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## **TRWC Board of Directors Meeting**

June 11, 2014 - 9:30AM

Conference Bridge: 480-644-6120 Pin: 582063

Gilbert Town Hall - Room 233

50 E Civic Center Drive

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.

### **Agenda**

1) Call to Order & Opening Comments - Chairman Kross

- a. Materials, Roll Call, and Sign-in Sheet (for those in physical attendance)
- b. Speaker Cards (for those in physical attendance) & Requests
- c. Audio Recording

2) Public Comment - Chairman Kross

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 - Chairman Kross

March 27th TRWC Board Meeting Minutes

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

- a. Executive Committee Update - Wes Kemp and David Hagar (Co-chairs)
- b. User Group Update - Rob Duggan (Chairman)
- c. Governance Working Group - Gary Bradbury & Dale Shaw

5) Discussion and Action on Simplex Radio System Consulting Contract - Denis Murphy

Consulting Services to Design & Recommend a Fire Hazard Zone Communications System

6) Discussion and Possible Action on Network Administrator Updates:

- a. Budget & Finance Overview - Sherry McGlade
- b. Network Performance Overview - Randy Thompson

7) Next Meeting(s):

Joint TRWC/RWC Board Meeting - September 2014 TBD

Joint TRWC/RWC Board Meeting - Nov 20, 2014 9AM to 11 AM

8) Adjournment - Chairman Kross



## **TRWC Board of Directors Meeting**

March 27, 2014 - 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.

### **Directors & Staff Attendees**

John Kross, John Pombier, Gary Bradbury, Jerry Ward, Wes Kemp, Dave Montgomery, Dale Shaw, Bill Anger, Randy Thompson, Sherry McGlade

### **Agenda**

#### 1) Call to Order & Opening Comments - Chairman Kross

- a. Materials & Sign-in Sheet
- b. Speaker Cards
- c. Audio Recording

Chairman Kross called the meeting to order and welcomed the attendees, provided instruction on the process for public comment, and reminded participants that the meeting audio was recorded.

#### 2) Public Comment - Chairman Kross

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.

No Public Comment requests were received.

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

January 23rd TRWC Board Meeting Minutes

Gary Bradbury motioned to approve the 01/23/14 TRWC Board Meeting Minutes and John Pombier seconded. All were in favor; the motion passed.

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

- a. Executive Committee Update - Wes Kemp and David Hagar (Co-chairs)

David Hagar provided a brief overview of the recent work of the Executive Committee, including the review and endorsement of the proposed 14/15 TRWC Budget, continued review of the network upgrade financial forecast, and VHF (Simplex) project scoping.

Chairman Kross inquired on the review of additional options for the financing of the network upgrade. In response, Mr. Hagar shared that the Committee will continue to review other options over the next several months but is also comfortable with the current plan as well.

b. User Group Update - Rob Duggan (Chairman)

Rob Duggan provided a brief overview of the recent work of the User Group. He shared that the group is now meeting every other month and will meet as necessary to support the VHF (Simplex) effort. The group is also reviewing user problem reports as identified. Mr. Dugan shared that the next meeting is scheduled for April.

c. Governance Working Group - Gary Bradbury & Dale Shaw

Gary Bradbury provided a summary of the Governance Working Group Presentation.

Chairman Kross commented that good progress is being made and expressed thanks for the work put into it.

John Pombier commented that he supports the expansion of the working group and expressed hope that it will result in smoother adoption. Chairman Kross added that John Meza has been identified as one of the group additions and that he is working with RWC Chairman Steve Campbell to identify any other additions - with the goal of broader inclusion and stakeholder input.

5) Discussion and Action on TRWC 2014/2015 Fiscal Year Budget - Dale Shaw

TRWC 2014-2015 Budget

Executive Director Dale Shaw provided a brief overview of the recommended budget and recommended adoption as outlined in the Report.

Chairman Kross noted the significant reduction in the operating area of the budget. Mr. Shaw shared that the largest impact affecting the overall net reduction was in staffing, a result of changes in time tracking toward the TRWC.

Sherry McGlade reiterated that most of the savings were in the area of personnel costs because better data is now available. She went on to share some differences on the non-labor side of the budget - most notably consulting, which is expected to be lower next year.

Gary Bradbury motioned to approve the proposed Fiscal Year 2014/2015 Budget as recommended and Dave Montgomery seconded. All were in favor; the motion passed.

6) Discussion and Possible Action on Network Administrator Updates:

a. Budget & Finance Overview - Sherry McGlade

Sherry McGlade formally introduced herself to the Board then provided a verbal summary of the Year To Date Actuals Report.

b. Network Performance Overview - Randy Thompson

Randy Thompson requested questions from the Board on the Administrator Update Report. Having received no questions, Chairman Kross commended Mr Thompson for the thoroughness of the report.

7) Next Meeting(s):

Joint TRWC/RWC Board Meeting - May 22, 2014 9AM to 11AM

Joint TRWC/RWC Board Meeting - Nov 20, 2014 9AM to 11 AM

Chairman Kross reviewed the upcoming Board meeting schedule and inquired on the location of the meetings. Mr. Shaw shared that both meetings are scheduled to occur at MAG but some adjustments may be necessary due to plans to conduct a Joint Board meeting in September instead of May.

8) Adjournment - Chairman Kross

Dave Montgomery motioned to adjourn the meeting and Gary Bradbury seconded. All were in favor; the motion passed. Chairman Kross adjourned the meeting.



**Date:** June 11, 2014  
**To:** TOPAZ Regional Wireless Cooperative (TRWC) Board of Directors  
**Through:** Dale Shaw, TRWC Executive Director  
TRWC Executive Committee  
**From:** Randy Thompson, Communications Administrator, City of Mesa  
Denis Murphy, Wireless Communications Administrator, City of Mesa  
**Subject:** Consulting Services to Design & Recommend a Fire Hazard Zone Communications System

**Strategic Initiatives**



**Purpose and Recommendation**

The purpose of this procurement is to hire a consultant to design and recommend a Fire Hazard Zone Communications System. The Proposal Evaluation Committee recommends awarding the contract to Federal Engineering for \$127,164 plus 10% for change orders, for a total award of \$139,800. These consulting services were included in the TRWC FY13/14 operating budget, which is included in the Communications Department FY13/14 budget, and is being carried over to the FY14/15 budget.

**Background**

The TRWC Board of Directors, at their January 23, 2014, meeting, approved the request of the TRWC Users Group to hire a consultant to design and recommend a Fire Hazard Zone Communications System. The City of Mesa, as the Administrative Manager of the TRWC, released a Request for Proposals March 31, 2014 (solicitation 2014216, "Very High Frequency Radio System Consultant"), and received bids April 30, 2014. The Proposal Evaluation Committee scored the proposals, and interview the top three consulting firms on May 20, 2014.

The selected consultant will finalize detailed system requirements and design a Fire Hazard Zone (Very High Frequency analog simplex) Communications System, develop a solicitation document, evaluate responses and vendors, establish a budget, and participate in contract negotiations to implement the system. Note this is for Phases 1 and 2 only of the Request for Proposal requirements. The cost for Phase 3, for project management services for the implementation of the Fire Hazard Zone Communications System, will be included in the budget for the equipment and services to implement the Fire Hazard Zone Communications System.

This award recommendation is for the second highest scoring bidder. The highest scoring bidder's price for Phases 1 and 2 substantially exceeded the \$250,000 budget for these consulting services.

### **Discussion**

The TRWC Users Group identified the need for a Fire Hazard Zone Communications System to align with their automatic aid partners to utilize the same type of communications systems for hazard and non-hazard communications. The Fire Hazard Zone Communications System will be separate from the TOPAZ 800 MHz voice radio network. The Request for Proposal for the consultant services was written so the Fire Hazard Zone Communications System designed by the consultant will be compatible with the Fire Hazard Zone Communications System utilized by the Phoenix Fire Department automatic aid partners.

### **Alternatives**

Continue to utilize the TOPAZ voice radio network for both Hazard Zone and non-Hazard Zone communications.

### **Fiscal Impact**

The funds for these consulting services were included in the FY13/14 TRWC operating budget, and were included in the budget from the City of Mesa Communications Department FY13/14 budget to allow Mesa to contract for these services. A request to carry these funds over to the Communications Department's FY14/15 budget has been approved. The members of the TRWC will reimburse the City of Mesa approximately 25% of the costs incurred for these consulting services.

### **Coordinated With**

The members of the evaluation committee included representatives from the following organizations:

- Town of Gilbert Fire Department
- Superstition Fire & Medical District (formerly Apache Junction Fire District)
- City of Mesa Fire Department
- City of Mesa Communications Department



**YEAR TO DATE ACTUALS THROUGH APRIL 2014**

**OPERATIONS, MAINTENANCE AND CAPITAL**

**PRESENTED TO THE BOARD OF DIRECTORS JUNE 11, 2014**

**TOPAZ BUDGET TO ACTUAL COMPARISON**  
**Fiscal Year 2013 / 2014**

VOICE

**Operations and Maintenance Costs**

1. Budgeted Airtime Units

	Original Budget	Transfers	Revised Budget	February Units
COM	73.44%		73.44%	73.40%
TOG	19.16%		19.16%	18.12%
AJFD	0.53%		0.53%	0.43%
CAJ	5.62%		5.62%	6.86%
TQC	0.36%		0.36%	0.30%
RVFD	0.05%		0.05%	0.04%
SWA	0.84%		0.84%	0.85%
<b>Total Airtime</b>	<b>100.00%</b>		<b>100.00%</b>	<b>100.00%</b>

	Monthly Budget	Transfers	Revised Monthly	Current Month Actuals	% Used	Monthly Variance
<b>2. Total Monthly Operating &amp; Maintenance Costs</b>	\$180,631		\$180,631	\$105,675	59%	-\$74,956

3. Operating & Maintenance Costs

	Original Budget	Transfers	Revised Budget	YTD April	% Used	YTD Variance
COM	\$1,591,884		\$1,591,884	\$784,359	49%	
TOG	\$415,308		\$415,308	\$190,149	46%	
AJFD	\$11,484		\$11,484	\$5,127	45%	
CAJ	\$121,812		\$121,812	\$72,599	60%	
TQC	\$7,800		\$7,800	\$3,178	41%	
RVFD	\$1,080		\$1,080	\$448	41%	
SWA	\$18,204		\$18,204	\$9,067	50%	
<b>Total Operating &amp; Maintenance Costs</b>	<b>\$2,167,572</b>		<b>\$2,167,572</b>	<b>\$1,064,923</b>	<b>49%</b>	<b>-\$784,945</b>

**Capital Projects**

	Original Budget	Transfers	Revised Budget	Current Month Actuals	% Used	YTD Variance
<b>1. Total Monthly Capital Costs</b>	\$0		\$0	\$0	0%	\$0

**2. Capital Costs**

	Original Budget	Transfers	Revised Budget	YTD June	% Used	YTD Variance
COM	\$0		\$0	\$0	0%	
TOG	\$0		\$0	\$0	0%	
AJFD	\$0		\$0	\$0	0%	
CAJ	\$0		\$0	\$0	0%	
TQC	\$0		\$0	\$0	0%	
RVFD	\$0		\$0	\$0	0%	
<b>Total Capital Costs</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0%</b>	<b>\$0</b>



Description	FY13/14		Average over		Actuals as of Apr 30, 2014	Variance From 10 Months Projected Increase/(Decrease)	% Variance	Variance Explanations (over \$5,000/10%)
	Fiscal Year Budget	10 months Budget	Fiscal Year Projected	10 months Projected				
Personnel Services	925,949	771,624	440,672	367,227	347,754	(19,473)	-3%	
Sub-total Personnel Services	\$ 925,949	\$ 771,624	\$ 440,672	\$ 367,227	\$ 347,754	\$ (19,473)	-3%	
Professional Services - Consulting	250,000	208,333	250,000	208,333		(208,333)	-100%	Use of funds expected in 4th QTR or possibly next Fiscal Year
Professional Services - Legal	6,122	5,102	13,000	10,833	13,585	2,752	54%	
Professional Services - Grant Writing	15,306	12,755	-	-		-	0%	
Professional Services - Other	7,653	6,378	2,976	2,480	3,904	1,424	22%	
Temp Services		-	69,172	57,643	63,814	6,171	100%	Current expectation is to incur \$90K by the end of FY2014
Telephone - Local	4,337	3,614	4,790	3,992	3,726	(265)	-7%	
Equipment Usage (Vehicles)	10,714	8,928	32,048	26,707	14,618	(12,088)	-135%	Reviewed and re-allocated vehicle costs for the current year.
Insurance Premiums - Agencies	9,055	7,546	9,651	8,043	10,136	2,094	28%	
Repairs & Maintenance Outside	20,408	17,007	9,858	8,215	7,849	(366)	-2%	
Shaw Butte Land Rental	14,694	12,245	14,750	12,292	14,734	2,442	20%	
Utilities	85,714	71,428	63,535	52,946	52,468	(478)	-1%	Utilities are billed one month behind; with the end of year accrual we expect to be around \$70K for the year.
Contract - Preventative Generators	51,020	42,517	10,000	8,333		(8,333)	-20%	Use of funds expected in 4th QTR
Training (Education)	5,102	4,252	198	165	99	(66)	-2%	
All Other Services	7,599	6,333	506	422		(422)	-7%	
Sub-total Services	\$ 487,724	\$ 406,437	\$ 480,484	\$ 400,403	\$ 184,932	\$ (215,471)	-53%	
Materials & Parts - Outside	57,398	47,832	16,772	13,977	12,552	(1,424)	-3%	
Non Cap Assets	10,204	8,503	50,086	41,738	53,441	11,703	138%	Funds are utilized as needed; no additional expenditures are expected for FY2014
Contract - Preventative Motorola	683,746	569,788	588,997	490,831	467,221	(23,610)	-4%	Motorola monthly contract reduced from \$53K to \$43K in October; savings can be utilized for Temp Services
All Other Commodities	2,552	2,127	-	-		-	0%	
Sub-total Commodities	\$ 753,900	\$ 628,250	\$ 655,855	\$ 546,546	\$ 533,214	\$ (13,331)	-2%	
Grand Total	\$ 2,167,573	\$ 1,806,311	\$ 1,577,011	\$ 1,314,176	\$ 1,065,901	\$ (248,275)	-14%	Variance from Billed is due to allocated vehicle costs which will be trued-up at year end

**Date:** June 11, 2014

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

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

**From:** Randy Thompson

**Subject:** Administrator Update

### **Capital Projects**

No capital projects were budgeted for fiscal year 2013-2014.

### **Operations Summary**

**System Availability** – Please see the system availability chart on page 3. Since the last Administrator update on March 27, 2014, there was one equipment failure on May 18, 2014, that removed the TRW site from the system for 101 seconds; there were no reports of impacts to users from this event. For fiscal year 2014, the average system availability has been 99.967%, which is below the goal of 99.999%.

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

- 1) Average airtime usage by member for fiscal year 2014 through April, 2014
- 2) Average number of radios enabled by member for fiscal year 2014 through April, 2014
- 3) Average airtime usage by service type for fiscal year 2014 through April, 2014
- 4) Average number of radios enabled by service type for fiscal year 2014 through April, 2014

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

- 1) Peak channel usage for each site for March, 2014
- 2) Peak channel usage for each site for April, 2014 – you will note 3 occasions of all 15 voice channels in use on the simulcast cell during April, 2014; however, no busies were reported by the system or users.

### **Other Significant Events:**

- 1) As stated in the January 23, 2014 Administrator's Update, the failure of an electrical relay caused the cooling system for the City of Mesa Communications Building to shut down on February 14, 2014. Additional alarms have been installed to ensure that appropriate personnel are alerted to a failure of the cooling plant. The current cooling plant has been overhauled, and the external cooling tower has been replaced. Temporary equipment has been brought in to provide redundancy. The City of Mesa has a project underway to upgrade the cooling plant for the Communications Building. This project is funded by City of Mesa General Obligation Bonds for Public Safety Capital Improvement Projects approved by the voters November 5, 2013. The firm timeline for this work is pending the completion of the replacement cooling plant design.

## TRWC Administrator Update, June 11, 2014

### Upcoming Events:

- 1) 800 MHz “re-banding.” Re-banding is the initiative by Sprint (formerly Nextel) and the Federal Communications Commission to mitigate interference to users of the 800 MHz frequency spectrum caused by Sprint/Nextel’s iDEN (integrated Digital Enhanced Network) network. The issues with 800 MHz frequency use in the United States-Mexico border region have been settled, and the re-banding of 800 MHz Land Mobile Radio systems in the US-Mexico border region has begun. This work will involve the retuning of the TOPAZ voice radio network to new radio frequencies in the 800 MHz band, and require the reprogramming of all of the mobile and portable radios using the TOPAZ network. The cost of this work is borne by Sprint (there should be no cost to the TRWC members), and is planned to be complete by February, 2016. The City of Mesa (as the licensee for the 800 MHz frequencies) and Sprint entered into mediation regarding the cost of the Frequency Reconfiguration Agreement effective Monday, May 12, 2014. Conference calls with the mediator are being held twice per week.
- 2) Although no capital projects were budgeted in the 2013-2014 fiscal year, the opportunity arose to replace the obsolete point-to-point microwave radios that connect the Range Rider TOPAZ site to the Falcon Field backhaul network node. The total TRWC operating budget expenditure for this project is less than \$20,000. Even with this expenditure, the TRWC budget is forecast to end the fiscal year well under budget. Replacing these microwave radios also generates additional spare equipment for other point-to-point microwave radio connections in the network. This work was completed on May 14, 2014.
- 3) In addition to the project mentioned above for replacement of the cooling system for the Communications Building, there are two other projects underway to upgrade the emergency generators (placing them outside of the Communications Building to mitigate any exhaust fumes entering the building) and to upgrade the building Uninterruptible Power Source (UPS) and move it out of the basement of the Communications Building. These projects are funded by City of Mesa General Obligation Bonds for Public Safety Capital Improvement Projects approved by the voters November 5, 2013. The firm timeline for this work is pending the completion of the design for the new generators and UPS.
- 4) The batteries that back up the TOPAZ voice radio network and other equipment at the remote radio sites are 12 years old. Routine testing this spring revealed the batteries have reached the end of their service life. Normally, these batteries only power the equipment at a radio site for less than a minute while the emergency generator starts and comes up to speed to power the site. However, we size these batteries to power the site for a minimum of 4 hours in the event the emergency generator does not start, and we have to take the portable generator to the site to provide power. The batteries at the Mesa Community College (MCC) radio site are in particularly poor condition, and we have already ordered a replacement set of batteries for the site from the TRWC FY13/14 operating budget, at a cost of approximately \$12,000. The batteries at 2 of the sites, Twin Knolls and TRW, will be replaced by Maricopa County when they install the radio equipment for their new radio system at those sites later in calendar year 2014. Unfortunately, the need to replace these batteries sooner rather than later was not discovered until after the FY14/15 TRWC budget was developed. However, given the history of the TRWC operating budget running under budget, and in light of the item below, it may be possible to replace the batteries at up to 3 radio sites during FY14/15 without putting the TRWC over budget. This cost will be included in the FY15/16 and FY16/17 TRWC operating budgets.
- 5) In the City of Mesa’s FY14/15 budget, which was approved by the City Council on May 19<sup>th</sup>, a “lifecycle” project for \$1,000,000 to fund upgrades to the TOPAZ voice radio network was

### **TRWC Administrator Update, June 11, 2014**

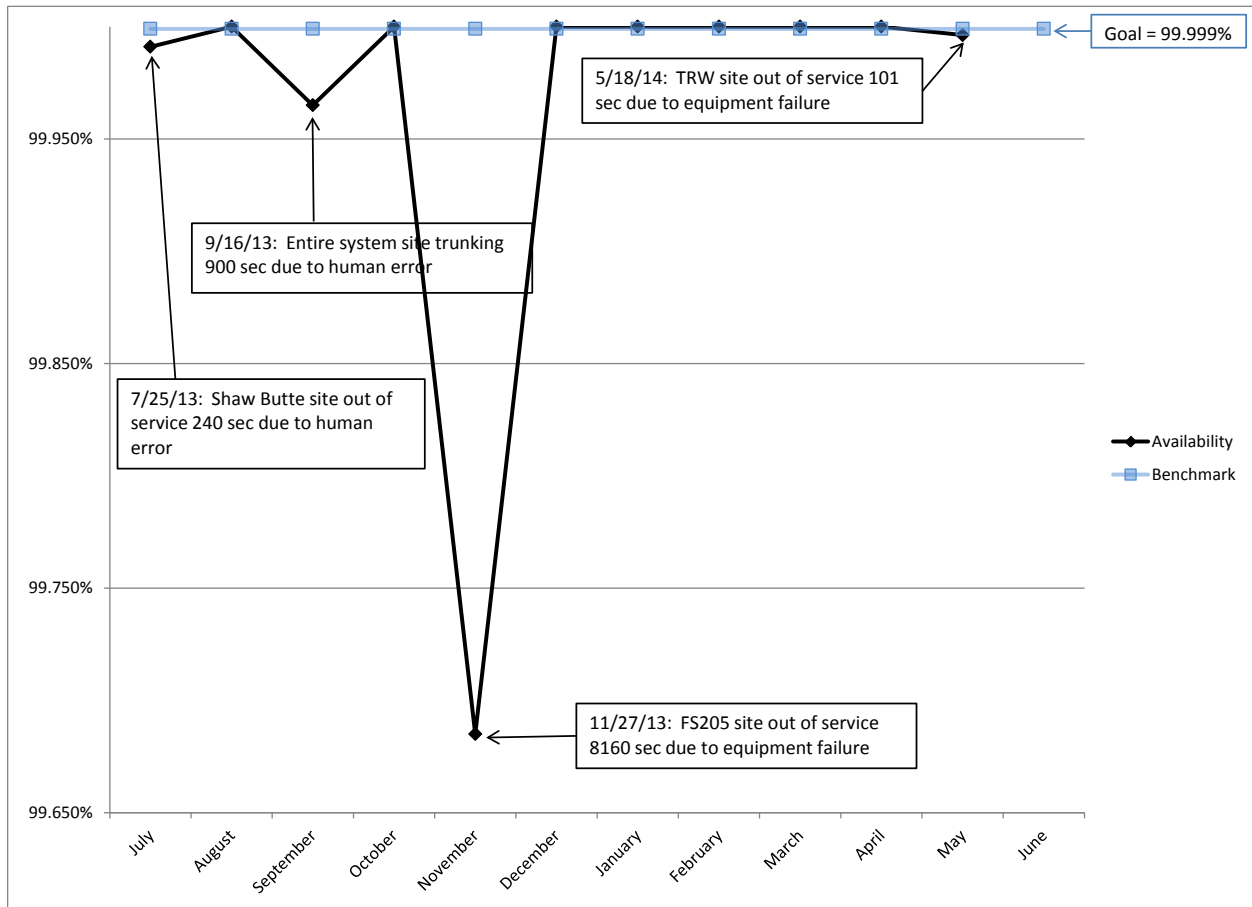
included. Unfortunately, this inclusion in the City's budget was unknown at the time the TRWC budget was being prepared and approved by the Board, so no provision has been made for the other members to fund their share of these upgrades in FY14/15. This amount of funds will allow the upgrade of the infrastructure at 2 TOPAZ radio sites. This will be a topic for discussion at future TRWC Executive Committee meetings as plans for the upgrades are developed.

- 6) The City of Mesa has been working with the Salt River Pima-Maricopa Indian Community (SRPMIC), the Arizona Department of Public Safety (DPS), and Maricopa County on the agreements necessary to allow SRPMIC to utilize space in the Thompson Peak radio site that is allocated to Mesa/TRWC to install equipment for SRPMIC's new radio system. In exchange for use of the space, SRPMIC has agreed to upgrade the TOPAZ voice radio network infrastructure on Thompson Peak. This will save the TRWC members approximately \$300,000. The agreements are still being finalized, and the equipment should be upgraded within the next 4 months.

#### **Personnel:**

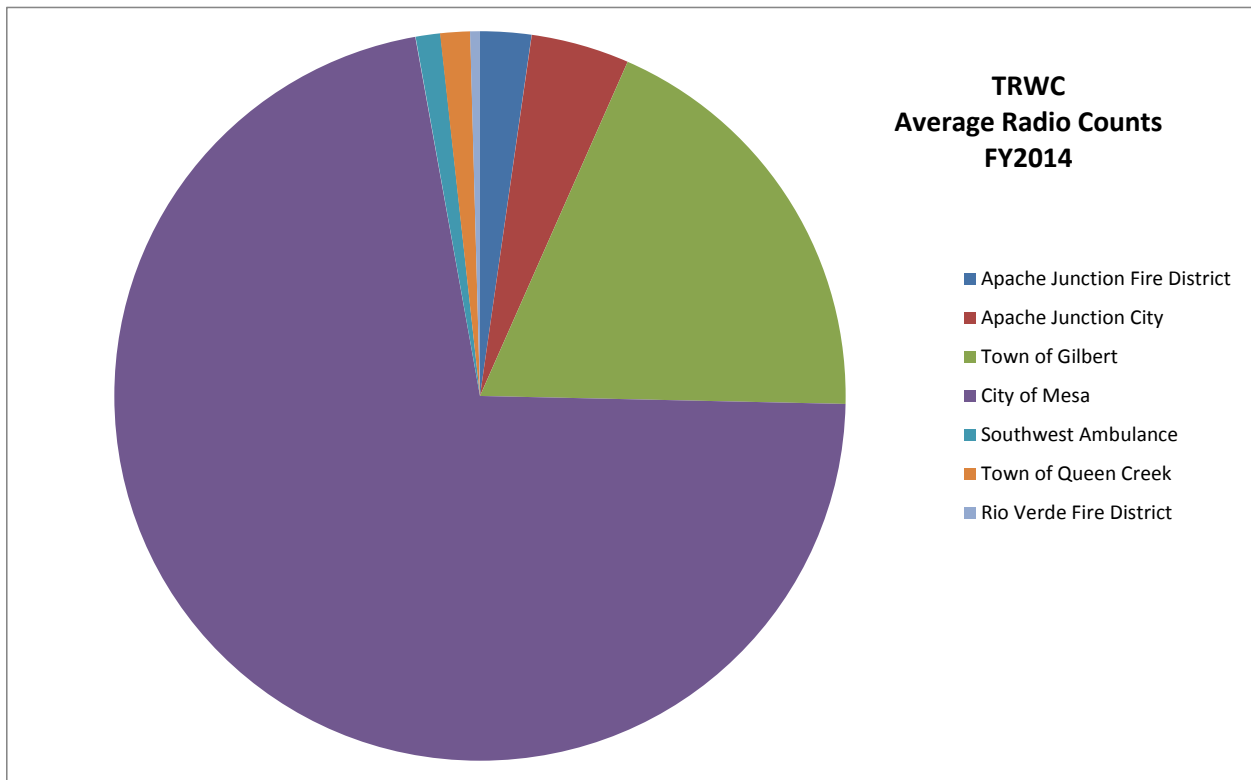
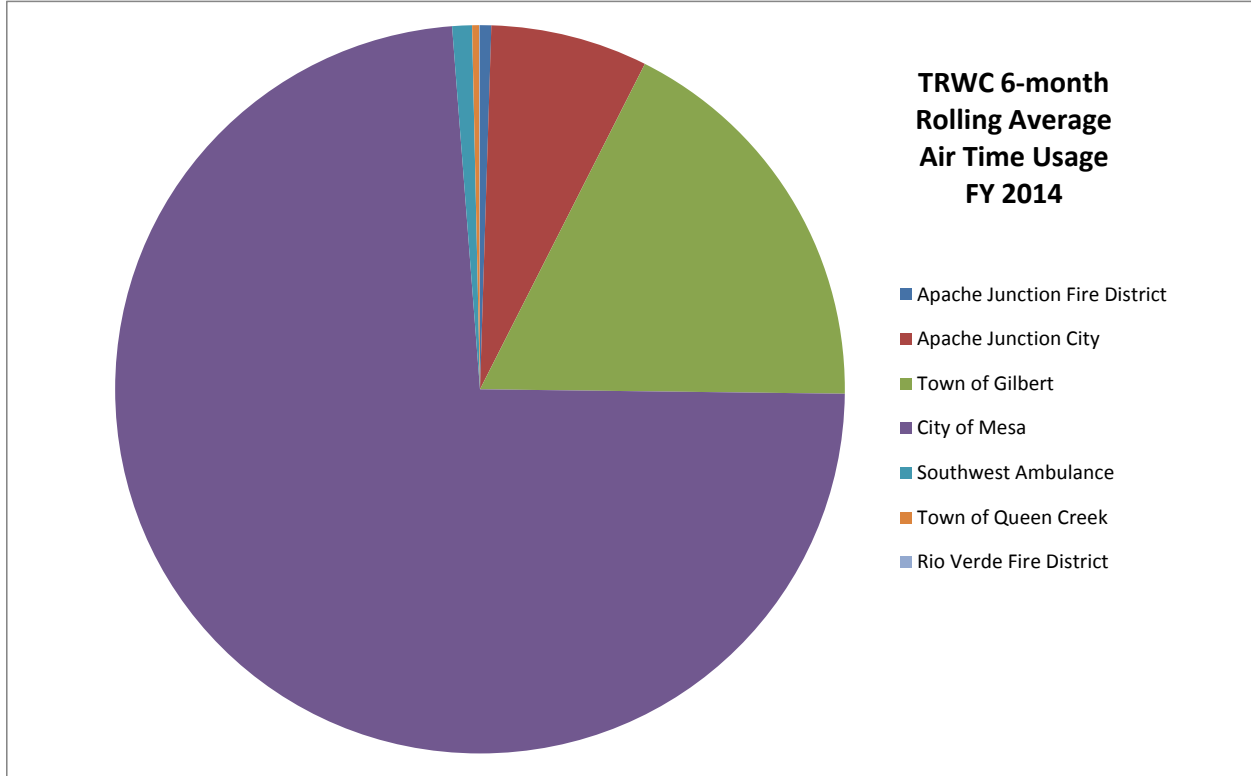
- 1) Nothing to report.

# TRWC Administrator Update, June 11, 2014

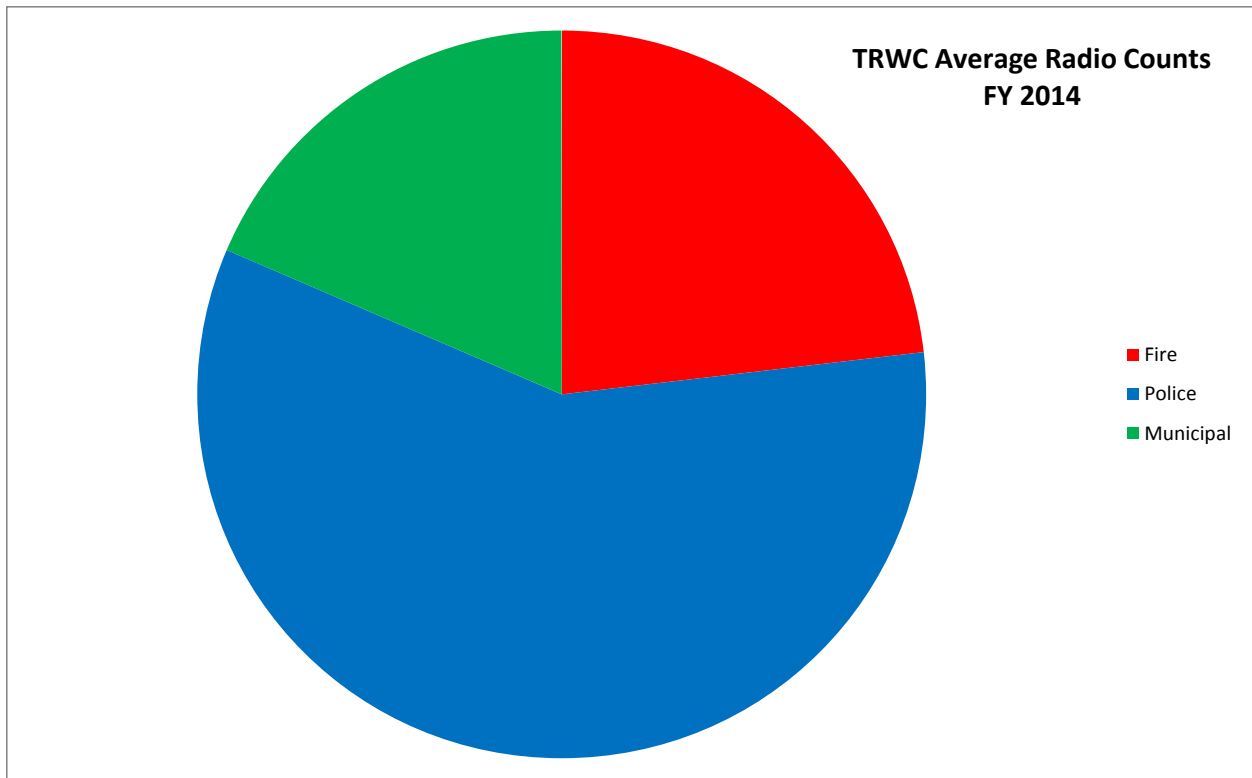
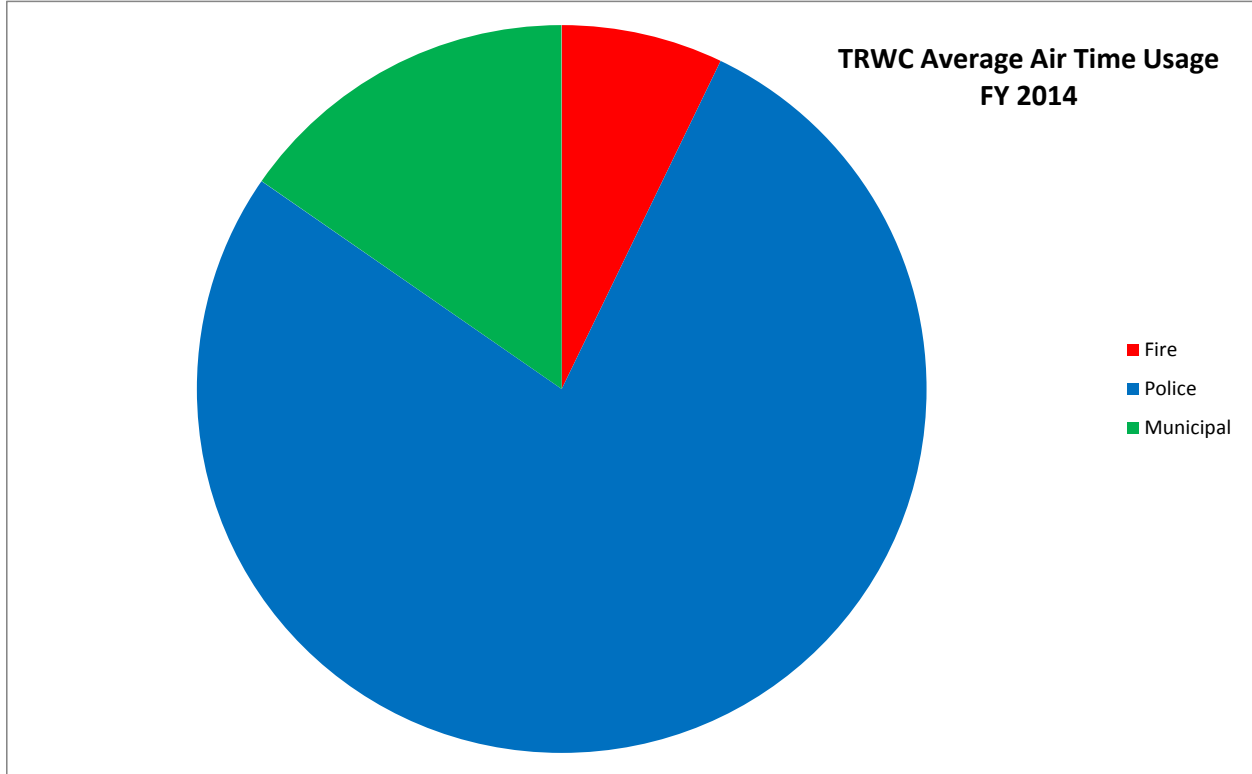


## System Availability, Fiscal Year 2014

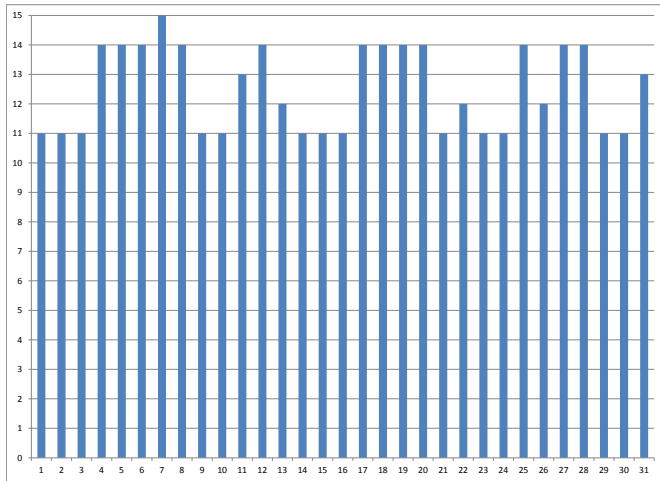
TRWC Administrator Update, June 11, 2014



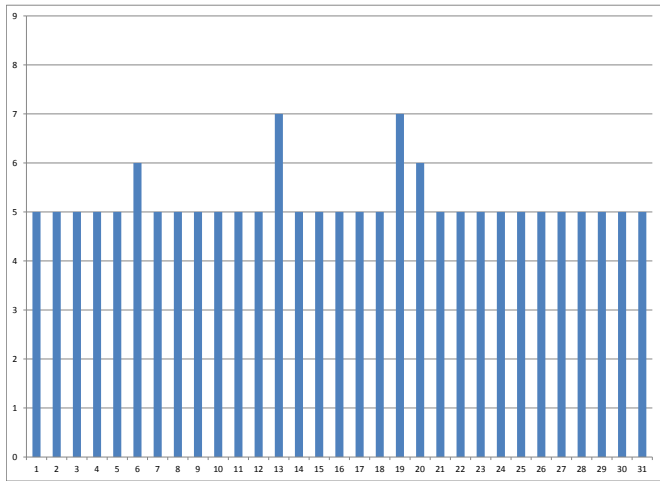
TRWC Administrator Update, June 11, 2014



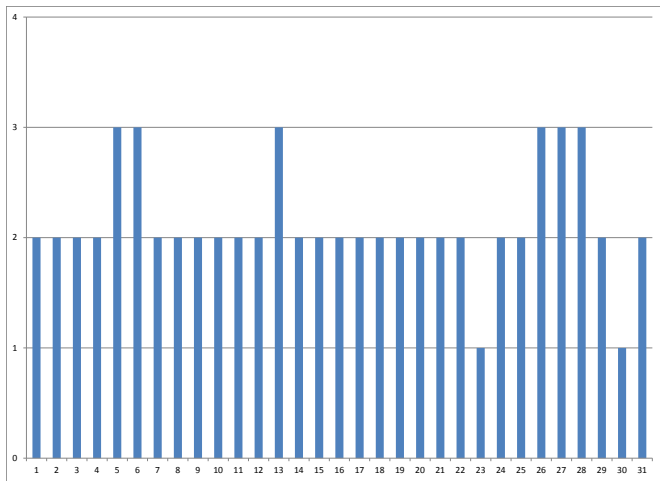
TOPAZ Peak Channel Usage, March, 2014



Simulcast Cell



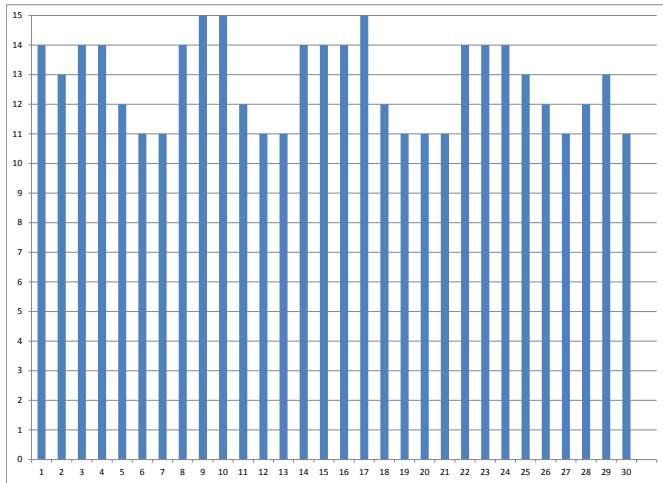
Thompson Peak



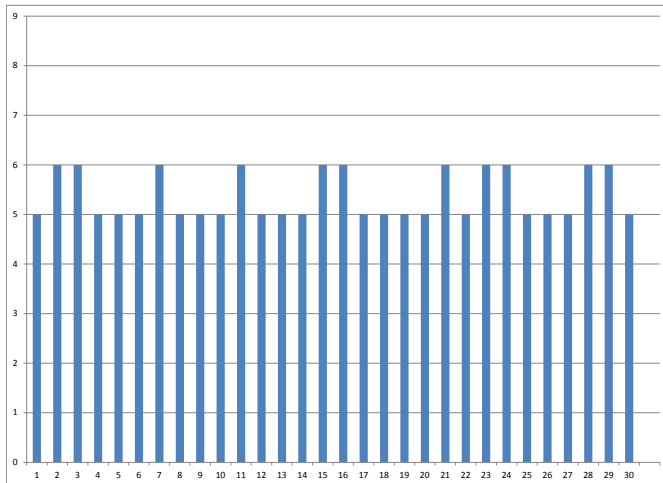
Shaw Butte



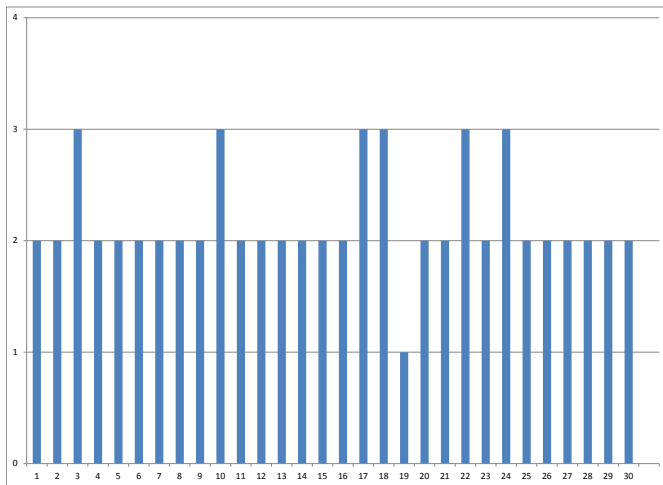
TOPAZ Peak Channel Usage, April, 2014



Simulcast Cell



Thompson Peak



Shaw Butte