

PCWIN Cooperative  
Business Plan  
August 2017



PCWIN Board Approved

Pima County Wireless Integrated Network  
3434 East 22<sup>nd</sup> Street • Tucson, AZ 85713

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## Summary of Revisions

Overall, this Business Plan represents a completely new communication tool for the governance of the Pima County Wireless Integrated Network (PCWIN). The August 2017 Business Plan updates the description of the network and organizational structure of PCWIN and establishes new goals and projects for the 2018-2019 fiscal year. Below is a brief summary of the significant revisions to the document:

Title	Sub-Title	Page(s)	Change
<b>Executive Summary</b>			
	<b>Not Applicable</b>	2	Changed P25 to Project 25
	<b>PCWIN Project Background</b>	3	Changed reference to third year of operation to fourth year of operation
	<b>Business Plan Purpose</b>	3	Added "administrative" activities
	<b>Business Plan Purpose</b>	3	Changed 2016 to 2017
	<b>PCWIN Costs</b>	4	Updated costs based on FY18/19 projections; Added FY 21/22
<b>PCWIN Cooperative Goals</b>		12	Updated Cooperative Goals to reflect goals and objectives for FY17/18
<b>PCWIN FY17/18 Projects and Issues</b>		13	Deleted, combined with PCWIN Cooperative Goals
<b>Annual Operating and Maintenance Cost Projections</b>		13	Added " unless a subscriber service maintenance plan has been executed" to bullet 7
	<b>Projected Annual Membership Fees</b>	14	Updated the expense estimates to reflect the FY 18/19 draft 5-year plan. Deleted second paragraph referring to 5-year predictions (extraneous language).
<b>Appendix A FY 18/19 Budget with 5-year Forecast</b>		15	Updated
<b>Appendix B PCWIN Cooperative Current Members and Participants</b>		17	Updated

## **Executive Summary**

PCWIN is a state-of-the-art digital trunked radio communications system designed to provide public safety grade radio communications throughout Pima County. The system is based on the Telecommunications Industry Association Project 25 standard for interoperable communications, supported by multiple public safety industry associations, and provides participating agencies and first responders with:

- Improved support for public safety operations with significant improvements, such as real-time, on-demand, automatic county-wide communications that expands the service areas for all users;
- Enhanced in-building communication in major population centers, particularly within the City of Tucson to meet the demanding needs of firefighters and law enforcement;
- System capacity to support routine, peak and emergency traffic that relieves the overcrowding that previously existed;
- Interagency and interdisciplinary interoperable communications with other member agencies;
- Improved dispatch center communications with field subscriber units including increased coverage in hard-to-reach places;
- Options for interconnections with state and federal communication systems for interoperability with external public safety service providers;
- New subscriber unit equipment with expanded radio features for improved safety of first responders;
- Improved system reliability designed to survive weather or emergency conditions, through the use of redundant equipment, hardened facilities, and backup power; and,
- Cost effective system maintenance, radio programming, and support services.

## **PCWIN Project Background**

In December 2003, public safety entities in Pima County joined in a collaborative effort to present a plan for a regional public safety communications system to the Pima County Board of Supervisors. The plan for the new system was subsequently approved by the voters and Pima County was authorized to issue bonds for the development, procurement, implementation, and management of the Pima County Wireless Integrated Network (PCWIN). The Bond Implementation Plan assigned responsibility for implementing the program to the PCWIN Executive Management Committee (EMC).

Now in its fourth year of operation the PCWIN radio system has delivered superb communication to Pima County's public safety professionals without fault or failure. PCWIN, as a Pima County bond project, has proven to be a success by every estimate.

The following business plan explains the construct of the Radio System's governance and financial structure.

## **PCWIN Cooperative Overview**

The Cooperative organization consists of a Board of Directors, Executive Committee and an Executive Director. To ensure representation and opportunity for all participants, the Board of Directors is comprised of a representative from each Member, with each Member having one (1) vote. Any Member can bring an item to the Board of Directors for consideration.

Appendix C contains the current list of participating public safety agencies.

To manage the Cooperative functions the Board of Directors appoints a seven (7) member Executive Committee with representatives from Pima County, the City of Tucson, and other persons nominated by Member entities. This Committee reviews Cooperative activities and proposals, sets Board agendas, and manages Executive Director's activities. Finally, the Executive Director manages the administration of the Cooperative, including the establishment of working groups as necessary to address any issues affecting the Cooperative or its Membership.

Operations and maintenance activities, and any special projects, are funded through the establishment of an annual operating budget as approved by the Board of Directors. The Executive Director prepares budgets, five (5) year forecasts, and fund balance reports for presentation to the Executive Committee and the Board of Directors. Approved budgets are used to develop the rates or the Annual Membership Fees of the Cooperative.

### **Business Plan Purpose**

The purpose of the PCWIN Cooperative Business Plan is to clearly communicate the business goals and objectives, cost projections, financial and administrative activities to the Membership and stakeholders of the PCWIN Cooperative. This document is consistent with and satisfies the philosophy, policy and objectives by which the PCWIN Project was envisioned and implemented. The PCWIN Cooperative Business Plan is intended to be a living document, the content of which will be revised annually by the Executive Director and submitted to the PCWIN Board of Directors for approval and adoption. This Business Plan (PCWIN Cooperative Business Plan August 2017) represents a recommended plan from the Executive Director to the PCWIN Cooperative Board of Directors as established by the PCWIN Intergovernmental Agreement (Intergovernmental Agreement to Operate, Maintain, Sustain, Improve and Finance the Pima County Wireless Integrated Network).

### **PCWIN Costs**

PCWIN operates three fund accounts to support the operation and maintenance of the radio system and business cooperative. A Special Revenue Fund supports the daily expenses required to sustain the radio system and the employees that maintain it. An Infrastructure Replacement Fund (IRF) was established in FY15/16 to fund the periodic, large-scale upgrades and maintenance necessary to keep the radio system viable for the expected life of the system. Finally, a Subscriber Services fund supports the maintenance of the portable and mobile radio units of the PCWIN participants.

Revenue is derived from three primary sources. Annual membership fees are collected from most participants on the radio system as a proportion of their participation on the network. Members and most participants are charged a monthly per radio subscriber rate to support the network. Additionally, revenue is garnered from special assessments to members and participants when necessary to support a specific endeavor. Finally, third-party rental revenue bolsters the PCWIN Special Revenue Fund and helps defray direct expense to the PCWIN Cooperative members and participants. The table below contains projected monthly subscriber fees for the next five years.

Table 1: Projected Monthly Subscriber Unit Rates

	FY 17/18	FY 18/19	FY 19/20	FY 20/21	FY 21/22
MONTHLY SUBSCRIBER RATE	\$33	\$33	\$35	\$37	\$38

### Support Overview

Pima County is the designated Administrative and Network Managing Member for PCWIN. The County has ultimate responsibility for the management of the network and cooperative. PCWIN will function within the administrative framework of Pima County government as a standalone department. The PCWIN Executive Director, as a Pima County employee will work with the applicable functional areas of Pima County government to achieve the objectives of the PCWIN Board of Directors.

As Administrative Managing Member, Pima County will be responsible for conducting business on behalf of the membership, including day-to-day management of the Cooperative organization and finances.

PCWIN will be supported to specific service levels as defined by the Cooperative. The Network Managing Member, Pima County will be responsible for management and programming of the Network electronics, in collaboration with operations and technical working groups.

Maintenance Providers will provide technical support for the Network components and the subscriber units. The City of Tucson and Pima County are currently the only approved Maintenance Providers. The Board of Directors may authorize third parties to provide support for subscriber equipment.

### PCWIN Cooperative

The Cooperative is formed for the purpose of using best efforts through cooperation and sharing of common resources, for the mutual benefit of all parties to operate, maintain, sustain, improve, and finance PCWIN. The governing principles defined in the PCWIN IGA set forth a structure that will promote participation of all member agencies in the decisions affecting their mission critical communications services of the Cooperative. Entities become members of the Cooperative by executing the PCWIN IGA which defines rights, roles and responsibilities of members related to operating, maintaining, sustaining, improving and financing the PCWIN.

This section contains an overview of the key concepts contained in the PCWIN IGA and the PCWIN Governance Document. Refer to those documents for further detail. Also, a PCWIN Governance Quick Reference Guide is shown in Figure 2.

## **PCWIN Board of Directors**

The PCWIN Board of Directors is the overarching governing body responsible for setting strategic direction, policy formation, financial oversight, and the ongoing viability of the PCWIN Cooperative. Each Member organization of the PCWIN Cooperative will have a voting Representative on the Board of Directors. The Board of Directors is responsible for the following:

- To develop, sustain, and promote the vision and guiding principles of the Cooperative;
- Act on business and policy matters relevant to the Cooperative;
- To review and approve the annual PCWIN Cooperative Business Plan;
- To review and approve the annual PCWIN Operating Budget;
- Establish Capital Funds and Special Assessments on behalf of the Membership, as required;
- To review and approve policy recommendations as appropriate;
- To appoint members of the Executive Committee;
- To establish the responsibilities of the Executive Director;
- To authorize and review an annual financial audit or review;
- To comply with all statutes and ordinances.

## **Voting**

Voting rights are afforded to all PCWIN Cooperative Members through their Representative on the Board of Directors. Each Member organization will have one vote and the Board of Directors will utilize a numerical vote which will require a majority to carry a motion. If necessary, a weighted vote, based on subscriber unit count, will be utilized to decide business matters. Any matter requiring a weighted vote must also pass a numerical vote. Matters that cannot be resolved through the voting process will be subject to mediation.

## **PCWIN Executive Committee**

- The Executive Committee is a seven member committee appointed by the Board of Directors and serves in advisory capacity to the Board and the Executive Director. Members of the Executive Committee are executive level members of police, fire, technology, maintenance organizations, and an Indian Community or at-large member. The Executive Committee is responsible for:
- Advising the Board of Directors and the Executive Director on matters of relevance to the Cooperative;
- Reviewing all proposals, recommendations, financial reports, and system performance reports prior to submittal to the Board of Directors;
- Establishing Board of Directors meeting agendas;
- Vetting policies and procedures;
- Other duties as assigned by the Board of Directors.

## **PCWIN Executive Director**

The PCWIN Executive Director is an at-will employee of Pima County and a non-voting member of the Board of Directors and of the Executive Committee. The primary responsibility of the Executive Director will be to ensure that the Cooperative's Guiding Principles of representation,

participation, transparency, system sustainability, and equitable cost allocation are evident in all aspects of the Cooperative. The Director will serve as the Cooperative's liaison to the Maintenance Providers to ensure that Service Level Agreement (SLA) metrics are being met, to resolve service delivery complaints, mediate contract disputes with suppliers, and enforce operational policies approved by the Board of Directors. The Director is also the administrative head of the Pima County Wireless Integrated Network, Wireless Services division (one of two authorized maintenance providers for PCWIN). The Director will be the Cooperative's ambassador to the community and will represent the Cooperative's membership on all matters relative to PCWIN. The Director's office will be responsible for providing administrative support for the Board of Directors, the Executive Committee, and the Working Groups.

The PCWIN Executive Director is expected to be an executive level employee, capable of working with Elected Officials and County, City, and Indian Community Executives. The Executive Director will be expected to engender trust and build consensus among all parties. The primary responsibilities of the Executive Director are as follows:

- To oversee all administrative aspects of the Cooperative;
- To oversee financial transactions of the Cooperative;
- To actively pursue additional funding for the sustainability of PCWIN;
- To develop a public relations strategy and take an active role in public relations;
- To help educate the community, PCWIN users, and political leaders about issues of relevance to the Cooperative;
- To develop and secure appropriate intergovernmental agreements;
- To assemble the Operations Working Group and Technical Working Group and task each work group appropriately;
- To maintain an awareness of advances in technology, national trends, best practices relative to radio communications;
- Represent the interests of all members of the Cooperative; and
- Function as an advisor to the Board of Directors and Executive Committee

## **Managing Members**

Managing Members are Member organizations that provide a service, or collection of services, to the Cooperative in lieu of a third party. The types of administrative and maintenance providers contemplated by the PCWIN Governance Document are as follows:

Administrative Managing Member - Pima County will serve as the Administrative Managing Member for the Cooperative and will be responsible for conducting business on behalf of the membership, including day-to-day management of the Cooperative organization and finances. As the Administrative Managing Member, the County will be responsible for collection of all Annual Membership Fees, disbursement of funds as approved by the Board of Directors, financial reporting, entering into legal agreements on behalf of the Cooperative, and employing the Executive Director and administrative staff.

Network Managing Member - Pima County, with collaboration from the Operations and Technical Working groups, will function as the Network Managing Member and is responsible for management and programming of the Network electronics, coordination of the maintenance activities, and reporting of Network performance.

Maintenance Providers - The City of Tucson and Pima County will both function as Maintenance Providers. As such, both the City and County will retain their existing radio shop staffs and facilities. They will provide technical support to their respective portions of the system and will provide subscriber unit programming and maintenance services as assigned by the Cooperative.

### **Operations Working Group**

Each Member organization of the Cooperative can appoint up to four (4) Representatives, one each from police, fire, and municipal user departments, to the Operations Working Group (OWG). One representative from each Communications Center operating on the Network can also be appointed to the OWG. The OWG will function in an advisory capacity to the Executive Director and is responsible for the following activities:

- To recommend to the Executive Director policies and procedures required for consistent, reliable, and coordinated use of PCWIN;
- To recommend to the Executive Director policies and procedures for the efficient and effective management of grants to support the PCWIN Network;
- To develop recommendations to the Executive Director regarding the planning of operational exercises and annual events utilizing PCWIN;
- To develop recommendations to the Executive Director for the purchase and use of equipment relative to PCWIN;
- To review applications for membership submitted by potential members for operational impact to PCWIN;
- To coordinate with and support the Technical Working Group as necessary.

### **Technical Working Group**

Each Maintenance Provider authorized by the Board of Directors may have up to three (3) representatives from their respective technical support teams as members of the Technical Working Group (TWG). The TWG shall be responsible for addressing all technical, architectural and engineering issues and maintaining Board of Director approved policies and procedures for the technical operation and maintenance of the Network. The Technical Working Group is assembled by the Executive Director and has the following responsibilities:

- To evaluate and plan for new equipment and technologies;
- To evaluate system performance and configuration with applicable recommendations for improvement;
- To develop and maintain standards, procedures, and processes for equipment usage;
- To review reports for service providers regarding system performance;
- To review applications for membership submitted by potential members for technical impact to PCWIN; and
- To coordinate and support the Operations Working Group, as necessary

### **Members and Participants**

Members are defined as entities that execute and become a party to the PCWIN Intergovernmental Agreement to operate, maintain, sustain, improve, and finance the Cooperative. All city, town, state, federal, Indian community, fire district or other separately

constituted public entity that provides public safety services are eligible for Membership. Members are represented on the Board of Directors and have voting rights. Those entities eligible for initial membership are as defined in the 2004 Bond Ordinance as participants in the PCWIN project.

One of the objectives of PCWIN is to expand the user base for improved interoperability and the operational benefits that result, and to help make the system as cost effective as possible to operate on behalf of all Members. Therefore, additional members may be admitted upon Board of Director's approval of their application for membership, and the subsequent execution of appropriate Cooperative agreements. Each applicant will undergo an evaluation to assess the potential operational and technical impact to the Cooperative.

Similarly, accommodations for improvement to interoperability for Public Safety Service and Emergency Medical Service Participants have been made as well. Participants are defined as non-member, non-voting agencies and organizations that are authorized by the PCWIN Executive Committee<sup>1</sup> to use PCWIN to provide public safety or emergency medical services. Participants will be required to execute an appropriate Intergovernmental Agreement or Memorandum of Understanding with the Cooperative. Consideration for participation by the PCWIN Executive Committee will include assessing the benefits and impact to the Cooperative, with the highest priority to maintaining service for public safety entities.

A list of current members and participants, by category, can be found in Appendix B.

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<sup>1</sup> Authorized by the PCWIN Board of Directors November 2017

Figure 1: PCWIN Cooperative Structure

**Cooperative Organization and Operational Associations**

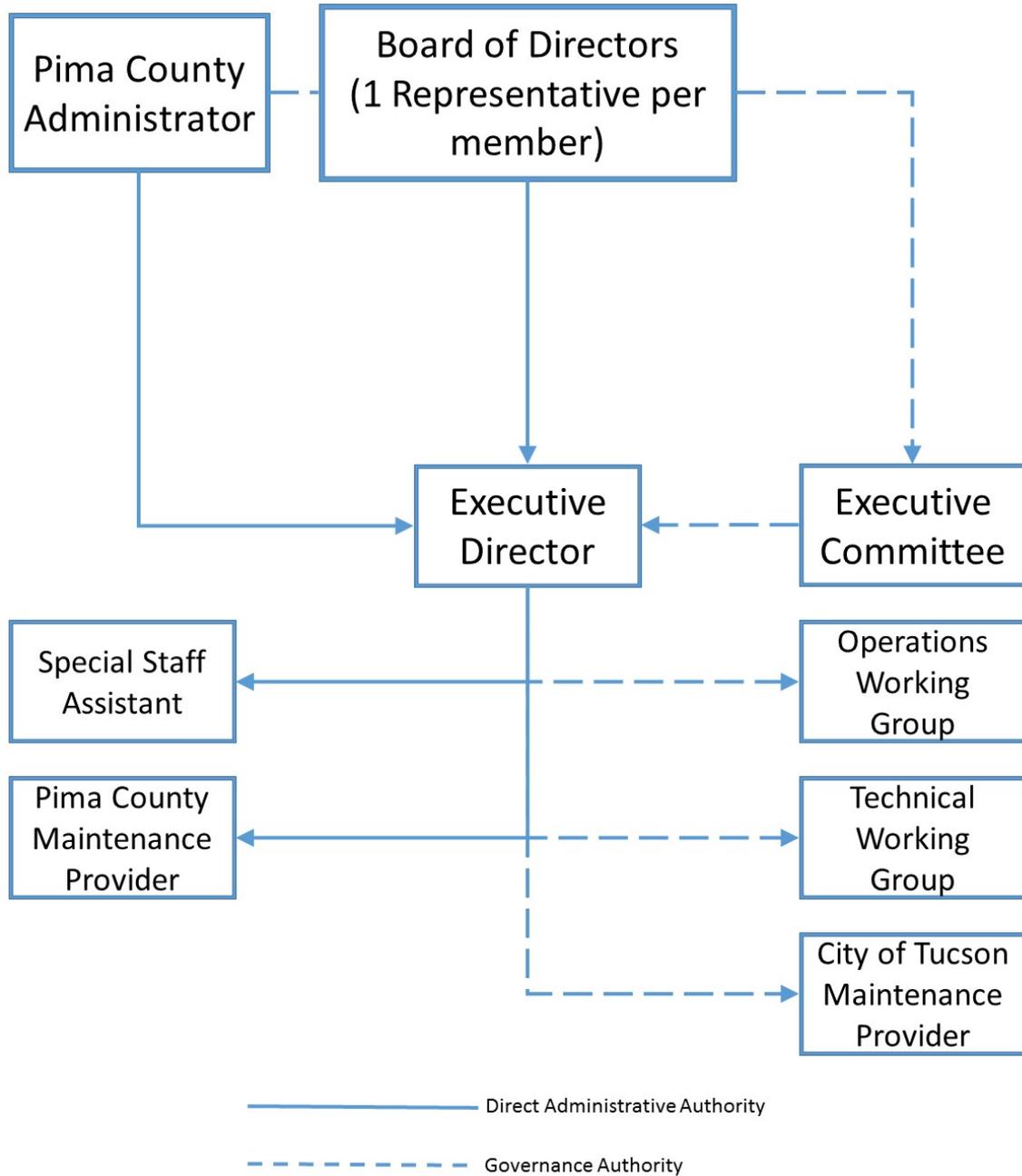


Figure 2: PCWIN Governance Quick Reference Guide

PCWIN Governance Quick Reference Guide

Member/Participant Description	Committee Membership/Voting Rights				Fees
	Board of Directors	Executive Committee	Operations Work Group	Technical Work	
<b>Member</b>					<b>Yes</b>
Any city, town, county, state, federal, Indian nation, fire district or other separately constituted public entity that provides public safety services and becomes a party to the IGA.	1 Member 1 Representative Provider 1 Vote technical  Numerical vote based on majority of a quorum of Managing  Weighted vote based on No majority of numerical vote and affirmative Decisions vote of members representing 80% of weighted votes of the members voting	1 City of Tus Rep 1 County Rep 1 Law Enf Rep  1 Fire Rep 1 Indian Community /At Large Rep 1 CIO 1 Network/Maint  Managing Member Rep  Representatives of a single member cannot form a majority	Up to 4 reps per member (1 for each type of user on the system - police, fire, public works, dispatch)  Staff working group. No specific quorum or voting rights established. Decisions are by consensus.	Up to 3 reps per Maintenance from their staff.  Working group is chaired by a member of the Network  Member.  Staff working group. specific quorum or voting rights established.  are by consensus.	Member partners share O&M costs.
<b>Participants</b>					
<b>Associate Participant</b>	None	None	1 Rep per Associate		<b>Yes</b>
A non-member agency or organization sponsored by a Member who is authorized by the BOD to use the network to support an existing member's public safety mission.					Fees are paid by the sponsoring member. Sponsor may have arrangements to recover costs from the Associate.
<b>Conditional Participant</b>	None	None	None	None	<b>No</b>
A non-member agency or organization authorized by the BOD to temporarily use the network for special preplanned events, tactical situations or emergency circumstances.					Temporary authorization to use the network for mutual aid or interop only. Primary communications are provided by other means.
<b>Emergency Medical Service Participant</b>	None	None	1 Rep per EMS	N	<b>Yes</b>
A non-member EMS provider authorized by the BOD to use the network to provide EMS services.					Use of network is to support primary communications needs of the applicant.
<b>Interoperability Participant</b>	None	None	None	None	<b>No</b>
A non-member public safety services agency authorized by the BOD to use the network for mutual aid and/or interoperability purposes.					Intermittent use of network for mutual aid or interop only. Primary communications are provided by other means.
<b>Public Safety Service Participant</b>	None	None	1 Rep per Public Safety Services Participant		<b>Yes</b>
A non-member law enforcement, fire, emergency management and disaster preparedness service provider authorized by the BOD to use the network for purposes of providing public safety services.					Use of network is to support primary communications needs of the applicant.
<b>Open Meeting Law Applicability</b>	Yes	Yes	No	No	

## **Radio System Overview**

PCWIN offers improved radio service features, reliability and coverage. There remain varying levels of radio service throughout the county. Agencies are using trunked systems and conventional systems. PCWIN has been designed to not only improve radio service for participant agencies but also bridge the gap of interoperability between participants and non-participants. In short, the PCWIN radio system was designed to meet the demanding needs of the area's public safety agencies.

The PCWIN system is a P25 Phase II Digital 800 MHz system that incorporates simulcast and trunking technology. The system provides the participating agencies with the highest level of interoperability possible. Conventional channel gateways provide opportunity to interconnect the PCWIN radio system with other state and federal systems for interoperability. The trunked system is augmented by simplex channels and digital vehicular repeaters (DVRs) to meet the demanding communications requirements for fire ground and police tactical communications.

## **Coverage**

PCWIN benefits all of the participating agencies by providing greatly improved radio service coverage. The PCWIN radio system provides countywide coverage for all participants. This significantly improves radio coverage for all agencies, and provides a mechanism for responders to communicate with their dispatch support and other responders when travelling outside their current service area.

The system is designed to provide reliable communications anywhere within the entire coverage area. County-wide portable coverage and mobile coverage was provided in accordance with industry accepted standards for delivered audio quality (DAQ), with the goal of providing coverage with minimum dead spots or areas with no radio coverage. The formal coverage testing results showed a DAQ of 3.4 or better for over 90% of the tested area. This means that over 90% of Pima County (and over 95% of the greater Tucson metropolitan area) radio transmissions are transmitted and received with virtually no anomalies. For more insight into this process an Executive Summary of PCWIN's coverage testing results can be made available upon request to the Executive Director's office.

## **Interoperability**

Emergencies are rarely constrained to geographic or political boundaries. These incidences often require a multi-discipline, multi-agency response. PCWIN promotes interagency and interdisciplinary interoperability through participation of local, county, state and federal public safety agencies and other public safety service providers in the region. This gives the participants the ability to share information on demand, in real time, when needed, and as authorized. This helps improve coordination of public safety services, thus improving public safety services.

## **Redundancy**

The PCWIN voice radio system is designed such that no single-point failure shall reduce the ability of the system to provide the required two-way radio communications under routine day-to-day operational conditions. Path diversification for network connections and redundant

electronics throughout the system provide the necessary backup to ensure PCWIN remains highly reliable.

## **Capacity**

The system is designed to relieve the overcrowding problems that existed previously. System design accommodates growth through the year 2026. The system is also designed with sufficient channels and talkgroups to allow agencies or departments with different functions to have their own channels or talkgroups, without interfering to other non-related groups or functions.

## **Maintenance**

The technical support staffs of Pima County and the City of Tucson will collaborate to form a cohesive maintenance support organization for PCWIN. In the past, differing agencies have utilized a wide range of maintenance programs for their radio systems yielding varying levels of customer service. Now, PCWIN cooperative policies require a consistent level of service and response times throughout the county. Rather than the patchwork of diverse levels of service, there are now common maintenance objectives. Operating procedures will continue to be developed by the Cooperative and adopted by the Maintenance Providers which results in maintaining PCWIN with practices consistent with direction established by the Cooperative.

Pima County serves as the Network Managing Member responsible for the day-to-day operations and programming of PCWIN. The County and City of Tucson function as Maintenance Providers to maintain the system and optimize the performance and availability of the PCWIN network. Maintenance providers participate with the Cooperative's Technical and Operations Working Groups to ensure that services are coordinated to support Cooperative objectives.

PCWIN is maintained in accordance with service levels agreements (SLAs) defined in the Cooperative's policies and procedures. The SLAs define the level of network performance, support service, and infrastructure maintenance, with requirements for monthly performance reporting.

## **Radio Programming**

Radios on PCWIN have their own software allowing them to be programmed with their own radio ID, talk groups, switch positions, emergency button settings, etc. The configuration of the radio's feature set determines the "personality" of the radio. PCWIN's maintenance organizations have employees trained and authorized to program radios.

PCWIN is also equipped with over-the-air programming (OTAP) capability. This feature is particularly valuable because it will permit a technician to reprogram a radio remotely without requiring the end user having to travel to a repair facility. This feature reduces the time and expense associated with radio programming or re-programming.

## PCWIN Cooperative Goals – FY 17/18

Every effective organization must have organizational goals and objectives that reflect the priorities of the organization. For FY17/18 the Board of Directors proposes the following goals:

Table 2: PCWIN Cooperative Goals FY 17/18

Category	Description	Owner	Target Date
<b>Governance</b>			
	Build on the relationship with Town of Marana that will foster greater interoperability	Executive Director	June 30, 2018
	Pursue a statewide interoperability solution for members who traverse multiple regional radio systems	Executive Director	June 30, 2018
	Create a legal document for interoperability participants that expedites their application and inclusion onto PCWIN	Executive Director/Network Managing Member	October 30, 2017
	Streamline the approval processes for interoperability participants to join PCWIN	Executive Director	February 1, 2018
	Participate in the Arizona Public Safety Radio System Administrator's Forum to stay abreast of regional radio system communication activities	Executive Director	June 30, 2018
	Collaborate with Pima County ITD on network backhaul improvements that will affect PCWIN	Executive Director/Network Managing Member	June 30, 2018
<b>Network &amp; Subscriber Maintenance</b>			
	Improve internal change management processes for City and County maintenance staffs	Network Managing Member	February 1, 2018
	Improve Common Operating and Reporting for Network Health monitoring	Network Managing Member	March 31, 2018
	Review and Improve Backhaul network Service Level Agreements with Pima County ITD	Network Managing Member	June 30, 2018
	Participate and contribute to Backhaul upgrade design and development to support PCWIN	Network Managing Member/Technical Working Group/PCITD	June 30, 2018
	Complete Rebanding 2 <sup>nd</sup> Touch and Annual Preventative Maintenance	Network Managing Member/Maintenance Providers	June 30, 2018
	Evaluate and Remediate Site Battery backup systems	Network Managing Member/Maintenance Providers	June 30, 2018
	Improve Radio Asset Management, Accountability, and Support by implementing Motorola Radio Management	Network Managing Member/Maintenance Providers	June 30, 2018

## **Annual Operating & Maintenance Cost Projections**

All PCWIN Members participate in the benefits of the system; therefore, it is appropriate that they also proportionately share the costs for the system. A forecast of the 5 Year Annual Operating and Maintenance costs associated with the PCWIN is contained in Appendix A. It should be noted that the Board of Directors and the Executive Director will continue to explore funding opportunities and improved methods to minimize the operations and maintenance costs associated with PCWIN.

The following assumptions have been applied to the financial forecast:

- Costs for operations and maintenance support are calculated on an annual basis and billed to the PCWIN participant agencies quarterly.
- Funding for future replacement of the PCWIN Network is not included in this 5 Year forecast or resulting Annual Membership Fees calculations.
- Annual budgeted expenses for PCWIN will vary, but the PCWIN Board of Directors will strive to minimize the changes in Annual Membership Fees to assist Members in forecasting budgetary requirements.
- The PCWIN Annual Budget is approved by the Board of Directors and expenses are apportioned to the Membership based on their pro-rata share of the subscriber unit count.
- When Members are authorized to add additional subscriber units to the Network, the Member participation ratio on which Annual Membership Fees are based shall be adjusted.
- Individual Members will be responsible for replacement costs for subscriber units bought by the County which are lost, stolen or damaged and not covered under warranty.
- Individual Members will be responsible for replacement of accessories such as battery chargers, carrying cases, and lapel microphones, unless a subscriber service maintenance plan has been executed.
- Pima County will maintain master repair depot contracts with manufacturers for the benefit of the Members.

## **Projected Annual Membership Fees**

Appendix A contains the current estimates of the 5-Year revenue and operations and maintenance expenses for the Cooperative. The estimate for the full yearly income is \$3,075,226 and year expenses estimated at \$2,863,443, based on an Annual Membership Fee of \$33/month (based on a subscriber unit count of 7,567).

**APPENDIX A – FY 17/18 Budget with Five-Year Forecast**

**FY18-2019 BUDGET FORM**

Bureau: B291

Fund: 2101

PCWIN Special Revenue Fund

	FY2018-19 Requested	FY2019-20 Forecasted	FY2020-21 Forecasted	FY2021-22 Forecasted	FY2022-23 Forecasted
<b>FULL TIME EQUIVALENT - FTE</b>	10	10	10	10	10
<b>REVENUES</b>					
4200 - GEN GOV FEES	1,802,592	1,911,840	2,021,088	2,021,088	2,021,088
4247 - INTER DEPT REV	1,193,940	1,266,300	1,338,660	1,338,660	1,338,660
4400 - RENT & ROYALTIES	68,652	69,655	70,685	71,743	72,830
4407 - INT POOL OPR	10,042	11,116	11,719	12,885	13,648
4415 - LATE INTRST FEE	-	-	-	-	-
<b>TOTAL REVENUE</b>	<b>3,075,226</b>	<b>3,258,911</b>	<b>3,442,152</b>	<b>3,444,376</b>	<b>3,446,226</b>
<b>EXPENSES</b>					
5000 - OFFICE SUPPLIES	5,500	5,500	5,500	5,500	5,500
5001 - SOFTWR <\$5M	-	-	-	-	-
5002 - COMPTR EQ <1000	-	-	-	-	-
5003 - FOOD SUPPLIES	-	-	-	-	-
5006 - MED & LAB SUPPLY	-	-	-	-	-
5007 - FUEL & OIL	2,563	-	-	-	-
5008 - BKS SBSCPTN VDS	500	500	500	500	500
5010 - R & M SUPPLIES	130,000	143,000	157,300	173,030	190,333
5012 - CHEMICALS	-	-	-	-	-
5013 - JANITORIAL SUP	-	-	-	-	-
5014 - APPAREL	-	2,000	-	2,000	-
5018 - OTH OPER SUP	2,000	2,000	2,000	2,000	2,000
5020 - TOOLS & EQ<1000	5,500	6,050	6,655	7,321	8,053
5021 - FURNITURE<1000	-	-	-	-	-
5121 - ACCNTG & AUDT	12,000	12,000	13,200	14,520	15,972
5125 - SFTWR MNT & SPP	35,000	35,000	35,000	35,000	35,000
5138 - TRAINING IN AZ	-	7,800	7,800	7,800	7,800

	7,800				
5139 - OUT AZ TRAINING	2,000	2,000	2,000	2,000	2,000
5141 - OUT AZ TRAVEL	2,200	2,200	2,200	2,200	2,200
5142 - POSTAGE & FRGHT	2,200	2,200	2,200	2,200	2,200
5143 - PRNTG & MICRFLM	620	620	620	620	620
5147 - LEASES & RENTALS INTERNAL	51,358	51,358	51,358	51,358	51,358
PECOC - Pima County	18,457	18,457	18,457	18,457	18,457
MISSION ROAD - Pima County	32,901	32,901	32,901	32,901	32,901
5148 - RENT - REAL EST	66,572	67,484	68,424	69,392	70,389
ARIVACA - ASLD	2,400	2,400	2,400	2,400	2,400
BEACON - Crown Castle	13,220	13,617	14,025	14,446	14,879
BIGELOW - SAT	17,194	17,710	18,241	18,788	19,352
CONFIDENCE - TEP	5,000	5,000	5,000	5,000	5,000
HAYSTACK - ASLD	2,400	2,400	2,400	2,400	2,400
KEYSTONE - AZ DPS	4,356	4,356	4,356	4,356	4,356
LEMMON - AZ DPS	4,356	4,356	4,356	4,356	4,356
MILDRED - ASLD	2,400	2,400	2,400	2,400	2,400
RVFD - Rincon Valley Fire District	15,246	15,246	15,246	15,246	15,246
5149 - R & M MACH & EQ	1,150,050	1,194,740	1,210,135	1,226,112	1,242,224
Motorola SUA II	703,541	708,246	713,116	718,153	722,893
Motorola LMR Tech Support	125,214	130,223	135,432	140,848	146,480
NICE Audio Logging Service	87,704	122,268	127,159	132,245	137,534
Consultation Expense (T&M)	-	-	-	-	-
Logicalis Microwave Maintenance	-	-	-	-	-
Test Equipment Repair	9,800	9,800	9,800	9,800	9,800
Facilities Site Maintenance	13,752	14,164	14,589	15,027	15,478
Charges in from Fleet	1,920	1,920	1,920	1,920	1,920
Southwest HeliServices	1,200	1,200	1,200	1,200	1,200
CoT Smartnet CTM (IGA)	2,834	2,834	2,834	2,834	2,834
CoT Sonet (IGA)	12,585	12,585	12,585	12,585	12,585
CoT Network Sharing (IGA)	190,000	190,000	190,000	190,000	190,000
B&W, Color Copies from Toshiba Printer	1,500	1,500	1,500	1,500	1,500
5150 - R & M BUILDINGS	-	-	-	-	-
5152 - NON MED PRO SRV	-	-	-	-	-
5162 - ADVERTISING	-	-	-	-	-
5203 - INTER SPL SV DR		9,578	9,865	10,161	10,466

	9,299				
5206 - ADMIN OH	198,132	208,038	218,440	229,362	240,831
5301 - ELECTRICITY	57,760	58,915	60,093	61,295	62,521
5306 - MOTOR POOL CHG	47,758	50,146	52,653	55,286	58,050
5309 - DUES MEMBERSHPS	1,000	1,000	1,000	1,000	1,000
5312 - MISC CHARGES	840	840	840	840	840
5318 - GEN LIAB INS PR	9,919	10,216	10,523	10,839	11,164
5319 - PROPRTY DMG INS	4,816	4,961	5,110	5,263	5,421
5351 - ISFCOMPCHAR	13,835	14,250	14,678	15,118	15,571
5352 - ISFSERVER	33,527	34,533	35,569	36,636	37,735
5353 - ISFSOFTWARE	6,226	6,413	6,605	6,803	7,007
5360 - INTERNET	1,690	1,690	1,690	1,690	1,690
5361 - MOBLEDEVC	5,000	5,000	5,000	5,000	5,000
5362 - PORTCHRD	84,804	84,804	84,804	84,804	84,804
5504 - OFF MCH CMPT NC	-	-	-	-	-
5508 - OTH EQUIP NC	-	-	-	-	-
5564 - INVENTORY ADJ	-	-	-	-	-
<b>Subtotal Operating Expenses</b>	<b>1,950,468</b>	<b>2,024,836</b>	<b>2,071,762</b>	<b>2,125,649</b>	<b>2,178,249</b>
5564 - OTH EQUIP C	-	-	-	-	-
<b>Subtotal Capital Expenses</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>PCWIN Staff</b>					
5400 - SALARY & WAGES	700,221	714,225	728,510	743,080	757,942
5401 - OVERTIME	100	102	104	106	108
5409 - FICA & MEDICARE	56,450	57,579	58,730	59,905	61,103
5410 - UNEMPLOYMENT	515	526	536	547	558
5411 - HLTH INS PREM	69,037	70,417	71,826	73,262	74,727
5412 - WORKERS COMP	1,918	1,956	1,996	2,035	2,076
5413 - LIFE INSURANCE	353	360	368	375	382
5416 - RETR AZ ST	84,857	86,554	88,285	90,051	91,852
5422 - DENTAL INS PREM	982	1,002	1,022	1,042	1,063
5423 - INTER SALARY CR	-	-	-	-	-
5424 - INTER SALARY DR	24,818	25,314	25,820	26,337	26,864
5425 - INTER FRINGE CR	-	-	-	-	-
5426 - INTER FRINGE DR	11,316	11,542	11,773	12,008	12,248
5427 - LDFRCR	-	-	-	-	-
5428 - LDFRDR	1,019	1,039	1,060	1,081	1,103
5429 - LDSALCR	-	-	-	-	-

5430 - LDSALDR	3,887	3,965	4,045	4,125	4,208
5457 - HSACONTRIB	10,000	10,200	10,404	10,612	10,824
<b>Subtotal Personnel Services</b>	<b>965,473</b>	<b>984,782</b>	<b>1,004,478</b>	<b>1,024,568</b>	<b>1,045,059</b>
<b>Wireless Staff</b>					
5400 - SALARY & WAGES	-	-	-	-	-
5409 - FICA & MEDICARE	-	-	-	-	-
5410 - UNEMPLOYMENT	-	-	-	-	-
5411 - HLTH INS PREM	-	-	-	-	-
5412 - WORKERS COMP	-	-	-	-	-
5413 - LIFE INSURANCE	-	-	-	-	-
5416 - RETR AZ ST	-	-	-	-	-
5422 - DENTAL INS PREM	-	-	-	-	-
5427 - LDFRCR	-	-	-	-	-
5429 - LDSALCR	-	-	-	-	-
<b>Subtotal Personnel Services</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total Personnel Services</b>	<b>965,473</b>	<b>984,782</b>	<b>1,004,478</b>	<b>1,024,568</b>	<b>1,045,059</b>
<b>TOTAL EXPENSE</b>	<b>2,915,941</b>	<b>3,009,619</b>	<b>3,076,240</b>	<b>3,150,217</b>	<b>3,223,307</b>
<b>OPERATING INCOME / LOSS</b>	<b>159,285</b>	<b>249,292</b>	<b>365,912</b>	<b>294,159</b>	<b>222,919</b>
<b>FUND IMPACT</b>					
<b>BEGINNING FUND BALANCE</b>	<b>969,093</b>	<b>628,378</b>	<b>877,670</b>	<b>1,243,582</b>	<b>1,537,741</b>
TRANSFER IN GENERAL FUND					
TRANSFER OUT INFRASTRUCTURE REPLACEMENT	(500,000)	-	-	-	-
<b>ENDING FUND BALANCE</b>	<b>628,378</b>	<b>877,670</b>	<b>1,243,582</b>	<b>1,537,741</b>	<b>1,760,660</b>
<b>REQUIRED OPERATIONAL FUND BALANCE</b>	<b>364,493</b>	<b>376,202</b>	<b>384,530</b>	<b>393,777</b>	<b>402,913</b>
<b>PROJECTED ENDING FUND BALANCE AFTER RESERVE REQUIREMENT IS MET (UNRESERVED FUND BALANCE)</b>	<b>263,885</b>	<b>501,467</b>	<b>859,052</b>	<b>1,143,964</b>	<b>1,357,746</b>

**FY18-2019 BUDGET FORM**

Bureau: B292

Annual Fee Rate                    \$            33    \$            35    \$            37    \$            37    \$            37

**APPENDIX B – PCWIN Cooperative Current Members and Participants**

MEMBERS	PUBLIC SAFETY PARTICIPANTS	INTEROPERABILITY PARTICIPANTS
Avra Valley Fire District	Ajo Ambulance	162nd Fighter Wing (ANG)
Corona de Tucson Fire District	Rural Metro Fire Department	AZ Attorney General's Office
City of Tucson Fire Department		AZDPS Aviation Unit
City of Tucson Police Department	<b>ASSOCIATE PARTICIPANTS</b>	AZ Game and Fish
City of South Tucson Fire Department	Ajo/Gibson Volunteer Fire Department	Bureau of Alcohol Tobacco Firearms Explosives
City of South Tucson Police Department	Arivaca Fire District	Customs & Border Protection Tucson Sector
Drexel Heights Fire District	Elephant Head Volunteer Fire Department	Cochise County Sheriff's Office
Golder Ranch Fire District	Helmet Peak Fire District	Davis-Monthan AFB
Green Valley Fire District	Mt. Lemmon Fire District	Federal Bureau of Investigations
Northwest Fire District	Southern Arizona Rescue Association	MAC Team (Nursewise)
Marana Police Department	Why Fire District	National Park Service
Oro Valley Police Department	<b>EMERGENCY MEDICAL SERVICES PARTICIPANTS</b>	Pinal County Sheriff's Department
Pascua Yaqui Fire	Green Valley Hospital	Sunnyside Unified School District
Pascua Yaqui Police	Northwest Medical Center	Union Pacific Railroad Police Department
Picture Rocks Fire District	Oro Valley Hospital	United States Forest Service
Pima College Department of Public Safety	Saint Joseph's Hospital	United States Marshal Service
Pima County Sheriff's Department	Saint Mary's Hospital	
Rincon Valley Fire District	Southern Arizona VA Hospital	
Sabino Vista Fire District	Tucson Medical Center	
Sahuarita Police Department	Banner University Medical Center - University Campus	
Tanque Verde Fire District	Banner University Medical Center - South Campus	
Three Points Fire District	University of Arizona EMS Team	
Tucson Airport Authority		
Tucson Country Club Estates Fire District		
University of Arizona		