<u>\$ 1,630,125</u>	<u>\$ 1,739,587</u>	<u>\$ 1,780,251</u>	<u>\$ 1,821,871</u>	<u>\$ 1,864,468</u>	<u>\$ 1,908,066</u>	<u>\$ 1,949,533</u>

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

Description	FY2015-16	FY 16/17	FORECAST					
	APPROVED	PROPOSED	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22	FY 22/23
<b>Total Operating &amp; Maintenance</b>	\$ 1,584,355	\$ 1,630,125	\$ 1,739,587	\$ 1,780,251	\$ 1,821,871	\$ 1,864,468	\$ 1,908,066	\$ 1,949,533
<b>ROLLING 6 MONTH AVG AS OF 9/30/15 (2)</b>	1,000	1,019	1,019	1,019	1,019	1,019	1,019	1,019
<b>O&amp;M - AIRTIME PERCENTAGE (1)</b>								
MESA		72.37%	72.37%	72.37%	72.37%	72.37%	72.37%	72.37%
GILBERT		16.88%	16.88%	16.88%	16.88%	16.88%	16.88%	16.88%
SUPERSTITION FIRE & MEDICAL		0.42%	0.42%	0.42%	0.42%	0.42%	0.42%	0.42%
APACHE JUNCTION		7.16%	7.16%	7.16%	7.16%	7.16%	7.16%	7.16%
FT MCDOWELL (2)		2.04%	2.04%	2.04%	2.04%	2.04%	2.04%	2.04%
QUEEN CREEK		0.30%	0.30%	0.30%	0.30%	0.30%	0.30%	0.30%
SOUTHWEST AMBULANCE		0.65%	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%
AMR		0.16%	0.16%	0.16%	0.16%	0.16%	0.16%	0.16%
RIO VERDE		0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
<b>TOTAL</b>		<u>100.00%</u>						
<b>VHF SPECIAL ASSESSMENT (3)</b>								
MESA FIRE & MEDICAL		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%
SUPERSTITION FIRE & MEDICAL		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%
RIO VERDE FIRE		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
<b>TOTAL</b>		<u>100.00%</u>						
<b>ANNUAL ESTIMATED REVENUE: OPERATING &amp; MAINTENANCE</b>								
MESA	\$ 1,179,722	\$ 1,179,722	\$ 1,253,781	\$ 1,283,055	\$ 1,313,016	\$ 1,343,679	\$ 1,375,062	\$ 1,405,072
GILBERT	275,165	275,165	295,446	302,364	309,445	316,693	324,111	331,111
SUPERSTITION FIRE & MEDICAL	6,847	6,847	14,493	14,879	15,276	15,684	16,102	16,277
APACHE JUNCTION	116,717	116,717	117,863	120,574	123,347	126,184	129,087	132,056
FT MCDOWELL (2)	33,255	33,255	33,581	34,354	35,144	35,952	36,779	37,625
QUEEN CREEK	4,890	4,890	10,293	10,567	10,849	11,138	11,436	11,560
SOUTHWEST AMBULANCE	10,596	10,596	10,700	10,946	11,198	11,455	11,719	11,988
AMR	2,608	2,608	2,634	2,694	2,756	2,820	2,885	2,951
RIO VERDE	326	326	796	818	840	863	886	895
<b>TOTAL</b>	<u>\$ 1,630,126</u>	<u>\$ 1,630,126</u>	<u>\$ 1,739,587</u>	<u>\$ 1,780,251</u>	<u>\$ 1,821,871</u>	<u>\$ 1,864,468</u>	<u>\$ 1,908,067</u>	<u>\$ 1,949,535</u>
<b>MONTHLY FEE PER AIRTIME UNIT: OPERATING &amp; MAINTENANCE</b>	\$ 133	\$ 133	\$ 142	\$ 146	\$ 149	\$ 153	\$ 156	\$ 159

(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) Ft McDowell share of costs is base on airtime estimate provided by the partner.

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

TRWC Capital Improvement Planning

	APPROVED BUDGET		PROPOSED BUDGET		FORECASTED					TOTAL 8 YEARS	
		FY2015/16		FY 2016/17	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22		FY 22/23
<b>CAPITAL IMPROVEMENT COSTS</b>											
<b>NETWORK RELIABILITY IMPROVEMENTS:</b>											
A. Fire VHF (CP0305)		\$ 900,000		\$ 685,000	\$ 496,168	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,081,168
B. TOPAZ Voice Radio Network Upgrade (CP0090)		3,633,828		433,828	433,828	433,828	433,828	-	-	-	5,369,140
		(564,320)									(564,320)
		(Funds provided by Sprint)									
C. Radio Sites Emergency Power Upgrade (CP0094)							198,298	198,298	198,298		594,894
D. Regional Communications Authority (CP0438)						750,000					750,000
E. Wireless Backhaul (Microwave) Network Upgrade (CP0093)						1,209,798	1,253,003	1,299,793			3,762,594
F. TOPAZ Voice Radio Network Coverage Improvements (CP0091)						-	724,946	750,687	674,360	931,325	3,081,318
<b>TOTAL to Partners</b>		<b>\$ 3,969,508</b>		<b>\$ 1,118,828</b>	<b>\$ 929,996</b>	<b>\$ 2,393,626</b>	<b>\$ 2,610,075</b>	<b>\$ 2,248,778</b>	<b>\$ 872,658</b>	<b>\$ 931,325</b>	<b>\$ 11,105,286</b>
<b>NORMAL ASSESSMENT TO PARTNERS(1)</b>											
MESA	74.18%	\$ 2,288,741	72.96%	\$ 316,525	\$ 316,525	\$ 1,746,413	\$ 1,904,336	\$ 1,640,731	\$ 636,700	\$ 679,504	\$ 9,529,475
GILBERT	17.64%	527,528	17.02%	73,828	73,828	407,344	444,179	382,694	148,508	158,491	2,216,399
SUPERSTITION FIRE & MEDICAL	0.48%	14,860	0.42%	1,837	1,837	10,135	11,052	9,522	3,695	3,944	56,882
APACHE JUNCTION	7.39%	226,614	7.22%	31,316	31,316	172,783	188,407	162,327	62,993	67,227	942,983
FT MCDOWELL(2)	0.00%	-	2.06%	8,922	8,922	49,229	53,680	46,250	17,948	19,154	204,105
QUEEN CREEK	0.28%	10,835	0.30%	1,312	1,312	7,240	7,894	6,801	2,639	2,817	40,850
RIO VERDE	0.03%	929	0.02%	87	87	483	526	453	176	188	2,930
<b>TOTAL</b>	<b>100.00%</b>	<b>\$ 3,069,507</b>	<b>100.00%</b>	<b>\$ 433,828</b>	<b>\$ 433,828</b>	<b>\$ 2,393,626</b>	<b>\$ 2,610,075</b>	<b>\$ 2,248,778</b>	<b>\$ 872,658</b>	<b>\$ 931,325</b>	<b>\$ 9,924,118</b>
<b>SPECIAL ASSESSMENT TO PARTNERS (VHF)(3)</b>											
MESA FIRE & MEDICAL	66.85%	\$ 601,662	66.85%	\$ 457,923	\$ 331,688	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,391,273
GILBERT FIRE	18.81%	169,249	18.81%	128,849	93,329	-	-	-	-	-	391,427
SUPERSTITION FIRE & MEDICAL	8.11%	73,028	8.11%	55,554	40,239	-	-	-	-	-	168,821
QUEEN CREEK FIRE	5.73%	51,598	5.73%	39,251	28,430	-	-	-	-	-	119,279
RIO VERDE FIRE	0.50%	4,463	0.50%	3,425	2,481	-	-	-	-	-	10,369
<b>TOTAL</b>	<b>100.00%</b>	<b>\$ 900,000</b>	<b>100.00%</b>	<b>\$ 685,000</b>	<b>\$ 496,168</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,181,168</b>
<b>TOTAL ASSESSMENT TO PARTNERS</b>											
MESA	72.82%	\$ 2,890,403	69.22%	\$ 774,448	\$ 648,213	\$ 1,746,413	\$ 1,904,336	\$ 1,640,731	\$ 636,700	\$ 679,504	\$ 10,920,748
GILBERT	17.55%	696,777	18.12%	202,677	167,157	407,344	444,179	382,694	148,508	158,491	2,607,826
SUPERSTITION SPRINGS FIRE & MEDICAL	2.21%	87,888	5.13%	57,390	42,076	10,135	11,052	9,522	3,695	3,944	225,702
APACHE JUNCTION	5.71%	226,614	2.80%	31,316	31,316	172,783	188,407	162,327	62,993	67,227	942,983
FT MCDOWELL(2)	0.00%	-	0.80%	8,922	8,922	49,229	53,680	46,250	17,948	19,154	204,105
QUEEN CREEK	1.57%	62,433	3.63%	40,563	29,743	7,240	7,894	6,801	2,639	2,817	160,129
RIO VERDE	0.14%	5,392	0.31%	3,512	2,568	483	526	453	176	188	13,299
<b>TOTAL</b>	<b>100.00%</b>	<b>\$ 3,969,507</b>	<b>100.00%</b>	<b>\$ 1,118,828</b>	<b>\$ 929,996</b>	<b>\$ 2,393,626</b>	<b>\$ 2,610,075</b>	<b>\$ 2,248,778</b>	<b>\$ 872,658</b>	<b>\$ 931,325</b>	<b>\$ 11,105,286</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) Ft McDowell share of costs is based on airtime estimate provided by the partner.

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

**TRWC Cash Flow: Assessments per Partner**  
**PROJECTED CASH FLOW FOR FISCAL YEAR 2016 / 2017**

<b>O&amp;M CASH FLOWS</b>										
MONTH	MESA	GILBERT	SFM	CAJ	FT MCDOWELL	QUEEN CREEK	SWA	AMR	RIO VERDE	
July	\$ 526,198	\$ 122,733	\$ 3,054	\$ 52,060	\$ 14,833	\$ 2,181	\$ 4,726	\$ 1,163	\$ 145	
August	59,411	13,857	345	5,878	1,675	246	534	131	16	
September	59,411	13,857	345	5,878	1,675	246	534	131	16	
October	59,411	13,857	345	5,878	1,675	246	534	131	16	
November	59,411	13,857	345	5,878	1,675	246	534	131	16	
December	59,411	13,857	345	5,878	1,675	246	534	131	16	
January	59,411	13,857	345	5,878	1,675	246	534	131	16	
February	59,411	13,857	345	5,878	1,675	246	534	131	16	
March	59,411	13,857	345	5,878	1,675	246	534	131	16	
April	59,411	13,857	345	5,878	1,675	246	534	131	16	
May	59,411	13,857	345	5,878	1,675	246	534	131	16	
June	59,411	13,857	345	5,878	1,675	246	534	131	16	
Total	\$ 1,179,722	\$ 275,165	\$ 6,847	\$ 116,717	\$ 33,255	\$ 4,890	\$ 10,596	\$ 2,608	\$ 326	
Total O&M Project Cash Flow										<u>\$1,630,126</u>

<b>CAPITAL CASH FLOWS</b>							
MONTH	MESA	GILBERT	SFM	CAJ	FT MCDOWELL	QUEEN CREEK	RIO VERDE
July	\$ 727,098	\$ 189,352	\$ 51,645	\$ 31,316	\$ 8,922	\$ 36,503	\$ 3,157
August	9,470	2,665	1,149	-	-	812	71
September	9,470	2,665	1,149	-	-	812	71
October	9,470	2,665	1,149	-	-	812	71
November	9,470	2,665	1,149	-	-	812	71
December	9,470	2,665	1,149	-	-	812	71
January	-	-	-	-	-	-	-
February	-	-	-	-	-	-	-
March	-	-	-	-	-	-	-
April	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
June	-	-	-	-	-	-	-
Total	\$ 774,448	\$ 202,677	\$ 57,390	\$ 31,316	\$ 8,922	\$ 40,563	\$ 3,512
Total Capital Projected Cash Flow							<u>\$ 1,118,828</u>



## Finance Update March 3, 2016

## FY2016 Operations & Maintenance Through January 31, 2016

Description	Fiscal Year 2015 / 2016					Variance Explanations (over \$5,000/20%)
	Fiscal Year Budget	YTD Budget*	YTD Actuals as of January 31, 2016	Variance From YTD Budget Increase/(Decrease)	% Variance	
Personnel Services	476,955	275,166	310,725	35,559	13%	Additional work on upgrade, completed Sept
Sub-total Personnel Services	\$ 476,955	\$ 275,166	\$ 310,725	\$ 35,559	13%	
Insurance Premiums - Agencies	10,600	10,600	8,094	(2,506)	-24%	Potential savings will be used to offset Motorola and Payroll variances Seasonal rates
Professional Services - Legal	37,000	21,583	23,416	1,833	8%	
Temp Services	90,000	52,500	47,081	(5,419)	-10%	
Shaw Butte Land Rental	15,000	15,000	14,734	(266)	-2%	
Professional Services - Other	23,100	13,475	10,031	(3,444)	-26%	
Professional Services - Consulting	90,000	52,500	-	(52,500)	-100%	
Utilities	72,500	42,292	34,036	(8,256)	-20%	
Telephone - Local	5,700	3,325	3,024	(301)	-9%	
Repairs & Maintenance Outside	10,400	6,067	3,072	(2,995)	-49%	
Equipment Usage (Vehicles)	20,000	11,667	10,236	(1,431)	-12%	
All Other Services	2,000	1,167	100	(1,067)	-91%	
Sub-total Services	\$ 376,300	\$ 219,575	\$ 153,824	\$ (65,751)	-30%	
Contract - Preventative Motorola	629,000	629,000	646,216	17,216	3%	Upgraded Motorola Service contract offset by Non-cap assets
Materials & Parts	17,600	10,267	1,514	(8,753)	-85%	
Non Cap Assets	50,000	29,167	35,542	6,376	22%	New Rectifier; Two new battery installations
Software Maintenance- Juniper	21,000	21,000	20,214	(786)	-4%	
All Other Commodities	1,000	583	-	(583)	-100%	
Sub-total Commodities	\$ 718,600	\$ 690,017	\$ 703,486	\$ 13,470	2%	
Subtotal O&M	\$ 1,571,855	\$ 1,184,758	\$ 1,168,035	\$ (16,723)	-1%	

## FY2016 Operations & Maintenance

Through January 31, 2016

Description	Fiscal Year 2015 / 2016				
	Fiscal Year	YTD		Variance	% Variance
	Budget	Budget*	Actuals as of January 31, 2016	Increase/(Decrease)	Variance Explanations (over \$5,000/20%)
Subtotal O&M	\$ 1,571,855	\$ 1,184,758	\$ 1,168,035	\$ (16,723)	-1%
Special Assessment: VHF Operations	\$ 12,500	\$ 7,292	\$ 24,292	17,000	233% Federal Engineering contract extended past the end of the fiscal year
Total	\$ 1,584,355	\$ 1,192,050	\$ 1,192,327	\$ 278	0%

## FY2016 Capital Projects

Through January 31, 2016

Capital Costs	Original Budget	YTD January	% Used
COM	\$2,276,961	\$2,288,741	101%
TOG	\$541,461	\$527,528	97%
SFM	\$14,734	\$14,860	101%
CAJ	\$226,837	\$226,614	100%
TQC	\$8,595	\$10,835	126%
RVFD	\$920	\$929	101%
Total Capital Costs	\$3,069,508	\$3,069,508	100%

# FY2016 VHF Special Assessment

Through January 31, 2016

<b>VHF Special Assessment</b>	<b>Current Month</b>			<b>Monthly Variance</b>
	<b>Monthly Budget</b>	<b>Actuals</b>	<b>% Used</b>	
<b>Total Monthly VHF O&amp;M Assessment</b>	\$1,042	\$0	0%	-\$1,042
<b>VHF Special O&amp;M Assessment</b>	<b>Original Budget</b>	<b>YTD January</b>	<b>% Used</b>	<b>YTD Variance</b>
COM	\$8,356	\$16,239	194%	
TOG	\$2,351	\$4,569	194%	
SFM	\$1,014	\$1,970	194%	
TQC	\$716	\$1,392	194%	
RVFD	\$63	\$121	194%	
<b>Total VHF Special Assessment</b>	<b>\$12,500</b>	<b>\$24,292</b>	<b>194%</b>	<b>\$11,792</b>
<b>Total Monthly VHF Capital Assessment</b>	\$75,000	\$4,534	6%	-\$70,466
<b>VHF Special Capital Assessment</b>	<b>Original Budget</b>	<b>YTD January</b>	<b>% Used</b>	<b>YTD Variance</b>
COM	\$601,662	\$440,524	73%	
TOG	\$169,249	\$123,953	73%	
SFM	\$73,028	\$53,443	73%	
TQC	\$51,598	\$37,759	73%	
RVFD	\$4,463	\$3,295	74%	
<b>Total VHF Special Assessment</b>	<b>\$900,000</b>	<b>\$658,975</b>	<b>73%</b>	<b>-\$241,025</b>





**FISCAL YEAR TO DATE ACTUALS**  
**As of January 31, 2016**

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

**PRESENTED**  
**March 3, 2016**

**TOPAZ BUDGET TO ACTUAL COMPARISON**

Fiscal Year 2015 / 2016

<b><u>Operations &amp; Maintenance</u></b>	<b>Monthly Budget</b>	<b>Current Month</b>		<b>Monthly Variance</b>		
		<b>Actuals</b>	<b>% Used</b>			
Total Monthly O&M Costs	\$130,988	\$53,886	41%	-\$77,102		
Operating & Maintenance Costs	<b>Original Budget</b>	<b>YTD January</b>	<b>% Used</b>	<b>YTD Variance</b>	<b>Original Budget</b>	<b>July Airtime</b>
COM	\$1,155,313	\$864,145	75%		73.50%	73.93%
TOG	\$274,760	\$199,312	73%		17.48%	17.04%
SFM	\$7,545	\$5,302	70%		0.48%	0.48%
CAJ	\$115,060	\$85,131	74%		7.32%	7.32%
TQC	\$4,401	\$4,006	91%		0.28%	0.35%
RVFD	\$472	\$296	63%		0.03%	0.03%
SWA	\$14,304	\$9,776	68%		0.91%	0.85%
Total O&M Costs	\$1,571,854	\$1,168,035	74%	-\$403,819	100.00%	100.00%

<b><u>Capital Projects</u></b>	<b>Monthly Budget</b>	<b>Current Month</b>		<b>Monthly Variance</b>		
		<b>Actuals</b>	<b>% Used</b>			
Total Monthly Capital Costs	\$255,792	\$0	0%	-\$255,792		
Capital Costs	<b>Original Budget</b>	<b>YTD January</b>	<b>% Used</b>	<b>YTD Variance</b>		
COM	\$2,276,961	\$2,288,741	101%			
TOG	\$541,461	\$527,528	97%			
SFM	\$14,734	\$14,860	101%			
CAJ	\$226,837	\$226,614	100%			
TQC	\$8,595	\$10,835	126%			
RVFD	\$920	\$929	101%			
Total Capital Costs	\$3,069,508	\$3,069,508	100%	\$0		

<b><u>VHF Special Assessment</u></b>	<b>Monthly Budget</b>	<b>Current Month</b>		<b>Monthly Variance</b>		
		<b>Actuals</b>	<b>% Used</b>			
Total Monthly VHF O&M Assessment	\$1,042	\$0	0%	-\$1,042		
VHF Special O&M Assessment	<b>Original Budget</b>	<b>YTD January</b>	<b>% Used</b>	<b>YTD Variance</b>		
COM	\$8,356	\$16,239	194%			
TOG	\$2,351	\$4,569	194%			
SFM	\$1,014	\$1,970	194%			
TQC	\$716	\$1,392	194%			
RVFD	\$63	\$121	194%			
Total VHF Special Assessment	\$12,500	\$24,292	194%	\$11,792		

Total Monthly VHF Capital Assessment	\$75,000	\$4,534	6%	-\$70,466		
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VHF Special Capital Assessment	Original Budget	YTD January	% Used	YTD Variance		
COM	\$601,662	\$440,524	73%			
TOG	\$169,249	\$123,953	73%			
SFM	\$73,028	\$53,443	73%			
TQC	\$51,598	\$37,759	73%			
RVFD	\$4,463	\$3,295	74%			
Total VHF Special Assessment	\$900,000	\$658,975	73%	-\$241,025		

# TOPAZ

## Operating and Maintenance Variance Analysis

### Fiscal Year 2015 / 2016

Description	Fiscal Year	YTD		Variance	% Variance	Variance Explanations (over \$5,000/20%)
	Budget	YTD Budget*	Actuals as of January 31, 2016	From YTD Budget Increase/(Decrease)		
Personnel Services	476,955	275,166	310,725	35,559	13%	Additional work on upgrade, completed Sept
Sub-total Personnel Services	\$ 476,955	\$ 275,166	\$ 310,725	\$ 35,559	13%	
Insurance Premiums - Agencies	10,600	10,600	8,094	(2,506)	-24%	Potential savings will be used to offset Motorola and Payroll variances Seasonal; costs are expected to catch up in the hot months
Professional Services - Legal	37,000	21,583	23,416	1,833	8%	
Temp Services	90,000	52,500	47,081	(5,419)	-10%	
Shaw Butte Land Rental	15,000	15,000	14,734	(266)	-2%	
Professional Services - Other	23,100	13,475	10,031	(3,444)	-26%	
Professional Services - Consulting	90,000	52,500	-	(52,500)	-100%	
Utilities	72,500	42,292	34,036	(8,256)	-20%	
Telephone - Local	5,700	3,325	3,024	(301)	-9%	
Repairs & Maintenance Outside	10,400	6,067	3,072	(2,995)	-49%	
Equipment Usage (Vehicles)	20,000	11,667	10,236	(1,431)	-12%	
All Other Services	2,000	1,167	100	(1,067)	-91%	
Sub-total Services	\$ 376,300	\$ 219,575	\$ 153,824	\$ (65,751)	-30%	
Contract - Preventative Motorola	629,000	629,000	646,216	17,216	3%	Upgraded Motorola Service contract offset by Non-cap assets
Materials & Parts	17,600	10,267	1,514	(8,753)	-85%	
Non Cap Assets	50,000	29,167	35,542	6,376	22%	New Rectifier; Two new battery installations
Software Maintenance- Juniper	21,000	21,000	20,214	(786)	-4%	
All Other Commodities	1,000	583	-	(583)	-100%	
Sub-total Commodities	\$ 718,600	\$ 690,017	\$ 703,486	\$ 13,470	2%	
Subtotal O&M	\$ 1,571,855	\$ 1,184,758	\$ 1,168,035	\$ (16,723)	-1%	
Special Assessment: VHF Operations	\$ 12,500	\$ 7,292	\$ 24,292	17,000	233%	Federal Engineering contract extended past the end of the fiscal year
Total	\$ 1,584,355	\$ 1,192,050	\$ 1,192,327	\$ 278	0%	

\*YTD Budget represents 7 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:** March 3, 2016

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

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

**From:** Randy Thompson

**Subject:** Administrator Update

### **Capital Projects**

- 1) **Lifecycle upgrade to the TOPAZ radio network.** This project is complete. The old TOPAZ infrastructure has been removed from all of the sites, and has either been traded-in to Motorola Solutions Inc. per the contract, or has been sent for disposal (recycling).
- 2) **Fire Hazard Zone Communication Infrastructure.** This infrastructure will enable the Mesa Fire Dispatch Alarm Room to communicate with the mobile and portable radios on in Fire Hazard or Hot Zones, which will be operating on Very High Frequency (VHF, 150-174 MHz) radio frequencies in analog simplex mode. This funding for this project is shown in the TRWC budget. Below are project milestones:
  - a. Complete
    - i. Contract awarded to Motorola Solutions on September 28, 2015.
    - ii. First payment of \$600,000, was made on November 12, 2015
  - b. Upcoming
    - i. Frequency acquisition, TBD, in progress.
    - ii. Equipment ordering, TBD, dependent on completion of frequency acquisition.
    - iii. Equipment staging at Motorola Solution in Illinois, TBD.
    - iv. Site preparation, TBD.
    - v. Shipment of equipment from Motorola Solutions in Illinois, TBD.
    - vi. Installation of equipment at sites, TBD
    - vii. Optimization & testing of equipment, TBD
    - viii. Acceptance testing, TBD
    - ix. System Acceptance, TBD

### **Non-capital Projects**

- 1) **Site Battery Lifecycle Upgrade.** The batteries that back up the TOPAZ voice radio network and other equipment at the remote radio sites and the City of Mesa Communications Building are 14 years old. These batteries have reached the end of their service life. Normally, these batteries only power the equipment for less than a minute while the emergency generator starts and picks up the load to power the equipment. However, we size these batteries to power the site for a minimum of 4 hours in the event the emergency generator does not start, so we have time to take the portable generator to the site to provide power.
  - a. The battery replacement plan is as follows:
    - i. Falcon Field, April, 2016 (FY16 budget, TRWC pays ½ the cost)
    - ii. Communications Building, April, 2016 (FY16 budget, TRWC pays ½ the cost)

## TRWC Administrator Update, March 3, 2016

- iii. Range Rider, July, 2016 (FY17 budget)
- iv. CRS, October, 2016 (FY17 budget)
- v. South Water Plant, January, 2017 (FY17 budget)
- b. The batteries at the following sites have been replaced.
  - i. Apache Junction Fire Station 262, October 9, 2014
  - ii. Apache Junction Fire Station 264, December 16, 2014
  - iii. Twin Knolls South, February 24, 2015
  - iv. FS205, July 28, 2015 (FY16 budget)
  - v. EMSC, October 13, 2015 (FY16 budget, TRWC pays ½ the cost)
  - vi. Twin Knolls North, December 8, 2015 (funded by Maricopa County site colocation)
  - vii. TRW, January 5, 2016 (funded by Maricopa County site colocation)
- 2) **Emergency Generator Lifecycle Upgrade.** The emergency generators at the Twin Knolls and TRW sites have been replaced by Maricopa County as part of their site colocation on the following dates:
  - a. Twin Knolls, December 14, 2015 (funded by Maricopa County site colocation)
  - b. TRW, January 13, 2016 (funded by Maricopa County site colocation)
- 3) **Florence Gardens TOPAZ site.** It is planned to utilize some of the equipment removed from Thompson Peak when that site was upgraded to create a 4-channel TOPAZ network site at the Florence Gardens site near Florence, AZ. This will enable the City of Mesa Gas Utility to communicate with resources in Mesa when they are providing service in the Magma Gas Service Area without manually switching their radios as they do today. In addition, this will benefit TOPAZ members (in particular Apache Junction Police) when traveling to the Pinal County Jail. There are some minor hardware components required to accomplish this upgrade (less than \$15K in FY15/16), which will be funded by the TOPAZ operations & maintenance budget.
- 4) **Additional Channel on Thompson Peak.** The Fort McDowell Yavapai Nation (FMYN) added a radio channel to the Thompson Peak site to minimize the impact of their joining the TRWC network. The additional channel was brought in to service February 23, 2016. There was no cost to the TRWC members other than some work to integrate the additional channel into the TRWC network infrastructure. This additional channel increases the capacity of the Thompson Peak site for all TRWC members.

### Operations Summary

**System Availability** – Please see the system availability chart on page 3. Since the last Administrator update on September 22, 2015, there were two impairments to the network. On October 26, 2015, the TRW site was out of service for 7-1/2 minutes due to an unidentified problem. On November 12, 2015, the Range Rider site was out of service for 4-1/3 hours due to an Internet Protocol (IP) transport network problem. This outage was triggered when troubleshooting of a microwave radio link caused the connection to the Range Rider site to switch to what should have been a redundant path. For unknown reasons, an interface in the redundant path was in an unalarmed state that prevented it from passing IP traffic. There were no complaints of radio coverage problems during either system impairment. For calendar year 2015, the system availability was 99.948%. For fiscal year 2016, the system availability has been 99.913% through January, 2016.

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

## TRWC Administrator Update, March 3, 2016

- 1) Average airtime usage by member for fiscal year 2016 through January, 2016.
- 2) Average number of radios enabled by member for fiscal year 2016 through January, 2016.
- 3) Average airtime usage by service type for fiscal year 2016 through January, 2016.
- 4) Average number of radios enabled by service type for fiscal year 2016 through January, 2016.

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

- 1) Peak channel usage for each site for September, 2015, through January, 2016. It should be noted that the simulcast cell has seen all channels in use during October (1), November (2), and December (2). The Shaw Butte site has seen all channels in use during September (4), October (7), November (6), December (2), and January (9). There have been no complaints of users experiencing busies. As can be seen from the charts, the Thompson Peak site continues to be very lightly loaded.

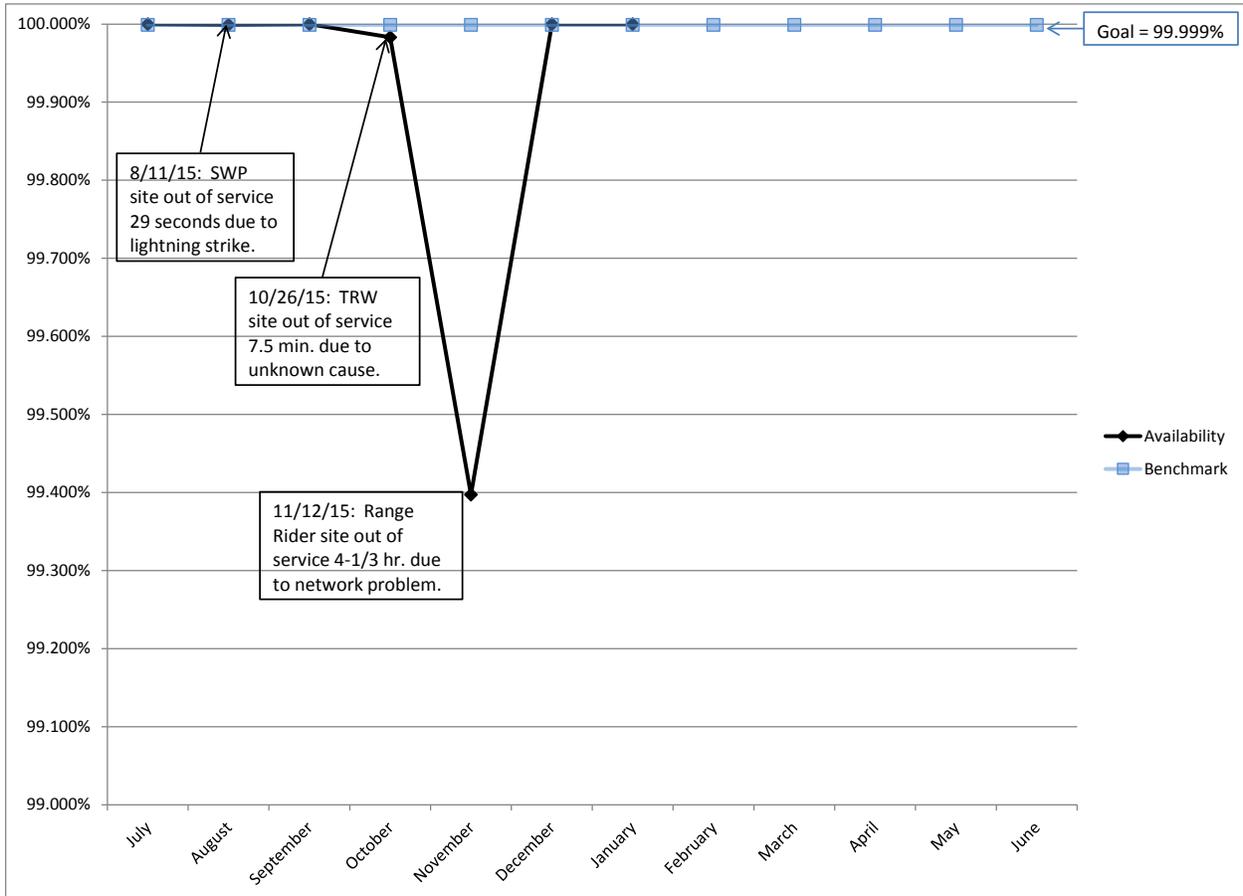
### **Upcoming Events:**

- 1) Testing of Dynamic Site Resiliency (backup radio master site) and geo-redundant prime site (simulcast) capability is planned for 9:00 AM on March 29, 2016.
- 2) The next City of Mesa Communications Building (quarterly) simulated power outage testing is planned for 5:00 AM on April 13, 2016.

### **Other News:**

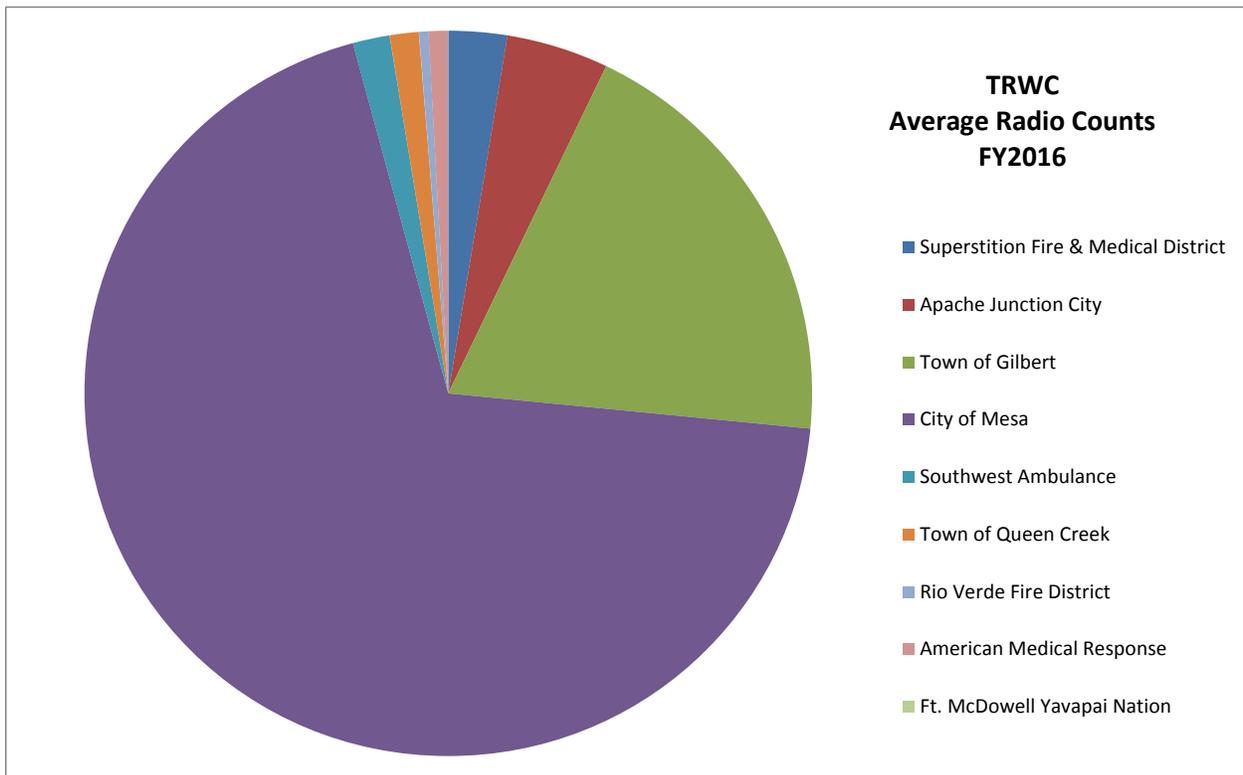
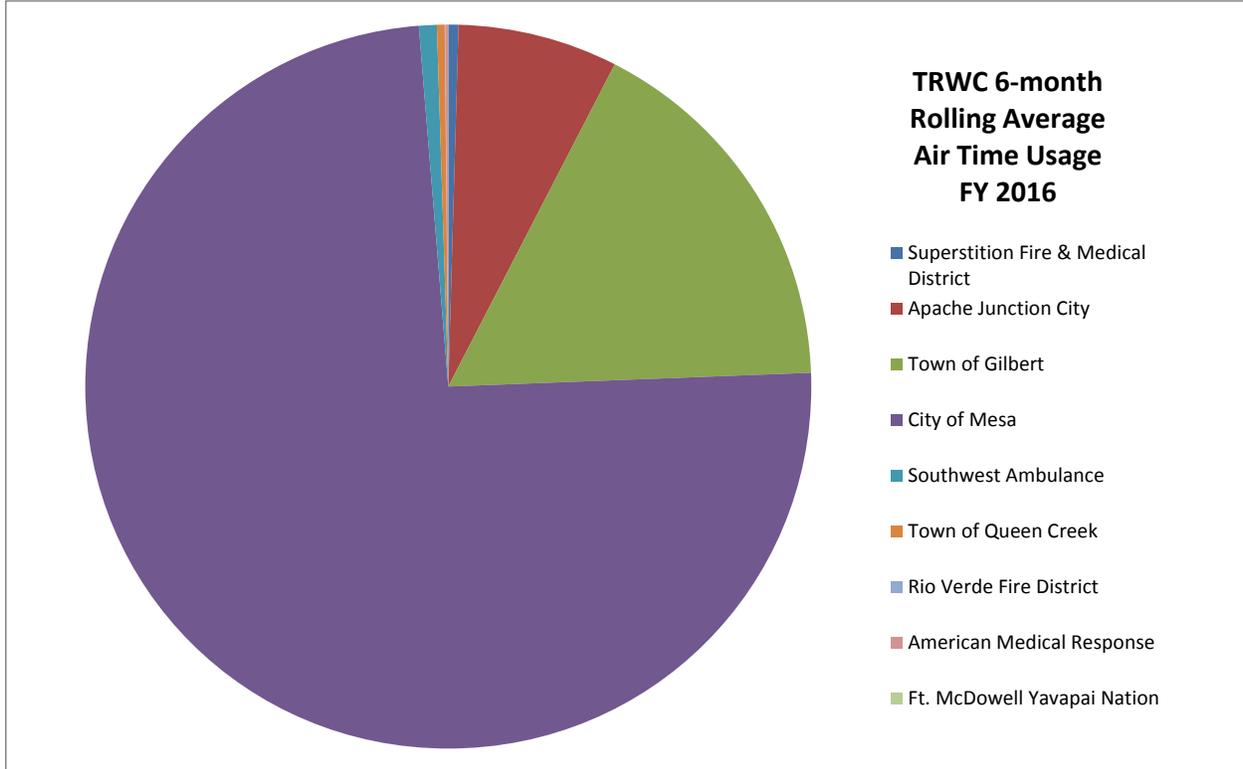
- 1) **Verizon Wireless High Effective Radiated Power (ERP) Long Term Evolution (LTE) Testing in Gilbert.** Acting upon the direction from the September 22, 2015, TRWC Board of Directors meeting, letters were sent by Engelman Berger to the Chairman of the Federal Communications Commission and the Chairman of Verizon, Inc., expressing the concerns of the TRWC for potential interference to Public Safety communications by the testing proposed by Verizon Wireless in Gilbert. On October 12, 2015, representatives from Verizon met with representatives of the Town of Gilbert, City of Mesa (TRWC Administrative Manager), TRWC Executive Director Shaw, and other interested parties to discuss the matter. At that meeting, the Verizon Wireless representatives stated that Verizon Wireless decided not to perform the high ERP LTE testing in the State of Arizona.

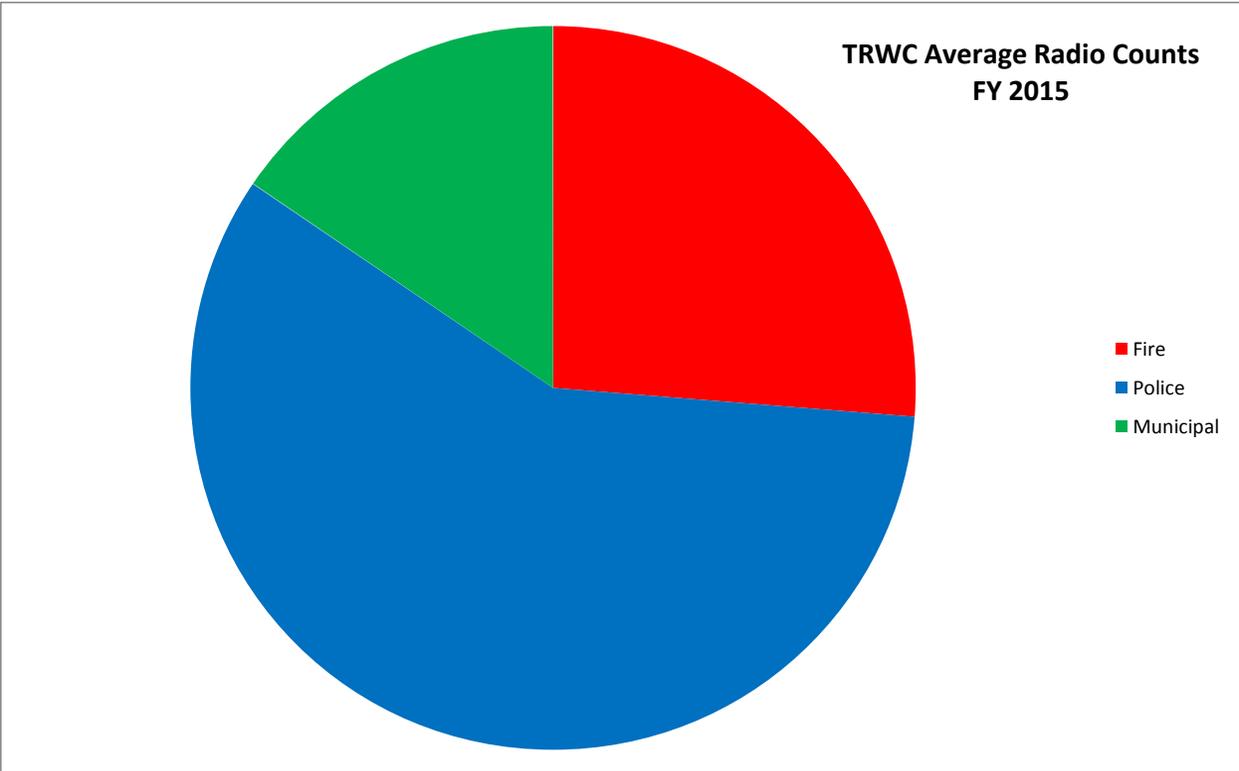
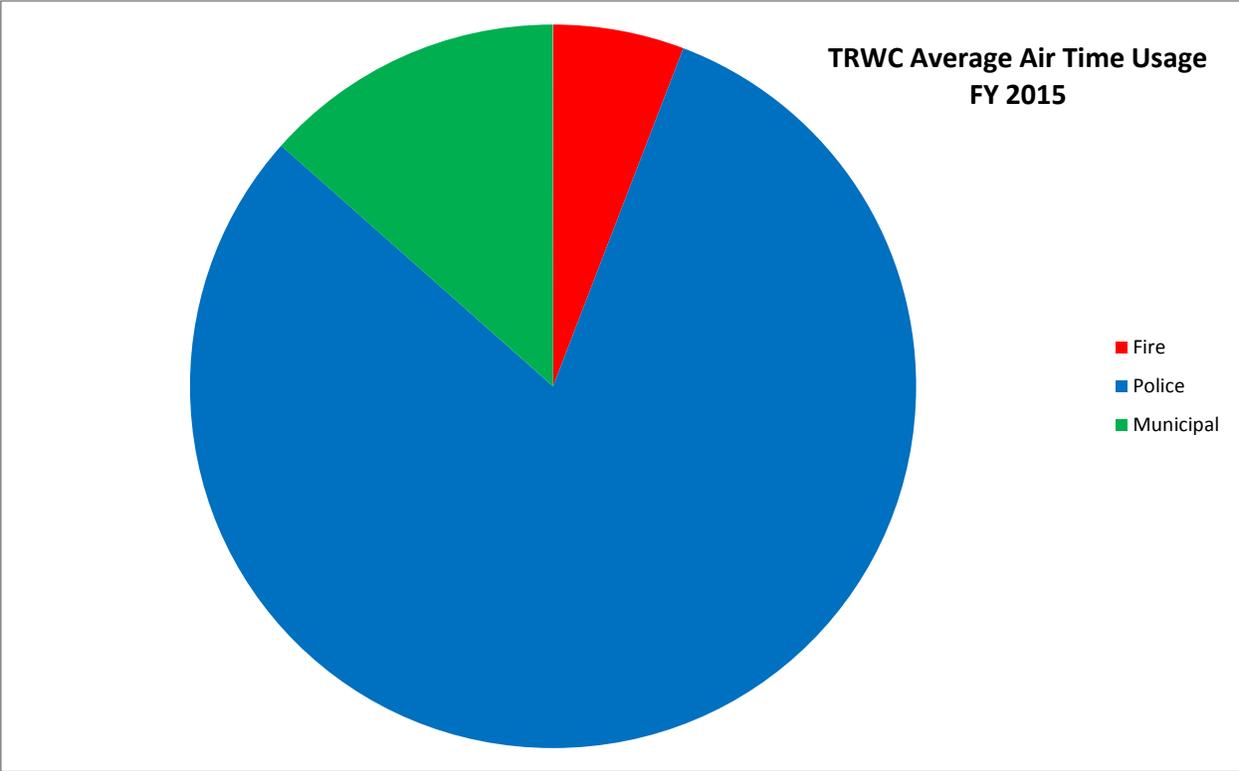
# TRWC Administrator Update, March 3, 2016



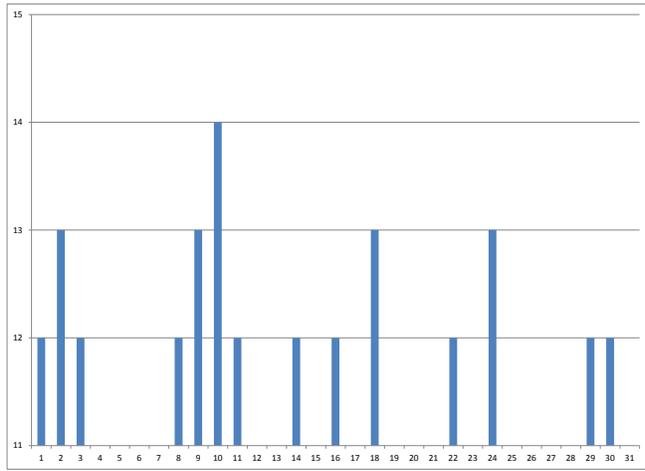
**System Availability, July, 2015 through January, 2016**

TRWC Administrator Update, March 3, 2016





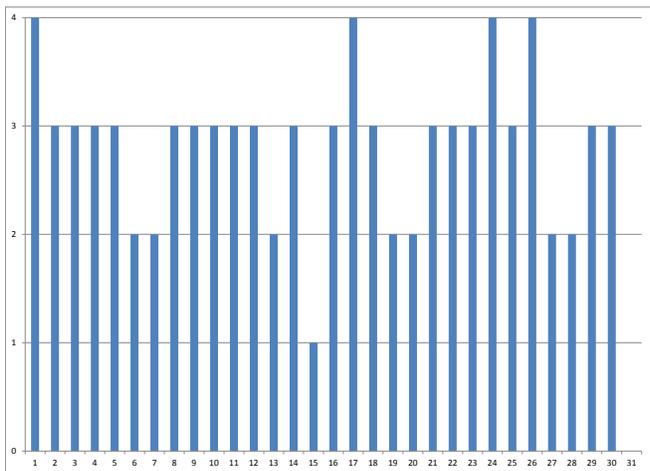
TOPAZ Peak Channel Usage, September, 2015



Simulcast Cell

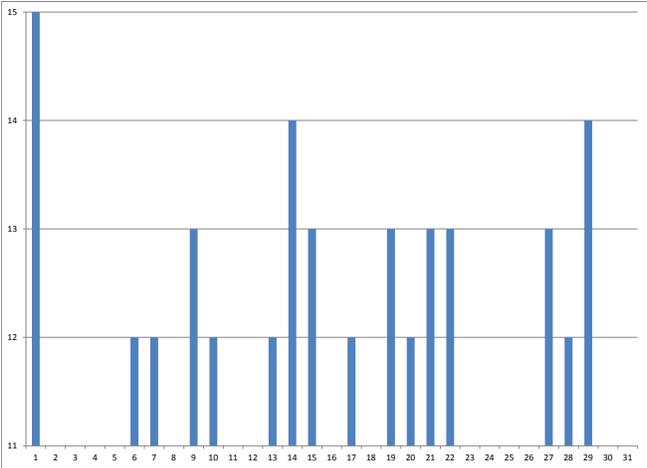


Thompson Peak

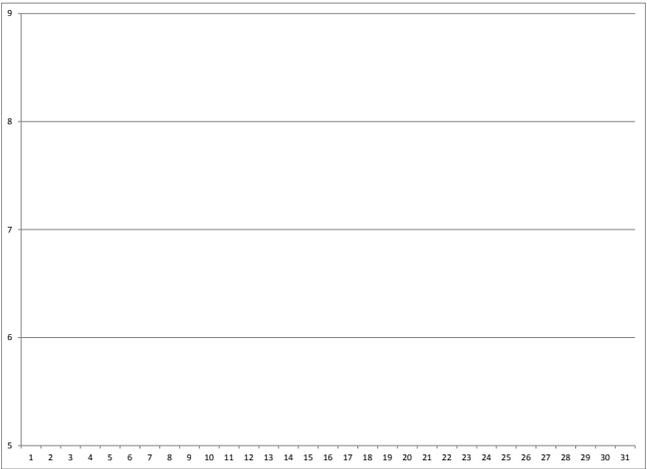


Shaw Butte

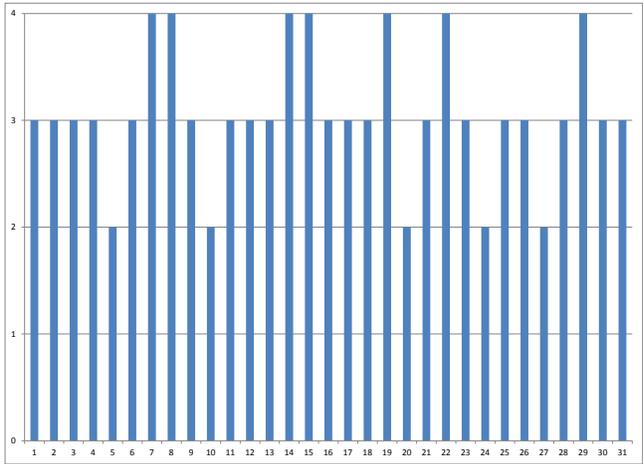
TOPAZ Peak Channel Usage, October, 2015



Simulcast Cell

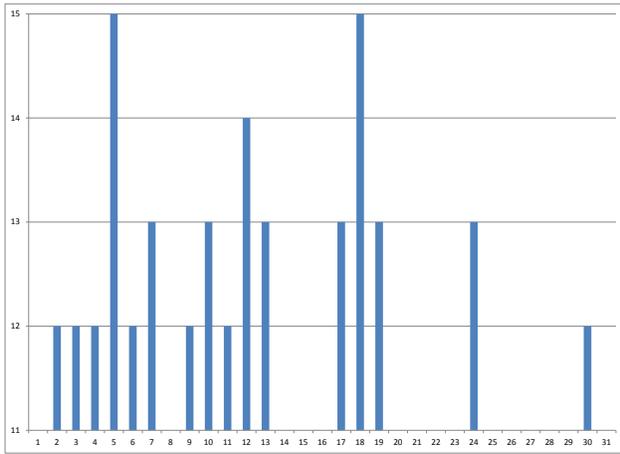


Thompson Peak

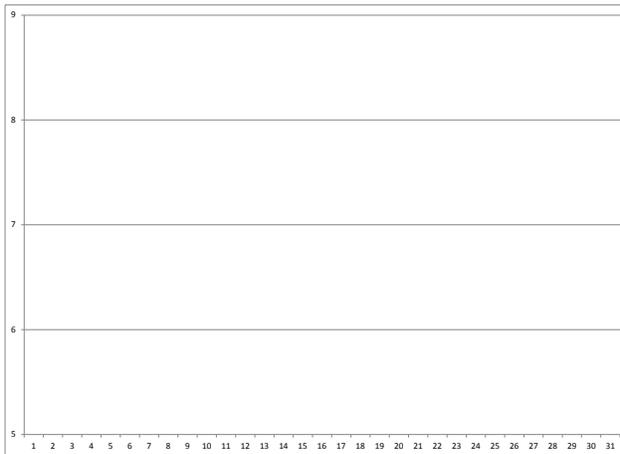


Shaw Butte

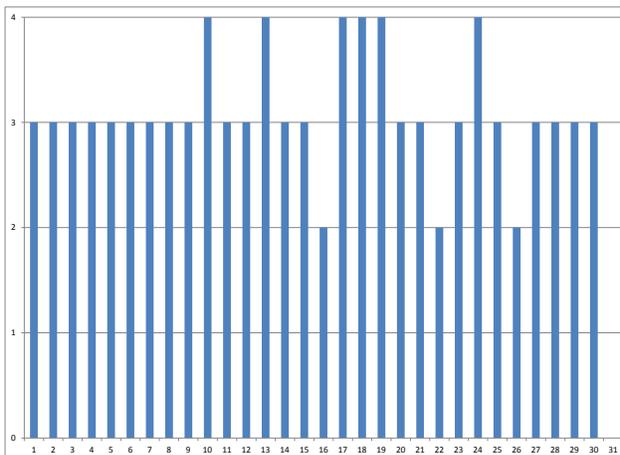
TOPAZ Peak Channel Usage, November, 2015



Simulcast Cell

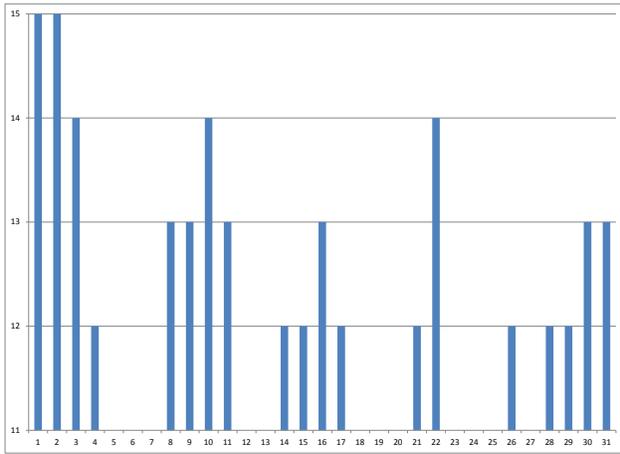


Thompson Peak

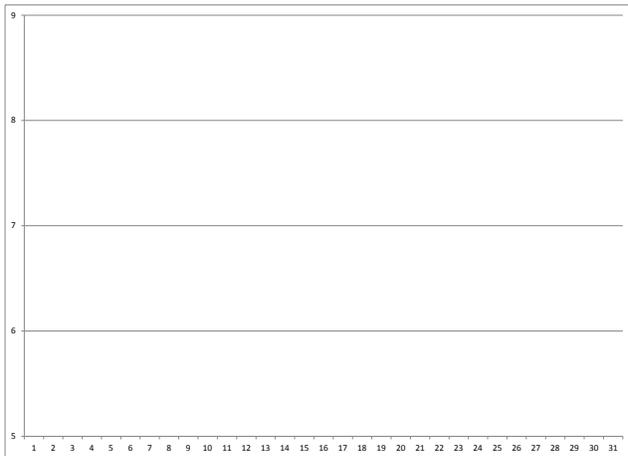


Shaw Butte

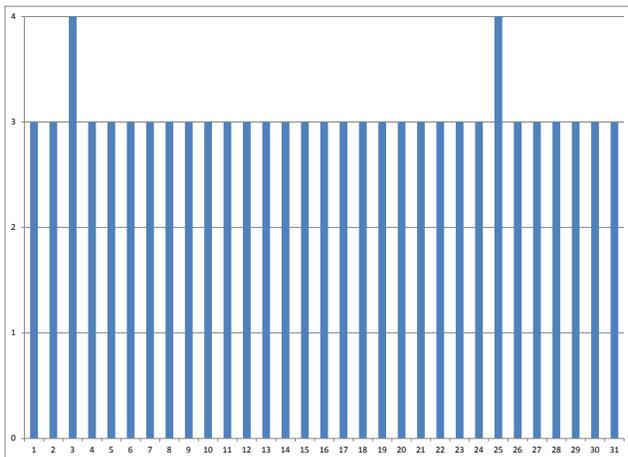
TOPAZ Peak Channel Usage, December, 2015



Simulcast Cell

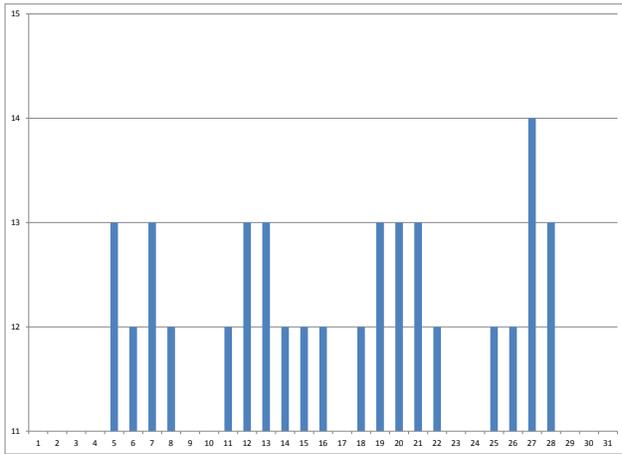


Thompson Peak

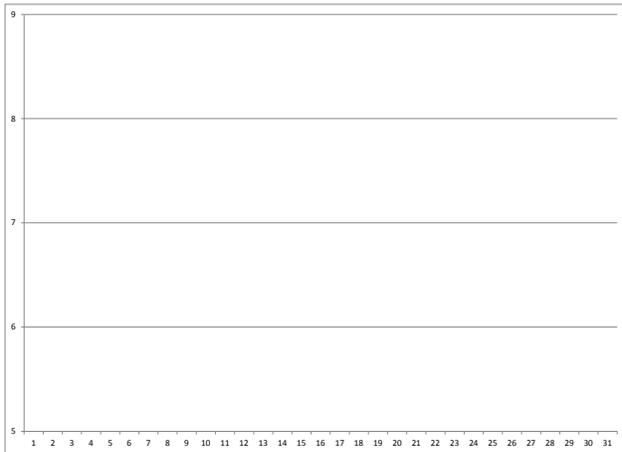


Shaw Butte

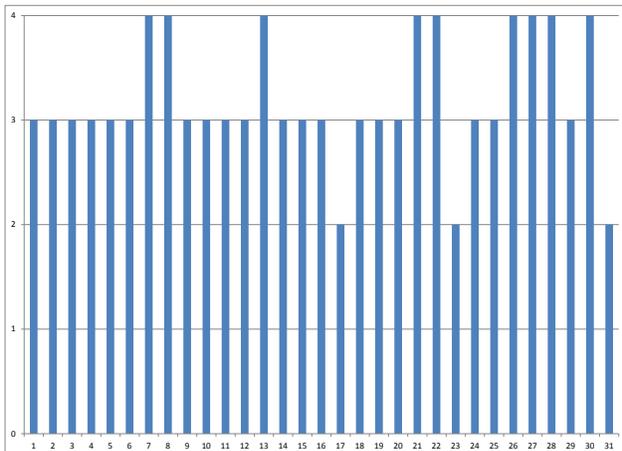
TOPAZ Peak Channel Usage, January, 2016



Simulcast Cell



Thompson Peak



Shaw Butte



# Board of Directors Meeting March 3, 2016

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## VHF Fire Communications System



# Project Status - Budget

**Lease Number: 23762**  
**Commencement Date: 10/1/2015**

Contract Value: \$1,696,164.24

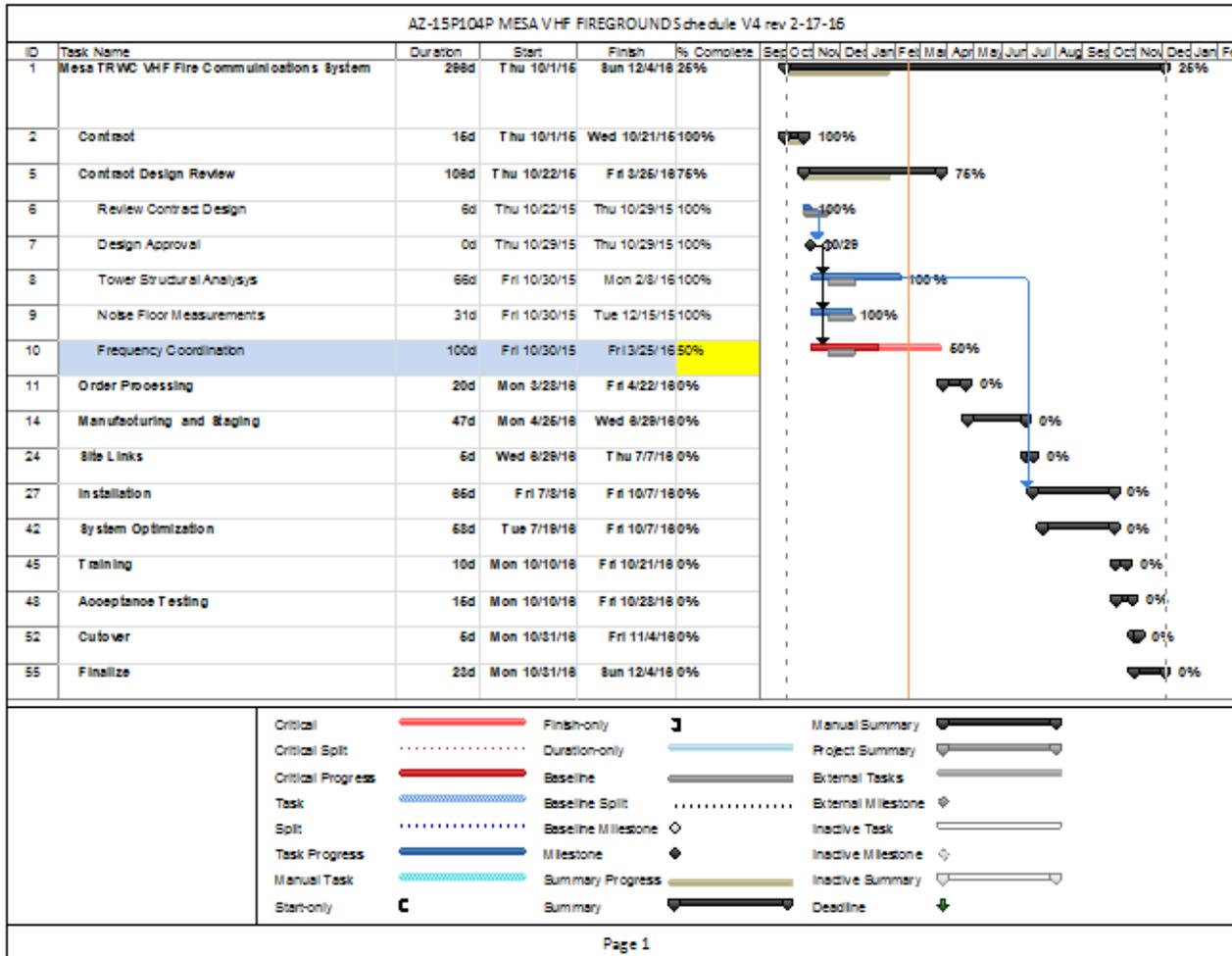
Payment 1: \$600,000.00 Paid 10/1/15

Payment 2: \$600,000.00 Due 10/1/16

Payment 3: \$496,164.24 Due 10/1/17

- **No Change since last meeting**
- **On – Budget**
- **No Change Orders (scope change) projected at this time**

# Project Status - Timeline



- ### Current Status
- No change since last meeting
  - 2 months behind schedule
- ### Mitigation
- Shorten the installation and optimization durations with additional resources

# Project Status - Performance

**Currently in the Design Review Phase**

## Frequency Acquisition Issues

- **Frequency Acquisition – Working with VHF Frequency Coordinator to find four (4) “Clean” VHF Frequencies. Very Iterative Process**
- **VHF Frequencies are very popular for LMR use due to their excellent range, length of antennas, propagation characteristics and availability of low-cost equipment.**
- **Ultimate Goal - Avoid Having to Purchase Frequencies**

## Tower Loading Issue

- **CRS tower is currently overloaded. Working on identifying antennas and line that can be removed.**