



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.

Directors & Staff Attendees

John Kross, John Pombier, Marc Skocypec, Dale Shaw, Bill Anger, Randy Thompson, Sherry McGlade

Minutes

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

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. A roll call was conducted and a quorum was confirmed.

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

March 27th TRWC Board Meeting Minutes

John Pombier motioned to approve the 03/27/14 TRWC Board Meeting Minutes and Chairman Kross 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)

Wes Kemp provided a brief overview of the recent work of the Executive Committee, including an update on the Simplex Radio System effort. He shared that 18-months of work by the Executive Committee that has resulted in a formal bid process that will be considered later in the agenda.

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 User Group's recent effort primarily involved review of the Simplex Radio bids. They narrowed the considered candidates from 7 to 3, which were then interviewed by the team. He also shared that the User Group reviewed commercial basement performance issues and necessary operational adjustments. He then outlined work underway to test noise canceling microphones to determine the best configuration, equipment, and training required for use of these microphones. He shared that the group is reviewing the reintegration of the new consoles in TRWC partner dispatch centers.

Chairman Kross asked if Mr Duggan is comfortable with the Simplex process and how it has been handled to date. Mr. Duggan responded that he feels it has been effective, that the User Group has had a good opportunity to be engaged in the process, that it is moving forward at a good pace, and that a good provider has been selected to help set the system up.

Chairman Kross followed up seeking clarity on the bid review process and how the bid amounts were considered in the process. Mr. Duggan responded that the formal bid process involved rankings and scoring that provided clear separation that ultimately narrowed the candidates to the three that were interviewed.

c. Governance Working Group - Gary Bradbury & Dale Shaw

Dale Shaw provided a brief summary on the efforts of the Governance Working Group (GWG). He shared that the group has continued the work on the governance materials which now centers on the legal review that is being provided by Bill Anger. The GWG is working toward the presentation of the draft governance in September. He also shared that the group is conducting a financial review that involves the participation of Sherry McGlade. Ultimately the group is working to prepare both Boards to provide direction in November. The start of adoption and detailed implementation work would begin sometime in 2015 after direction is received by the Boards. Bill Anger added that the group is going through an intensive review process that involves frequent meetings and that the group is making very good progress.

Chairman Kross asked what the title of the governance document will be. Dale Shaw responded that the group is generally referring to the document as the Governance Agreement but also noted that the final form and title of the document will be impacted what type of entity is established for the new Authority. Mr. Anger shared that the existing agreements used in each Cooperative today have been used as a basis for the new document.

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

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

Denis Murphy summarized the recommendation provided in the report. He outlined the formal approval process that will require the approval of the Mesa City Council. Randy Thompson shared that the consulting funding is in the current FY 13/14 Budget and will be carried forward to the FY 14/15 Budget.

Chairman Kross asked how long it will take the consultant to complete the work. Mr. Murphy shared that Phase 1 & 2 will be complete in March of 2015.

Chairman Kross then asked if there are any cost estimates for Phase 3 - the hardware. Mr. Murphy responded that Phase 1 & 2 will need to be completed before we will have costs. Chairman Kross then asked how we are handling the budgeting for Phase 3 as it relates to the next budget adoption cycle. Mr. Shaw responded that the completion of Phase 2 and the budget adoption process will time very close. He added that we included some high level estimates as part of the last budget forecast as a place holder, but we will not have a good cost estimate until the work is done by the consultant.

John Pombier motioned to approve the recommendation and Chairman Kross 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 provided a verbal summary of the Year To Date Actuals Report.

b. Network Performance Overview - Randy Thompson

Randy Thompson provided a verbal summary of the Network Performance Overview.

Chairman Kross expressed appreciation for Mesa including the lifecycle item in their budget.

7) Next Meeting(s):

Joint TRWC/RWC Board Meeting - September 2014 TBD

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

Dale Shaw summarize the upcoming meeting schedule.

8) Adjournment - Chairman Kross

Chairman Kross motioned to adjourn the meeting and John Pombier seconded. All were in favor; the motion passed. Chairman Kross thanked everyone and adjourned the meeting.



Date: September 25, 2014
To: TOPAZ Regional Wireless Cooperative (TRWC) Board of Directors
Through: TRWC Executive Committee
Dale Shaw, TRWC Executive Director
From: Randy Thompson, Communications Administrator, City of Mesa
Subject: Lifecycle Upgrade for the TOPAZ Voice Radio Network

Purpose and Recommendation

The City of Mesa, as the Administrative Manager for the TRWC, recommends awarding a contract to Motorola Solutions for \$7,169,138.13 for an upgrade to the TOPAZ Voice Radio Network and the execution of a Frequency Reconfiguration Agreement with Sprint Communications to provide \$2,364,320 of the funding for the upgrade. The upgrade will replace obsolete radio base stations, upgrade the existing core network equipment, implement resilient core network equipment to improve radio network reliability, and save \$6.4M over the forecasted budget for this work in the current TRWC Capital Plan.

Background

The TOPAZ Voice Radio Network equipment is used to provide mission critical Public Safety communications and two-way voice radio communications for other Municipal users throughout the TRWC service area. The equipment in use today is 12 years old and is out of hardware support by the manufacturer. The radio system was planned to be replaced in the near future due to its age, parts support, and to remain compatible with other agencies throughout the valley. This time line is being accelerated due to an unexpected opportunity from a Federal Communications Commission (FCC) order to move to new radio frequencies. This FCC order is the result of a settlement with Sprint/Nextel Communications to mitigate interference caused by

Sprint/Nextel’s network. If approved, by the TRWC Board of Directors and the City of Mesa City Council, the TRWC will be able to take advantage of a \$2.4M settlement from Sprint. This settlement, coupled with the Motorola discounted price for performing the upgrade as a system, has reduced the price by an additional \$3.1 M. The total savings that could be achieved by going forward with this project at this time, thus taking advantage of the Sprint settlement and Motorola discounts, is \$5.5M. This upgrade will be presented to the City of Mesa City Council for approval on October 6, 2014, if it is approved by the TRWC Board of Directors at the September 25, 2014, Board meeting.

Discussion

The Sprint settlement requires a contract for the upgrade not later than October 15, 2014.

The new radio base stations and upgraded core network equipment have manufacturer lifecycle support through 2030.

Alternatives

The Board may elect to take no action. An alternative proposal to utilize Lifecycle funds budgeted by the City of Mesa will be presented to the Board to upgrade the TOPAZ radio infrastructure over the current and next 5 fiscal years, at a total cost of approximately \$8.5 million, and the core radio network resiliency will be implemented utilizing the City of Mesa 2013 Public Safety bonds at a cost of \$2.2 million at some point in the future. This will result in a \$3.5 million higher cost to the members of the TRWC. In addition, the \$2,364,320 Sprint re-banding settlement funds will be utilized to re-band the existing TOPAZ infrastructure, and will not offset any of the cost of the TOPAZ infrastructure upgrades.

Fiscal Impact

The fiscal impact to the TRWC Members is as follows:

TRWC Member	Share	FY14/15	FY15/16	FY16/17	FY17/18	FY18/19	FY19/20	Total
Amount Due		\$1,800,000	\$3,633,828	\$433,828	\$433,828	\$433,828	\$433,828	\$7,169,138
Sprint/Nextel Re-banding Settlement		\$1,800,000	\$564,320	\$0	\$0	\$0	\$0	\$2,364,320
Superstition Fire & Medical District	0.49%	\$0	\$15,041	\$2,126	\$2,126	\$2,126	\$2,126	\$23,544
City of Apache Junction	7.12%	\$0	\$218,549	\$30,889	\$30,889	\$30,889	\$30,889	\$342,103
Town of Gilbert	17.90%	\$0	\$549,442	\$77,655	\$77,655	\$77,655	\$77,655	\$860,062
City of Mesa	74.15%	\$0	\$2,276,040	\$321,683	\$321,683	\$321,683	\$321,683	\$3,562,773
Town of Queen Creek	0.30%	\$0	\$9,209	\$1,301	\$1,301	\$1,301	\$1,301	\$14,414
Rio Verde Fire District	0.04%	\$0	\$1,228	\$174	\$174	\$174	\$174	\$1,922

Summary of Savings Achieved by Accelerating This Project:

- Avoidance of inflation projected in TRWC Capital budget, \$945,368
- Software Licenses, \$2,600,000
- Sprint “Re-banding” Settlement, \$2,364,320
- Additional Savings Negotiated by City of Mesa Purchasing Division, \$506,757

Coordinated With

Coordinated with the TRWC Executive Committee.



**FISCAL YEAR TO DATE ACTUALS
THROUGH AUGUST 2014**

OPERATIONS, MAINTENANCE AND CAPITAL

**PRESENTED TO THE BOARD OF DIRECTORS
SEPTEMBER 25, 2014**

TOPAZ BUDGET TO ACTUAL COMPARISON
Fiscal Year 2014 / 2015

VOICE

Operations and Maintenance Costs

	Original Budget	Transfers	Revised Budget	February Units
1. Budgeted Airtime Units				
COM	73.96%		73.96%	0.00%
TOG	17.91%		17.91%	0.00%
AJFD	0.51%		0.51%	0.00%
CAJ	6.46%		6.46%	0.00%
TQC	0.27%		0.27%	0.00%
RVFD	0.04%		0.04%	0.00%
SWA	0.85%		0.85%	0.00%
Total Airtime	100.00%		100.00%	0.00%

	Monthly Budget	Transfers	Revised Monthly	Current Month Actuals	% Used	Monthly Variance
2. Total Monthly Operating & Maintenance Costs	\$117,485		\$117,485	\$92,428	79%	-\$25,057

3. Operating & Maintenance Costs

	Original Budget	Transfers	Revised Budget	YTD August	% Used	YTD Variance
COM	\$1,042,699		\$1,042,699	\$495,718	48%	
TOG	\$252,498		\$252,498	\$119,875	47%	
AJFD	\$7,190		\$7,190	\$3,191	44%	
CAJ	\$91,074		\$91,074	\$51,674	57%	
TQC	\$3,807		\$3,807	\$2,145	56%	
RVFD	\$564		\$564	\$272	48%	
SWA	\$11,983		\$11,983	\$6,170	51%	
Total Operating & Maintenance Costs	\$1,409,815		\$1,409,815	\$679,055	48%	-\$260,832

Capital Projects

	Original Budget	Transfers	Revised Budget	Current Month Actuals	% Used	YTD Variance
1. Total Monthly Capital Costs	\$574,750		\$574,750	\$0	0%	-\$574,750

2. Capital Costs

	Original Budget	Transfers	Revised Budget	YTD August	% Used	YTD Variance
COM	\$430,028		\$430,028	\$0	0%	
TOG	\$105,524		\$105,524	\$0	0%	
AJFD	\$2,644		\$2,644	\$0	0%	
CAJ	\$33,910		\$33,910	\$0	0%	
TQC	\$1,322		\$1,322	\$0	0%	
RVFD	\$1,322		\$1,322	\$0	0%	
Total Capital Costs	\$574,750	\$0	\$574,750	\$0	0%	-\$574,750

Fiscal Year 2014 / 2015

Description	2			Variance From 2 Months Budget Increase/(Decrease)	% Variance	Variance Explanations (over \$5,000/10%)
	Fiscal Year Budget	Months Budget	Actuals as of August 31, 2014			
Personnel Services	467,115	77,853	67,486	(10,366)	-13%	
Sub-total Personnel Services	\$ 467,115	\$ 77,853	\$ 67,486	\$ (10,366)	-13%	
Professional Services - Consulting	-	-	-	-	0%	
Professional Services - Legal	52,000	8,667	-	(8,667)	-100%	Internal city services have not been posted yet
Professional Services - Other	3,100	517	1,570	1,053	204%	
Temp Services	75,000	12,500	13,727	1,227	10%	
Telephone - Local	5,000	833	807	(26)	-3%	
Equipment Usage (Vehicles)	20,000	3,333	2,803	(530)	-16%	
Insurance Premiums - Agencies	10,600	1,767	-	(1,767)	-100%	
Repairs & Maintenance Outside	10,400	1,733	1,692	(42)	-2%	
Shaw Butte Land Rental	15,000	2,500	14,724	12,224	489%	One time annual billing
Utilities	74,000	12,333	5,759	(6,574)	-53%	SRP bills are one month in arrears; July has also not been posted yet
Contract - Preventative Generators	10,000	1,667	-	(1,667)	-100%	
All Other Services	2,000	333	-	(333)	-100%	
Sub-total Services	\$ 277,100	\$ 46,183	\$ 41,082	\$ (5,101)	-11%	
Materials & Parts - Outside	17,600	2,933	250	(2,683)	-91%	
Non Cap Assets	50,000	8,333	-	(8,333)	-100%	Funds are utilized as required
Contract - Preventative Motorola	577,000	96,167	551,316	455,149	473%	Motorola one time annual billing, \$530K
Software Maintenance- Juniper	20,000	3,333	-	(3,333)	-100%	
All Other Commodities	1,000	167	-	(167)	-100%	
Sub-total Commodities	\$ 665,600	\$ 110,933	\$ 551,566	\$ 440,633	397%	
Grand Total Budget	\$ 1,409,815	\$ 234,969	\$ 660,135	\$ 425,165	181%	
2014 Rollforward of Consulting fees	250,000	100,000	18,920	(81,080)	-81%	Carried forward funds from FY2014
Grand Total	\$ 1,659,815	\$ 334,969	\$ 679,055	\$ 344,085	103%	



**FISCAL YEAR ENDED
JUNE 30, 2014**

OPERATIONS, MAINTENANCE AND CAPITAL

**PRESENTED TO THE BOARD OF DIRECTORS
SEPTEMBER 25, 2014**

TOPAZ BUDGET TO ACTUAL COMPARISON
Fiscal Year 2013 / 2014

VOICE

Operations and Maintenance Costs

1. Budgeted Airtime Units

	Original Budget	Transfers	Revised Budget	June Units
COM	73.44%		73.44%	73.13%
TOG	19.16%		19.16%	17.83%
AJFD	0.53%		0.53%	0.44%
CAJ	5.62%		5.62%	7.36%
TQC	0.36%		0.36%	0.31%
RVFD	0.05%		0.05%	0.04%
SWA	0.84%		0.84%	0.89%

Total Airtime	100.00%		100.00%	100.00%
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2. Total Monthly Operating & Maintenance Costs

Monthly Budget	Transfers	Revised Monthly	Current Month Actuals	% Used	Monthly Variance
\$180,631		\$180,631	\$149,867	83%	-\$30,764

3. Operating & Maintenance Costs

	Original Budget	Transfers	Revised Budget	YTD June	% Used	YTD Variance
COM	\$1,591,884		\$1,591,884	\$951,656	60%	
TOG	\$415,308		\$415,308	\$230,970	56%	
AJFD	\$11,484		\$11,484	\$6,128	53%	
CAJ	\$121,812		\$121,812	\$89,520	73%	
TQC	\$7,800		\$7,800	\$3,890	50%	
RVFD	\$1,080		\$1,080	\$540	50%	
SWA	\$18,204		\$18,204	\$11,107	61%	

Total Operating & Maintenance Costs	\$2,167,572		\$2,167,572	\$1,293,810	60%	-\$795,408
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Capital Projects

1. Total Monthly Capital Costs

Original Budget	Transfers	Revised Budget	Current Month Actuals	% Used	YTD Variance
\$0		\$0	\$11,164	0%	\$11,164

2. Capital Costs

	Original Budget	Transfers	Revised Budget	YTD June	% Used	YTD Variance
COM	\$0		\$0	\$39,032	0%	
TOG	\$0		\$0	\$9,484	0%	
AJFD	\$0		\$0	\$241	0%	
CAJ	\$0		\$0	\$3,839	0%	
TQC	\$0		\$0	\$162	0%	
RVFD	\$0		\$0	\$21	0%	

Total Capital Costs	\$0	\$0	\$0	\$52,779	0%	\$52,779
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FY13/14

Description	Fiscal Year Budget	Fiscal Year Projected	Actuals as of June 30, 2014	Variance From Fiscal Year Projected Increase/(Decrease)	% Variance	Variance Explanations (over \$5,000/10%)
Personnel Services	925,949	440,672	417,134	(23,538)	-3%	
Sub-total Personnel Services	\$ 925,949	\$ 440,672	\$ 417,134	\$ (23,538)	-3%	
Professional Services - Consulting	250,000	250,000		(250,000)	-109%	Use of funds carry forward to FY2015
Professional Services - Legal	6,122	13,000	43,963	30,963	552%	Governance Working Group - ACRCA committee
Professional Services - Grant Writing	15,306	-		-	100%	
Professional Services - Other	7,653	2,976	4,504	1,528	22%	
Temp Services		69,172	79,681	10,509	15%	D.Shaw time spent on ACRCA
Telephone - Local	4,337	4,790	4,943	153	4%	
Equipment Usage (Vehicles)	10,714	32,048	16,640	(15,408)	-157%	Allocation of city services was addressed mid-year and corrected
Insurance Premiums - Agencies	9,055	9,651	10,136	485	6%	
Repairs & Maintenance Outside	20,408	9,858	20,190	10,332	55%	Includes Preventative Generator services
Shaw Butte Land Rental	14,694	14,750	14,734	(16)	0%	
Utilities	85,714	63,535	66,081	2,546	3%	
Contract - Preventative Generators	51,020	10,000		(10,000)	-21%	Included in Repairs & Maintenance
Training (Education)	5,102	198	99	(99)	-2%	
All Other Services	7,599	506	319	(187)	-3%	
Sub-total Services	\$ 487,724	\$ 480,484	\$ 261,288	\$ (219,196)	-49%	
Materials & Parts - Outside	57,398	16,772	14,799	(1,973)	-4%	
Non Cap Assets	10,204	50,086	44,709	(5,377)	-57%	
Contract - Preventative Motorola	683,746	588,997	555,002	(33,995)	-5%	
All Other Commodities	2,552	-		-	0%	
Sub-total Commodities	\$ 753,900	\$ 655,855	\$ 614,511	\$ (41,344)	-6%	
Capitalized Assets	\$ -	\$ -	\$ 52,783	52,783	100%	
Grand Total	\$ 2,167,573	\$ 1,577,011	\$ 1,345,716	\$ (284,078)	-14%	

Date: September 25, 2014
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 item is presented for Board action in a separate agenda item.

Operations Summary

System Availability – Please see the system availability chart on page 3. Since the last Administrator update on June 11, 2014, there were no outages or impairments of the network – 100% availability. For fiscal year 2014, the average system availability was 99.970%, which is below the goal of 99.999%. For calendar year 2014, the average system availability has been 99.9995%, and for fiscal year 2015, the average system availability has been 100%, both of which are above the goal of 99.999%.

Airtime and Radio Counts – the following charts are included:

- 1) Average airtime usage by member for fiscal year 2015 through August, 2014
- 2) Average number of radios enabled by member for fiscal year 2015 through August, 2014
- 3) Average airtime usage by service type for fiscal year 2015 through August, 2014
- 4) Average number of radios enabled by service type for fiscal year 2015 through August, 2014

Peak Channel Usage – the following charts are included:

- 1) Peak channel usage for each site for June, 2014
- 2) Peak channel usage for each site for July, 2014

Other Significant Events:

- 1) Nothing to report.

Upcoming Events:

- 2) 800 MHz “re-banding.” Re-banding is the agreement 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. An agreement has been reached with Sprint to take a cash settlement for \$2,364,320 to be applied to the lifecycle upgrade of the TOPAZ radio network.
- 3) There are three City of Mesa Capital Improvement Projects underway on the City of Mesa Communications Building, as follows:

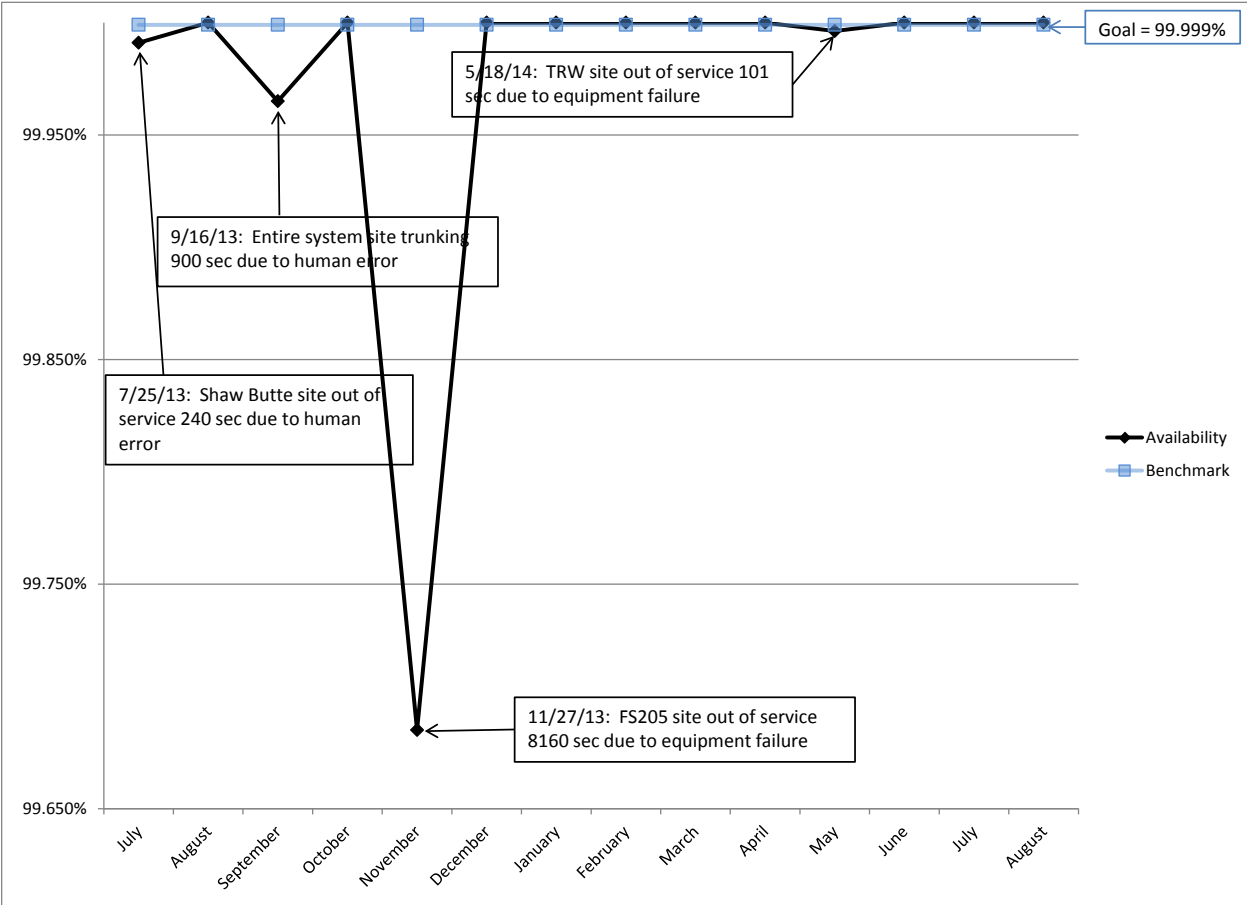
TRWC Administrator Update, September 25, 2014

- a. Upgrade of the building cooling system with two new air cooled chiller units to replace the existing cooling equipment.
 - b. Upgrade of the emergency generators to move them out of the basement of the Communications Building into the parking lot east of the mobile radio shop.
 - c. Lifecycle pgrade of the Uninterruptible Power Supply (UPS) and move it to an above-grade location in the Communications Building so it would not be subject to flooding.
- 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 have already been replaced. 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. A contract has been approved to replace three radio sites per year over the next three fiscal years so all sites will have adequate battery backup and the TRWC operating budget will not be adversely impacted.
- 5) The TOPAZ equipment on Thompson Peak is scheduled for replacement with new equipment on October 7, 2014. This was made possible at no charge to the TRWC members by negotiating with the Salt River Pima-Maricopa Indian Community for the use of spare reserved for the TRWC in the Thompson Peak radio site developed jointly with the Arizona Department of Public Safety.

Personnel:

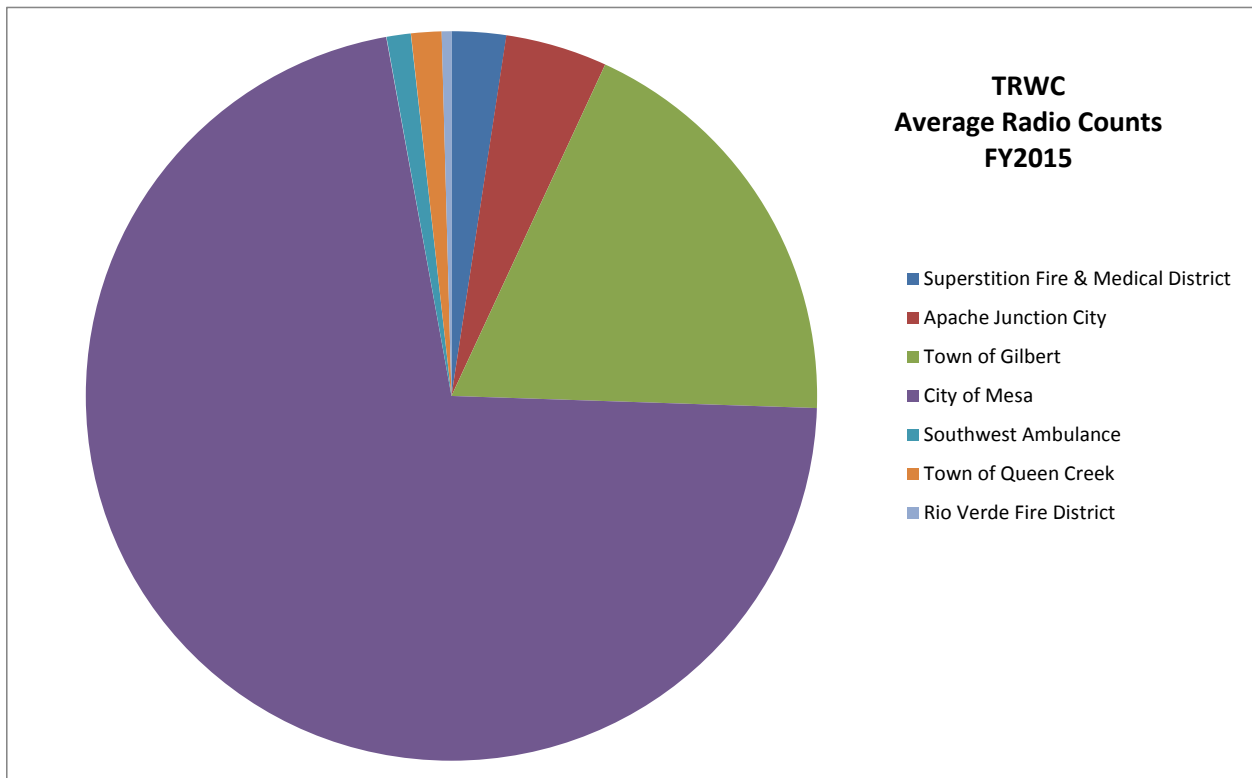
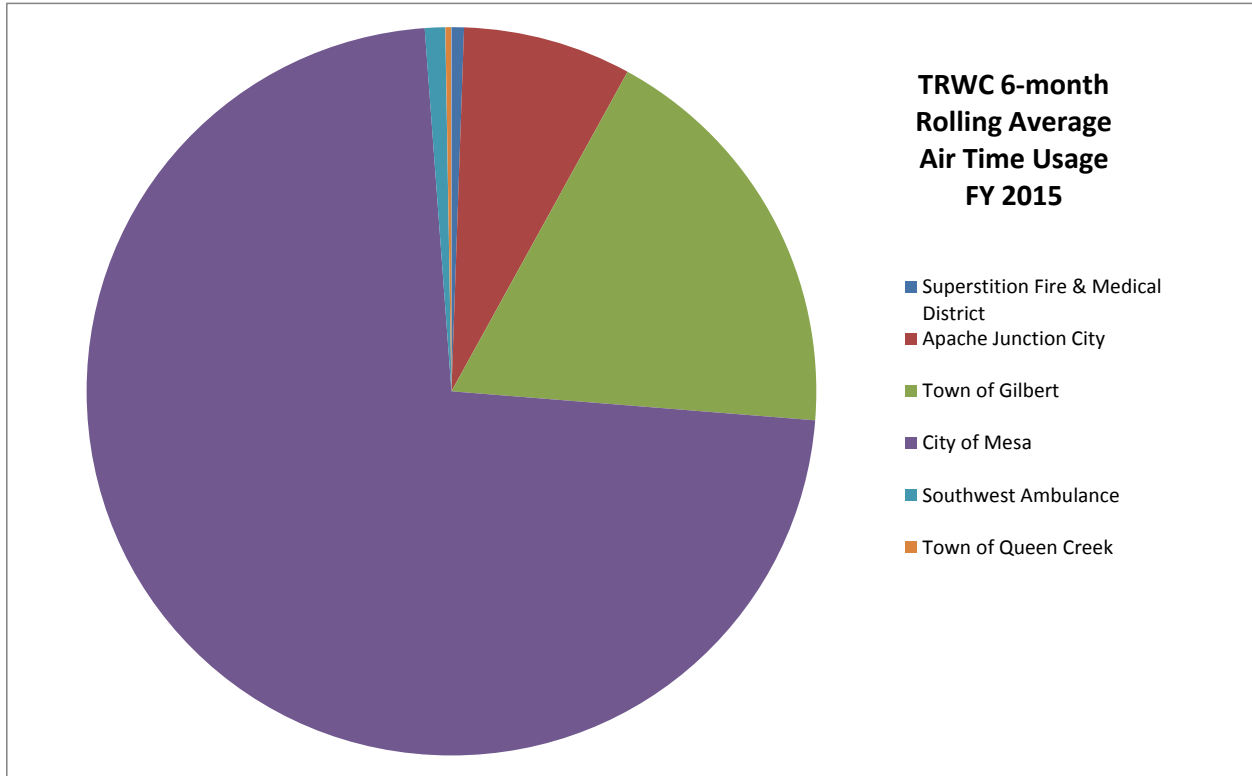
- 1) Nothing to report.

TRWC Administrator Update, September 25, 2014

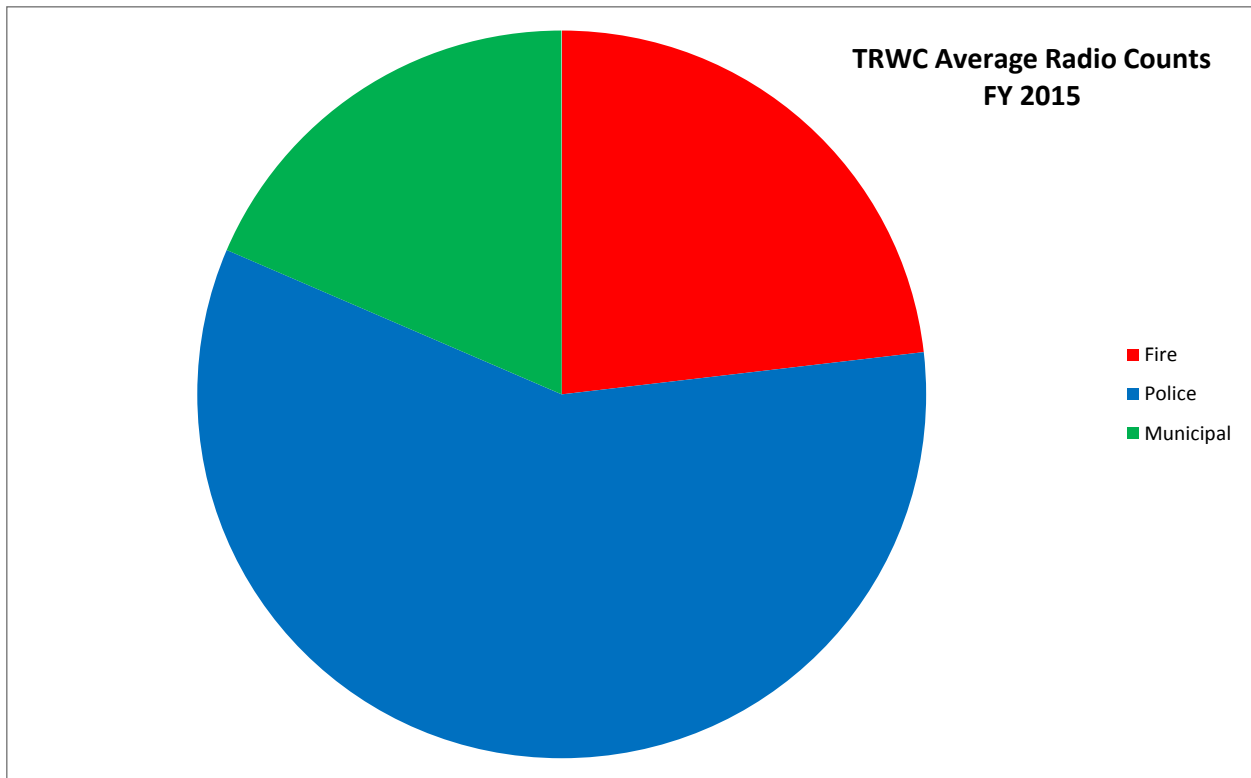
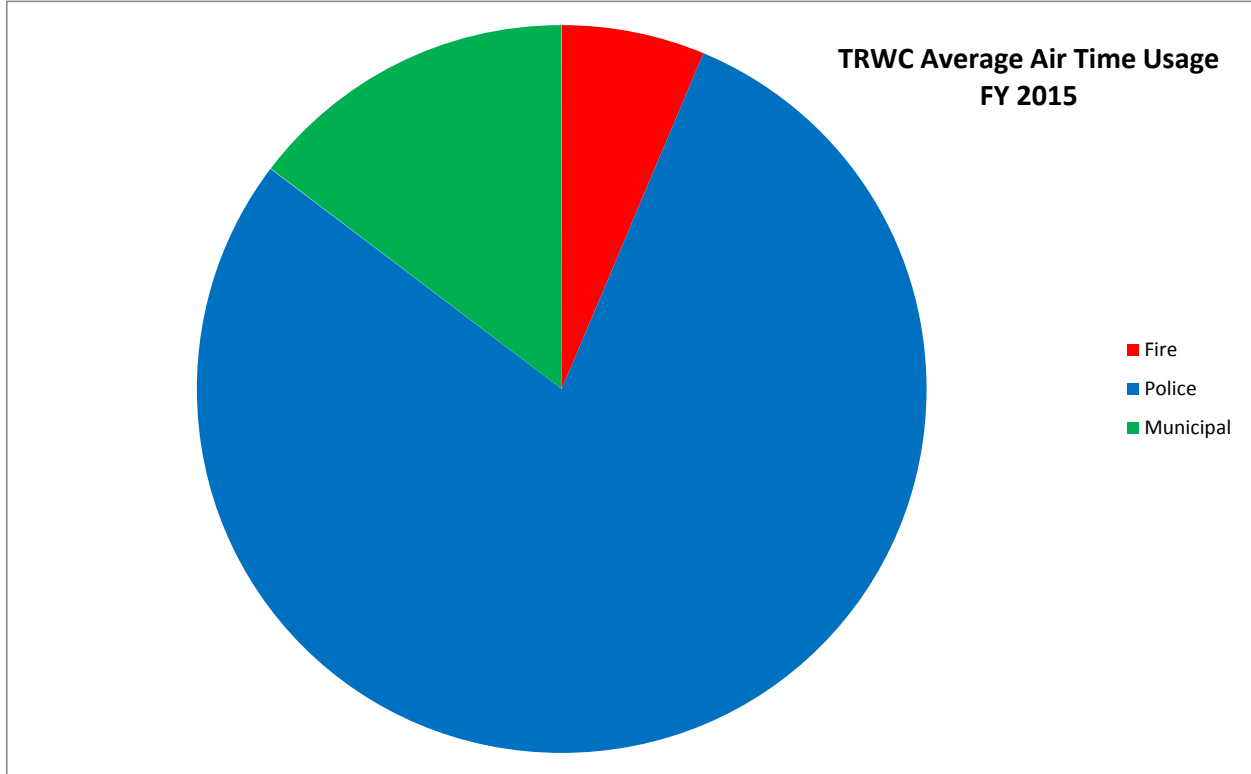


System Availability, July, 2103 through August, 2014

TRWC Administrator Update, September 25, 2014

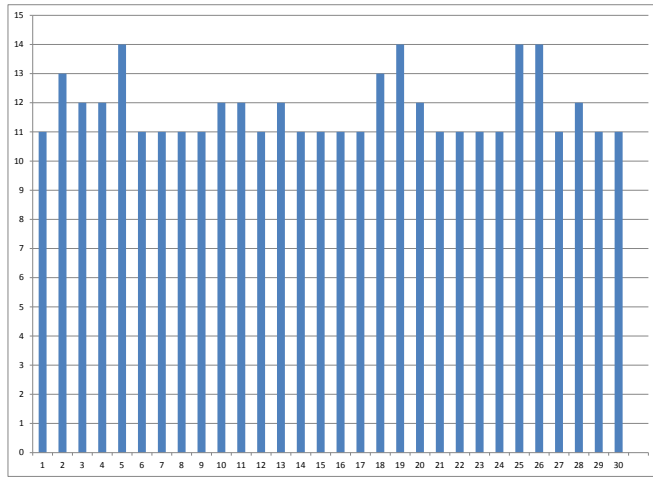


TRWC Administrator Update, September 25, 2014

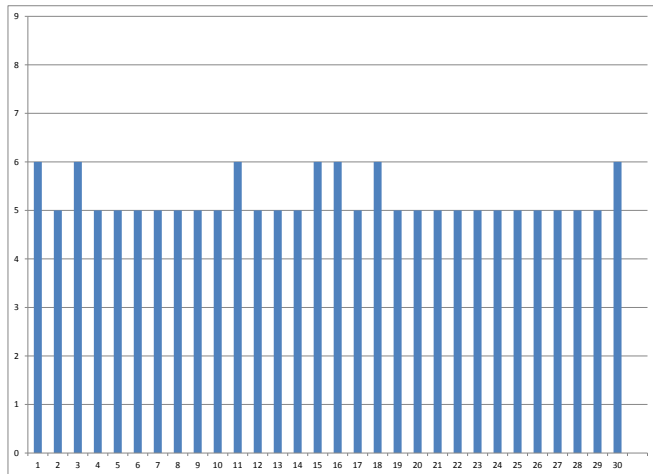


TRWC Administrator Update, September 25, 2014

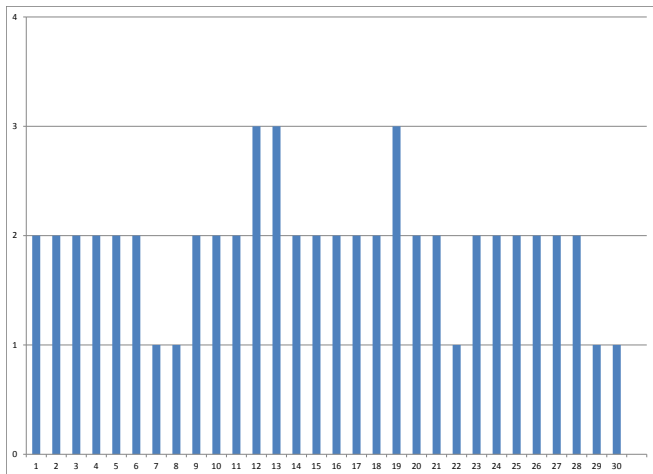
TOPAZ Peak Channel Usage, June, 2014



Simulcast Cell



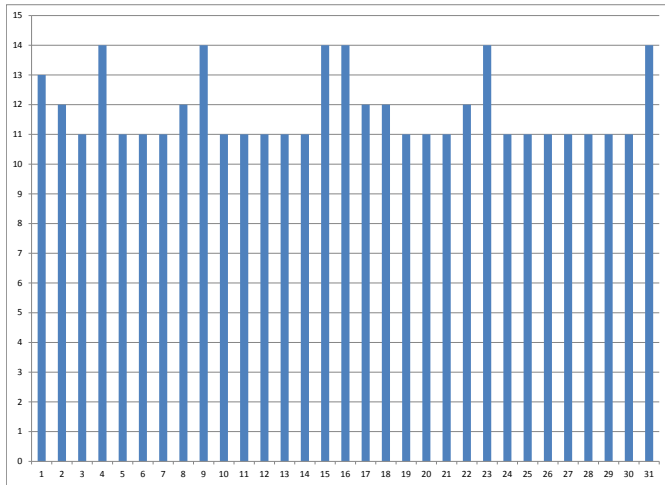
Thompson Peak



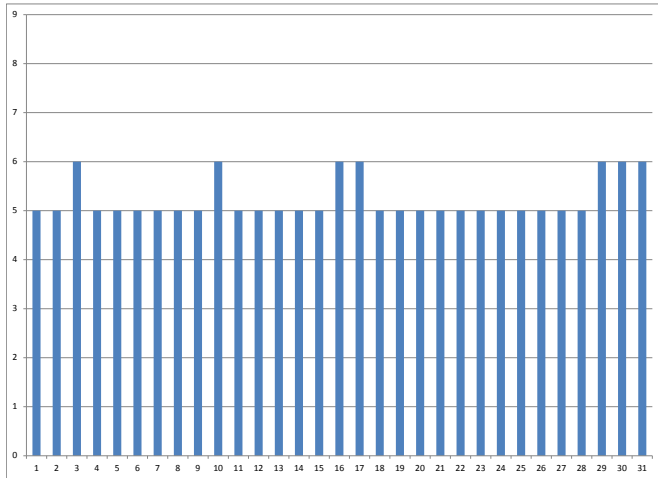
Shaw Butte

TRWC Administrator Update, September 25, 2014

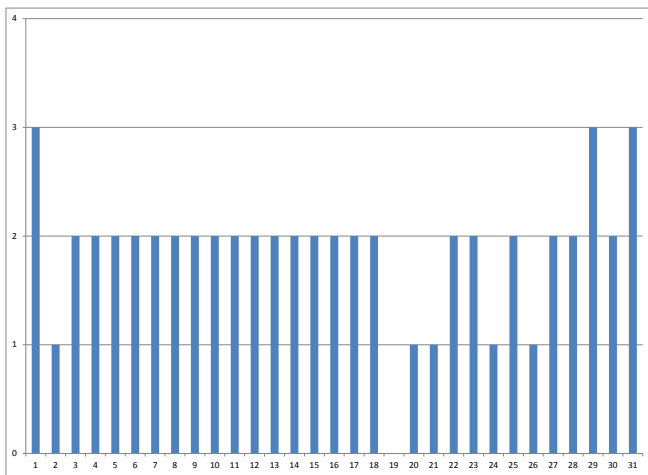
TOPAZ Peak Channel Usage, July, 2014



Simulcast Cell



Thompson Peak



Shaw Butte