2018 Annual Workplan and Budget

Regional Public Safety Communications Program Strategic Plan
Mission

The mission of the regional public safety communications program is to maintain, enhance and coordinate the 911 system as the primary means of access for those in the region who need emergency public safety services and to enhance the ability of public safety personnel and emergency responders to effectively communicate through all phases of emergency incidents and planned events.

Vision

- Provide citizens and public safety professionals with a high-quality, financially secure and well-maintained system of 911, interoperable radio and data communication services.
- Serve as a model of excellence, ensuring any person needing access to emergency services is able to immediately reach assistance and facilitate a quick response.
- Provide all public safety professionals with a baseline for seamless voice and data communications to ensure an effective public safety response.
- Educate the public, elected officials and public safety professionals about the services provided and the requirements to support the system.

Progress

2017-2018 Goals and Objectives

Upon reviewing the goals and objectives from the 2011–2015 strategic plan, accomplishments to date and the outcome of regional workshops, the strategic planning executive committee developed the following goals and objectives for 2016–2020.
Achieving the Goals and Objectives

Goal A: Enhance the quality of the regional 911 system to ensure access to public safety communication services that are reliable, current, redundant, secure and diverse.

Goal A — Objective 1:
Continue to improve the accuracy of location data received from non-wireline service providers.

Project: Call Routing Validation
Continue to annually review call routing for at least 30 percent of all wireless sectors with a goal of validating routing on each tower sector at least once every three years.

2017 Progress
All routing errors received via 911 error reports are researched. If deemed valid, the appropriate carrier is notified for investigation and resolution on their end. If invalid, the PSAP is contacted and an explanation is given so that proper information can be relayed back to the dispatcher and training provided. As of December 31, there were over 14,617 cell sectors in the regional map. In 2017, 7,327 cell sectors were added or modified.

While reviewing cell tower records it was determined that GeoComm had not updated the records in the map for the prior Sprint and AT&T audits and as a result, those records had to be re-audited in 2017. These corrections have since been made by GeoComm and MARC staff. A Verizon audit was completed as well.

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Number Records Reviewed</th>
<th>Additions</th>
<th>Deletions</th>
<th>Address Corrections</th>
<th>ESN Corrections</th>
<th>PSAP Corrections</th>
<th>Placement on Map Correction</th>
<th>Total Corrections</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T Mobility</td>
<td>5,201</td>
<td>2,428</td>
<td>0</td>
<td>728</td>
<td>70</td>
<td>67</td>
<td>0</td>
<td>3,193</td>
</tr>
<tr>
<td>Sprint</td>
<td>2,302</td>
<td>470</td>
<td>559</td>
<td>532</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>1,579</td>
</tr>
<tr>
<td>Verizon</td>
<td>3,574</td>
<td>4,429</td>
<td>960</td>
<td>2,046</td>
<td>0</td>
<td>161</td>
<td>42</td>
<td>7,638</td>
</tr>
<tr>
<td>Commnet</td>
<td>18</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>18</td>
</tr>
</tbody>
</table>

By the end of 2017, MARC GIS will take over maintenance of the cell tower map data layer. Public safety staff worked closely with GeoComm and MARC GIS to allow for a smooth transition.

2018 Action Plan
An audit of T-Mobile is planned for 2018. The audit will consist of working with the wireless carrier and the regional map provider to compare and update cell tower data. Doing so will ensure the information sent during a 911 call matches what is in the database and that Phase I wireless calls plot on the mapping software correctly.

Public Safety staff will continue to work with MARC GIS to ensure that processes are in place for maintenance of the cell tower map layer.
Project: Database Audit

Conduct an annual call-routing review and validation process in the stand-alone ALI database. MARC staff will compare and resolve discrepancies between data from non-wireline service providers (or their appointed database providers) and the region-owned database.

2017 Progress

At the end of the year there were 6,866 records in the routing database and over 1,783 changes have been made:

<table>
<thead>
<tr>
<th>MSAGs changed</th>
<th>Added</th>
<th>Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>60</td>
<td>147</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>Onvoy</td>
<td>526</td>
<td></td>
</tr>
<tr>
<td>Sprint</td>
<td>428</td>
<td></td>
</tr>
<tr>
<td>T-Mobile</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>Verizon</td>
<td>402</td>
<td></td>
</tr>
<tr>
<td><strong>Total Changes</strong></td>
<td><strong>1636</strong></td>
<td><strong>147</strong></td>
</tr>
</tbody>
</table>

A database specialist identified a pattern of issues on the daily No Record Found report. PSAPs also reported an increased number of telemarketing calls via 911. Research into the matter found that several Sprint pANIs had not been loaded in the routing database. Additionally, Sprint had not built those numbers into its system to prevent telemarketing calls from being delivered. MARC staff worked with Sprint to determine the full extent of the issue and resolve the matter.

The Kansas City, Missouri, Police Department and the Kansas City, Missouri, Fire Department were the only two agencies within the MARC region whose Computer Aided Dispatch (CAD) software did not allow for the use of “st, th, rd, nd” on the end of numbered streets within the Master Street Address Guide (MSAG). This information is what displays for the 911 calltakers as part of the automatic spill from the ANI/ALI (telephone number and location data that comes in with a 911 call) telephone equipment. This issue was problematic because it did not meet the National Emergency Number Association (NENA) national standard. On April 10, 2017, AT&T made a mass change to 3,098 numbered street MSAGs to meet the NENA national standard, which affected approximately 88,870 telephone numbers. Also, MARC’s GIS team confirmed 38,794 centerline segments containing proper formatting on April 13, 2017.

2018 Action Plan

MARC staff will continue to work with carriers and their third-party providers to make database record updates as needed and follow the standards put in place. This is an ongoing project in which records are added, modified and deleted throughout the year.

Project: Communication with Non-Wireline Service Providers

Continue to proactively identify and complete interconnection agreements with non-wireline service providers. These agreements ensure service providers are correctly connected to the region’s network, maintain accurate database records and comply with remittance requirements. In an effort to stay informed of new technologies or changes in existing technologies, MARC staff will contact each service provider annually to review existing agreements, provide updates on changes to 911 in the region and gather information on new technologies.
2017 Progress

Staff completed two different interconnection agreements with Onvoy Spectrum, a new VoIP provider. Connectivity was completed and successfully tested in early September. Staff also worked with TCG, an existing VoIP provider, to make changes to exhibit documents which also resulted in improved default routing scenarios.

Frequently, staff receive calls from organizations and companies that have installed a new internal VoIP phone system that has not been programmed to work correctly with 911. Explaining the different components of the process and pointing them in the right direction is imperative. Once programming has been corrected within an organization’s phone system, staff assists with database reviews and testing coordination with PSAPs.

2018 Action Plan

In 2018, staff will continue to identify carriers with which MARC does not have agreements and work to develop them.

**Project: New Services and Technologies**

Research new services and technologies available and coordinate interconnection agreements, ensure vendors are properly connected to the region’s network and verify that calls route accurately and plot on the regional map.

2017 Progress

Although no new services or technologies were added to the regional network in 2017, MARC staff shared information with PSAP personnel regarding Safe Trek and Sendpolice.com. SafeTrek is a mobile application that allows users to connect with police when personal safety is a concern. If a user is in danger, he or she holds down the SafeTrek button which connects to a dispatch center. If nothing unexpected happens, the user inputs a unique personal identification number (PIN) to cancel the alert being sent to police. However, if a situation is unsafe, the user releases the safe button without entering the PIN and is connected to police. SendPolice.com works in conjunction with the SafeTrek application, and is a website that provides dispatchers with real time location updates and the personal information of citizens who have triggered SafeTrek panic alarms.

Local city and county fire department and emergency medical services leaders joined forces to bring the lifesaving PulsePoint app to the Kansas City region. The free mobile app alerts citizens trained in hands-only cardiopulmonary resuscitation (CPR) when someone in a nearby public place suffers sudden cardiac arrest. Public safety communications centers send alerts through the app at the same time they dispatch first responders to the scene. The app also notifies users of the closest available automated external defibrillator. The three agencies that implemented PulsePoint in the region are Johnson County Emergency Communications, the Kansas City Kansas Fire Department and the Kansas City Missouri Fire Department. These agencies dispatch for multiple departments in the region.

2018 Action Plan

In 2018, staff will continue to research new services and technologies.

**Project: Monitor Developments in Location Technology**

Monitor advancements in wireless location technology, including, but not limited to, Z-axis (elevation) location information. Technicians will also monitor the Federal Communications Commission (FCC) for any proposals regarding new location accuracy requirements.
2017 Progress
In 2017, updated location requirements went into effect which state carriers must provide a dispatchable location or Phase II location information within 50 meters for 40 percent of all wireless 911 calls. Carriers must report this type of data quarterly to the FCC. MARC staff met with local media to explain the limitations of wireless location technology and how important it is for callers to know their location. The following chart details Phase II call delivery in the region:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AT&amp;T</td>
<td>69%</td>
<td>32%</td>
<td>24%</td>
<td>26%</td>
<td>29%</td>
</tr>
<tr>
<td>Sprint</td>
<td>27%</td>
<td>54%</td>
<td>53%</td>
<td>63%</td>
<td>83%</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>16%</td>
<td>20%</td>
<td>19%</td>
<td>29%</td>
<td>33%</td>
</tr>
<tr>
<td>Verizon</td>
<td>42%</td>
<td>57%</td>
<td>54%</td>
<td>58%</td>
<td>58%</td>
</tr>
</tbody>
</table>

2018 Action Plan
Staff will continue to monitor location technology updates as well as Phase II call delivery in the region.

Goal A — Objective 2: Ensure the geographic diversity and redundancy of 911 systems.

Project: Last-Mile Study
Improve last-mile network redundancy and geographic diversity.

2017 Progress
In 2017, the “last mile” to several PSAPs was upgraded from leased T-1 circuits to Point-to-Point (PTP) microwave, fiber or Multi-Protocol Label Switching (MPLS) circuits. These new circuits increased network bandwidth capacity and redundancy. Staff worked with local exchange carriers (LECs) to diversify CAMA trunks within their networks, based on the FCC mandate to ensure redundancy and diversity.

2018 Action Plan
MARC staff will continue to work with LECs and other service providers to identify and develop action plans to repair wireline trunks with chronic issues. Staff will update LEC network configurations and last mile facilities with PTP microwave, fiber and MPLS where possible, with the goal of providing cost-effective ways to improve last-mile network redundancy and geographic diversity for PSAPs.
Project: Review Service Provider Central Office Isolation Plans

MARC staff will annually review and update wireline service providers’ Central Office (CO) isolation plans. A CO isolation occurs when a LEC switch is unable to send or receive landline calls from other switches. The only calls the isolated switch will handle are within its territory. The isolated switch cannot send 911 calls to the selective router nor will it receive 911 calls from the selective router. These plans will be distributed to each PSAP periodically or when MARC is notified of a change by LECs.

2017 Progress

MARC staff worked with LECs, PSAPs and other public safety agencies to develop isolation plan updates. The status of the isolation plans for the following counties are:

<table>
<thead>
<tr>
<th>County</th>
<th>Data Gathering from LECs</th>
<th>Working Plan Developed</th>
<th>Meetings Held with PSAPs</th>
<th>Remaining Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cass</td>
<td>Completed</td>
<td>Yes</td>
<td>Scheduled</td>
<td>Assist agencies in developing policies and procedures for handling 911 calls; update LECs with correct ten-digit numbers; create final version of plan</td>
</tr>
<tr>
<td>Clay</td>
<td>Completed</td>
<td>Yes</td>
<td>Scheduled</td>
<td>Same as above</td>
</tr>
<tr>
<td>Jackson</td>
<td>Completed</td>
<td>Yes</td>
<td>Scheduled</td>
<td>Same as above</td>
</tr>
<tr>
<td>Johnson</td>
<td>Completed</td>
<td>Yes</td>
<td>Completed</td>
<td>Create final version of plan</td>
</tr>
<tr>
<td>Leavenworth</td>
<td>Completed</td>
<td>Yes</td>
<td>Ongoing</td>
<td>Assist agencies in developing policies and procedures for handling 911 calls; update LECs with correct ten-digit numbers; create final version of plan</td>
</tr>
<tr>
<td>Miami</td>
<td>Completed</td>
<td>Yes</td>
<td>Ongoing</td>
<td>Same as above</td>
</tr>
<tr>
<td>Platte</td>
<td>Completed</td>
<td>Yes</td>
<td>Ongoing</td>
<td>Same as above</td>
</tr>
<tr>
<td>Ray</td>
<td>Completed</td>
<td>Yes</td>
<td>Ongoing</td>
<td>Same as above</td>
</tr>
<tr>
<td>Wyandotte</td>
<td>Completed</td>
<td>Yes</td>
<td>Ongoing</td>
<td>Same as above</td>
</tr>
</tbody>
</table>

The plans will be validated with up-to-date information, such as the ten-digit number and current network configurations. In the event of a CO isolation within the MARC region, 911 calls can be delivered to a PSAP or public safety agency within the footprint of the isolated CO.

2018 Action Plan

Staff will review plans annually to ensure the contact information, alternate agency listings and phone numbers are accurate. This is an on-going project.

Project: Interconnection with Other Networks

Work with microwave network owners to establish interconnection agreements that provide access into their networks. These interconnections increase the 911 network footprint and create a backbone network that is diverse and redundant through network elements.

2017 Progress

MARC staff worked with service providers, microwave owners, building owners and city and county officials to develop interconnection agreements. These agreements allowed MARC to utilize other networks to connect PSAPs to the regional 911 backbone network. Staff worked with Fort Leavenworth, Midwest Mobile and the Unified Government’s Board of Public Utilities to increase the 911 network footprint, bandwidth, reliability and redundancy.
2018 Action Plan

Staff will continue to work with external stakeholders to develop interconnection agreements to build and maintain a reliable, diverse and redundant network. Agreements have been signed to ensure interconnection arrangements between RAMBIS and other microwave networks will remain in place without interruption. Staff will continue to upgrade network elements in RAMBIS and other networks to increase the 911 network footprint, bandwidth, reliability and redundancy.

Goal A — Objective 3: Ensure ongoing quality maintenance and operation of the regional 911 system.

Project: Equipment and Maintenance Reference Information

Continue to keep detailed documentation on maintenance and repair activities, developing a knowledge base that will decrease future repair times for similar trouble reports. Staff will also continue to create how-to postings for troubleshooting by calltakers and dispatchers in the PSAP.

2017 Progress

In 2017, communications technicians entered 1,781 trouble tickets, the bulk of which were speed dial changes for PSAPs on the VESTA 911 platform. These tickets are reflected in the “software” category in the chart below:

2018 Action Plan

Trouble tickets will continue to be tracked and analyzed to identify common issues. As remaining PSAPs are upgraded to the VESTA 911 platform, MARC staff anticipates the number of software trouble tickets will continue to increase. How-to postings and other specialized training materials will be created on an as-needed basis.
Goal A — Objective 4: Ensure the effectiveness of back-up plans and disaster-recovery procedures.

**Project: Public Safety Program Continuity of Operations Plan (COOP)**

Review and conduct an exercise of the program COOP annually and whenever significant programmatic changes occur.

2017 Progress

A tabletop COOP exercise was conducted in September 2017. Action items from the exercise were reviewed and updates made to the plan as needed.

2018 Action Plan

The Public Safety COOP plan will be reviewed and exercised in 2018, and will also incorporate the MARC Continuity of Operations Plan.

**Project: PSAP Reroute and Backup Planning**

Work with PSAPs and service providers to verify processes and procedures for PSAP reroutes. MARC staff will work with committees, PSAPs and service providers on PSAP backup planning. MARC staff reviews actions taken after every reroute.

2017 Progress

Staff met with agencies, service providers and committee members to ensure backup plans were in place and both accurate and feasible. A template is being developed to standardize backup planning across the region.

2018 Action Plan

Staff will work with PSAPs and service providers in 2018 to test and validate that reroutes are effective and efficiently performed. Staff will work with committees, PSAPs and service providers to develop predetermined reroute plans and determine the practicality of backup PSAPs. An after-action report will be prepared after every reroute.

**Project: Agency-Specific COOP Planning**

MARC staff will assist agencies in preparing their own COOP plans by providing a framework for them to use and share resources as needed.

2017 Progress

No requests for assistance were received from agencies in 2017. The backup subcommittee is working on developing a regional reroute template that will be shared with all agencies in 2018.

2018 Action Plan

MARC staff will continue to offer assistance to agencies when requested. Once completed, the regional template will be distributed.
Goal A — Objective 5:  
Ensure accuracy of the regional 911 database.

**Project: MSAG and GIS Improvements**

Continue to work with local governments to improve the quality of the regional Master Street Addressing Guide (MSAG) and map data layers through an ongoing review process. MARC staff will continue to conduct meetings, one-on-one sessions or an annual review and outreach process with MSAG coordinators, addressing and mapping personnel and PSAP constituents to explain the importance of accurate map data.

2017 Progress

MARC staff distributed the annual database true-up request to over 40 wireline, VoIP and third party database providers in the region in September 2017. These companies conducted a true-up by comparing customer database information in-house with information the 911 database service provider had on record. From that, over 21,232 corrections were made to customer records.

<table>
<thead>
<tr>
<th>2017 Database Totals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSAGs changed</td>
</tr>
<tr>
<td>MSAGs reviewed</td>
</tr>
<tr>
<td>TNs affected by MSAG changes</td>
</tr>
<tr>
<td>TNs reviewed</td>
</tr>
<tr>
<td>TNs corrected</td>
</tr>
<tr>
<td>Error Reports</td>
</tr>
</tbody>
</table>

Staff have continued to work with local governments to receive new addressing and map updates, as well as review existing data. With synchronized data, a larger percentage of wireline 911 calls will plot correctly on the regional map used by PSAPs. This project is also directly related to NG911, in which the MSAG will be absorbed into the map data. Staff provided reports to communities in all counties within the region. This information was obtained from a geocode project that is conducted quarterly, which includes the match rate of map data to customer records in the wireline 911 database, along with a listing of the addresses that did not match. Over 89 communities worked with MARC staff to clean up address data.

The annual error report contest was conducted for an entire year’s worth of data. PSAPs were encouraged to submit every valid 911 and map error discovered. Thirty-one agencies submitted valid error reports. The winning PSAPs were awarded a trophy, and a perpetual plaque located in the 911 training center was updated with the names of the winners. MARC staff visited every participating PSAP and provided donuts to express appreciation.

Staff continued to assist in the coordination of the Automatic External Defibrillation (AED) database, which contains records of AED devices that have been registered, as well as contacts for each community. In 2017, over 318 entries were added and 111 were updated, deleted or verified in the database. Additionally, PulsePoint launched in three jurisdictions within the region, and from that, several requests for data downloads were received. In mid-October, staff met with the chairs of the MARCER committee to discuss the AED database and accuracy concerns. This group established a game plan which consisted of verifying contacts, information sharing at MARCER and HOA meetings, clean-up of the existing AED database, researching the
possibility of an online regional inventory of AEDs, needed changes to state and/or federal legislation and updates to an AED brochure and website.

2018 Action Plan

Public safety staff will continue working with MARC GIS department to receive and enhance regional map data, and work with local governments to receive new addressing and map updates and review existing data. Staff will also continue to review geocode reports and provide data to local governments in an attempt to ensure that accuracy continues to improve. These efforts support the region’s transition to NG911.

Project: Database Provider

Continue to work closely with the 911 database provider, conducting conference calls to address current projects and outstanding issues. MARC staff will also continue to request and analyze Very Large Query (VLQ) reports from the 911 database provider for comparison with the community, county and carrier totals previously provided. Cleanup work will continue based on trends and discrepancies found in the data that may not be identified using other methods. Provide progress reports to the Public Safety Communications Board.

2017 Progress

In 2017, MARC staff received quarterly VLQ database downloads from the wireline database provider. From this data, reports were run to study totals and trends, and help identify areas in need of special attention. In 2017, the regional database totals increased by 2.75 percent from the previous year.

The Private Switch (PS911) project continued in 2017. Before the new school year started, MARC staff contacted the nine school districts in the region that subscribe to PS911, requesting they review and update any database records as appropriate. Six educational institutions responded to the request, one of which advised that it no longer subscribed to the service. All others indicated records were up to date.

2018 Action Plan

MARC staff will continue to monitor services provided by the regional wireline database provider and other carrier activity by participating in monthly conference calls. VLQ requests will continue on a quarterly basis, with a detailed analysis conducted and a summary provided. Staff will attempt to identify areas that need further attention and work with carriers to correct errors.

Project: Database Software

MARC staff will research technology and software solutions to improve automation of identifying database discrepancies or errors.

2017 Progress

MARC GIS and database staff continue to use the add-on tools for existing ESRI software to conduct quality control of map data and compare different sources of data used for 911. GIS staff members use these tools for quarterly geocoding, topology quality control (QC), Kansas NG911 statewide data preparation and other data layer comparisons.

With the training, installation and implementation of GeoLynx Server, a new error report process was made available to submit map data errors.
MARC GIS staff began developing an automation process to replace map data for Johnson and Miami counties on a weekly basis, rather than the current manual process. It is anticipated that this process change will be ready by the end of 2017 and implemented in 2018.

2018 Action Plan

The installation of Geolynx Server will continue around the region into 2018. MARC staff will continue to work with PSAPs regarding the submission of error reports and increased usage of the map.

Once the automated process for Johnson and Miami Counties are complete, staff will look at other counties or data layers in which this process may be more efficient. Staff will also seek out technology or software that is capable of automating processes.

**Project: Emergency Notification Systems**

Continue to work with local governments — by assisting with agreements and obtaining, analyzing and providing data — to establish or improve their emergency notification systems.

2017 Progress

In January, MARC staff worked with the city of Liberty to complete agreements with the database service provider and obtain data for the city’s emergency notification system. Trends show a decline in the use of emergency notification systems due to cost, the availability of social networks and other systems.

2018 Action Plan

MARC staff will continue to work with local governments to provide assistance with agreements, data requests and data analysis as needed.

**Goal A — Objective 6: Ensure accuracy of the regional GIS data.**

**Project: GIS Constituents**

MARC staff will continue to work with GIS coordinators, addressing personnel and PSAP constituents to provide and maintain accurate map data.

2017 Progress

2017 marked the eighth year that staff worked with the MARC GIS department to maintain regional GIS data. MARC GIS provides an annual report and meets regularly with MARC staff. The following updates were made in 2017:

<table>
<thead>
<tr>
<th>Tracking Packets</th>
<th>Street Segment Updates</th>
<th>Boundary Changes</th>
<th>ESN Changes</th>
<th>Address Point Additions/Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>426</td>
<td>22,700</td>
<td>27</td>
<td>31</td>
<td>203,082</td>
</tr>
</tbody>
</table>

At least 12 other layers were updated as well.
In 2016, the address point subcommittee finalized an address point guideline. Using that document as a guide, staff began collecting address point map data from jurisdictions across the region.

MARC staff continues to be active in the Kansas NG911 project on the GIS Committee, and worked with state contracted vendors and local governments to clean up data.

A GeoLynx “Super Users” group reviewed map views for GeoLynx Server. The group provided feedback to GeoComm for inclusion in the new map used in 911 centers.

2018 Action Plan
Staff will continue to improve GeoLynx Server map views and will identify strengths and opportunities for improvement of the map update process, such as automating processes and improving workflow efficiency.

Project: Regional Aerial Imagery
Research the opportunity to include aerial imagery in the regional 911 map.

2017 Progress
With the planned upgrade to GeoLynx Server, the regional aerial imagery will be made available for dispatchers to use on the 911 map. Unfortunately, this data is a composite of the most current data for each particular area, which requires piecing together views from different years. As a result, some areas are more outdated than others and may not have the same clarity or colors.

2018 Action Plan
MARC GIS staff will collect new aerial imagery data during the winter of 2018. Once completed and approved, the newest aerial data for a particular area will be made available.

Project: Map Data Layers
MARC staff will incorporate existing map data to enhance the 911 map and provide better call location detail. MARC staff will also work with users to determine additional map data needs and identify the resources necessary to obtain them.

2017 Progress
In 2017, at least 12 map layers were updated to the regional mapping software as part of the GeoLynx Server project. The initial address point map file was also completed for inclusion in the new map application.

2018 Action Plan
MARC will continue to collect address point map data from local governments, which will be incorporated into a regional dataset to increase accuracy. Staff will also attempt to identify additional data layers that could be beneficial to 911.
Project: Trails Mapping for Public Safety

Continue to work with local constituents to identify and develop trail data to be incorporated into the regional 911 map. Continue to provide information to communities interested in installing emergency location signage.

2017 Progress

Staff continued to work with local governments to implement trails mapping and signage in their jurisdictions. During the year, 69 trail segments were added or updated and 158 trail sign address points were added to the regional file and incorporated into the regional mapping software. Staff again assisted at Smithville Lake with the gathering of GPS data along trails and sign location addressing.

Not all responders have access to map data on MDTs, so MARC GIS staff developed a web map of trails and trail sign locations. The Clay County Park Rangers at Smithville Lake and the Kansas City, Missouri, Police Department are currently using the web map.

2018 Action Plan

MARC staff will continue to assist local governments with the trails mapping project.

Goal A — Objective 7: Continued implementation of Next Generation 911 (NG911) technologies.

Project: Next Generation 911 Upgrade

MARC staff will monitor developments in NG911 technologies, and will work with the Public Safety Communications Board and its subcommittees to develop regional NG911 standards that align with national standards. MARC staff meets with the service provider on a bi-weekly basis to review VESTA upgrade plans including budgeting, scheduling individual PSAP upgrades, as well as network and server upgrades. Meetings with PSAPs are scheduled prior to ordering equipment to verify connectivity, schedules and PSAP modifications. Bi-weekly conference calls are held with Airbus to discuss specific issues.

Staff will work with an external consultant, Airbus DS and service providers to determine bandwidth and equipment requirements necessary to provide NG911 technologies. MARC staff will continue to participate in local, state and national organizations and activities to learn about NG911 technologies and services.

2017 Progress

MARC staff attended the national APCO, NENA and Kansas APCO conferences to increase knowledge about NG911 technologies and services. Ethernet modules within Johnson County’s microwave network were upgraded to increase network reliability, and modules were also installed in Leavenworth County’s microwave network to increase bandwidth. Throughout 2017, new PTP microwave links were added in the city of Kansas City, Missouri, the city of Lee’s Summit, Johnson County, Fort Leavenworth, Leavenworth County and Platte County.

The Lee’s Summit Fire Department and the Platte County Sheriff’s Office were upgraded to the VESTA 911 platform in 2017. There were connectivity challenges with many of the remaining PSAPs yet to be upgraded, which delayed the installation schedule.
The remaining PSAPs to be upgraded include:

- American Medical Response
- Fort Leavenworth Provost Marshal
- Kansas City, Kansas, Fire Department
- Kansas City, Kansas, Police Department
- Leavenworth County Sheriff’s Office
- Leavenworth Police Department
- Overland Park Police Department

2018 Action Plan

Staff will continue to work with vendors and service providers to address network bandwidth and determine the appropriate equipment necessary to provide NG911 technologies. Staff will also participate in local, state and national organizations and activities to learn about NG911 trends, technologies and services. Staff will continue to work with microwave owners, fiber providers and local governments to ensure all PSAPs have dual connection points into the regional 911 network.

Project: Texting to 911

MARC staff will continue working with wireless providers to implement SMS to 911 in a phased approach, beginning with the largest PSAPs. A texting subcommittee will assist with the development of outreach materials and training tools for the PSAPs. MARC staff will continue to work with wireless providers and the 911 equipment manufacturer to ensure the region has the most efficient texting solution available.

2017 Progress

In 2017, the FCC adopted rules to facilitate the transition from text telephony (TTY) technology to real-time text (RTT) technology. A phased roll out of RTT is scheduled to begin in December, 2017, with a completion date of June, 2021. RTT technology is necessary to integrate texting into the VESTA platform.

Text to 911 information is shared during outreach presentations, in print form throughout the region and at the annual Missouri State Fair. During the Kansas APCO Conference, MARC staff gave a formal presentation sharing lessons learned and future plans with Text to 911. Outreach materials are updated as needed to reflect policy and technology changes.

2018 Action Plan

In 2018, MARC staff will continue to work with the Texting Subcommittee and PSAP personnel as needed to address concerns regarding text call handling. Text to 911 will be tested on a by-PSAP and by-carrier basis at the direction and discretion of MARC staff and committees. Training materials will continue to be updated as necessary.

Project: Connection to Kansas Statewide 911 Network

MARC staff will work with service providers, wireline carriers, wireless carriers, committees and Airbus DS Communications to connect to the Kansas statewide 911 network. MARC staff will ensure this connection is built with redundancy, diversity and with high-level network security.
2017 Progress
No progress was made in 2017 as connecting to the state network is dependent on the purchase and installation of NG911 selective routers in the region.

2018 Action Plan
Staff will continue to communicate and collaborate with the state of Kansas as it continues to build out the statewide ESINet.

**Project: Network Security**
Work with the regional service provider, Airbus DS Communications, NENA and APCO to ensure network security is compliant with industry standards. MARC staff will provide provisions and policies to prevent unauthorized access, misuse, modifications to the 911 network.

2017 Progress
MARC technical staff began installing hardware Ethernet locks on all open ports found in workstations, servers, switches and routers. This project will continue into 2018. The contract with the 911 support vendor was updated to include a section on appropriate password policies for users and devices going forward. Authorized personnel from the 911 support vendor, as well as MARC technical staff, were issued ID badges. PSAP personnel are asked to verify the validity of the ID against a list located on the 911 intranet before allowing access to equipment. MARC Public Safety staff joined MS-ISAC (Multi-State Information Sharing and Analysis Center) which provides cybersecurity resources free of charge.

2018 Action Plan
Staff will continue to follow industry cybersecurity recommendations and best practices. Antivirus software will be installed on all 911 workstations and servers during the year.

**Goal B: Enhance collaboration and communications capabilities among all regional public safety and emergency services agencies.**

**Goal B — Objective 1:**
Collaborate on delivering shared services to regional agencies when possible.

**Project: CAD-to-CAD Interface**
MARC staff will work with regional partners to develop a system of interfaces or direct connections for public safety computer-aided dispatch systems.

2017 Progress
This project relies on the use of the KC SCOUT fiber network. Final splicing work was completed late in the year by MoDOT, and the connection is currently being tested. A meeting will be scheduled with regional stakeholders and MoDOT staff to discuss the future of the project in early 2018.
2018 Action Plan
Once the testing period is completed, staff will work toward connecting CAD systems to the fiber network.

**Project: KC Scout Fiber Project**
Work with KC SCOUT, the city of Kansas City, Missouri, Johnson County, Kansas, and the MARRS Management Council to implement and manage the fiber connection between Kansas City and Johnson County. The fiber connection will be provided for public safety purposes, such as redundancy and diversity of computer-aided dispatch and 911 needs.

2017 Progress
The connection of the 911 selective routers over Scout fiber was made late in the year after splicing work was completed by MoDOT. The connection is still be tested for stability at this time.

2018 Action Plan
If the connection between the routers remains stable and reliable, the Scout fiber will be used more extensively for 911 network connections in 2018.

**Project: Regional Dispatching**
At the request of MARC member agencies, staff will support local officials in discussions on the feasibility of implementing a regional dispatch center for public safety.

2017 Progress
Multiple meetings on the regional dispatching project occurred in 2017. A review of the co-location model and consolidated model occurred at the Johnson County Emergency Communications Center. The next step will include reviewing services that may be shared between PSAPs, such as CAD.

Missouri Senate Bill 503 passed in August, 2017, which requires the Department of Public Safety to complete a study of the number of PSAPs necessary to provide the best possible 911 technology and service to all areas of the state in the most economical and efficient manner possible. The department is scheduled to release a comprehensive study of 911 services in Missouri in 2018.

2018 Action Plan
MARC will help facilitate regional dispatching discussions as needed throughout the year.

**Project: Shared Systems (CAD, RMS)**
Working with regional agencies, opportunities for cost sharing of technology systems will be identified. MARC staff will work with local agencies to facilitate discussions and potential partnerships.
2017 Progress
The regional dispatching working group met several times during the year. Although consolidation and co-location were discussed, the group decided to focus on achievable goals in the short-term, such as sharing CAD and RMS systems.

2018 Action Plan
Staff will work with agencies and vendors to determine how CAD and RMS system data can be shared over the SCOUT fiber network in the future.

Goal B — Objective 2: Support and coordinate regional interoperability.

Project: Metropolitan Area Regional Radio System (MARRS)
Provide support to the MARRS Management Council and all committees that report to the council. This will include scheduling meetings, monitoring and facilitating agreements between agencies and maintaining MARRS-related documents, such as standard operating procedures.

2017 Progress
MARRS Management Council and subcommittee meetings were held throughout the year. The process of reviewing and updating MOU documents and inter-agency agreements was also started.

2018 Action Plan
Staff will continue to review and update MARRS governance documents and ensure that an archive containing all agreements is maintained at MARC. The city of Lee’s Summit and the city of Excelsior Springs are currently constructing P-25 radio systems, and anticipate joining MARRS in 2018.

Project: MARRS Maintenance Upgrades
System maintenance costs will be reviewed and a new five-year subscriber and port-cost model will be developed. Long-range needs for infrastructure upgrades and replacement will be identified.

2017 Progress
The MARRS sustainment project was completed by the consultant in 2017, and reviewed by the Management Council. System participants were provided the lifecycle costs for the system and are reviewing options to fund long-term costs.

2018 Action Plan
MARC staff will continue to work with the MARRS Management Council and agencies to determine the best way to maintain system infrastructure in subsequent years. Staff will also work with agencies that have shown interest in regional options.

Project: Connection of MARRS to State Systems
The Regional Interoperability Communications (RIC) and the MARRS Technical Committees will work with state agencies to ensure interoperable communications and regional talkgroups are in place and operating. Testing and training will be conducted.
2017 Progress
The MARRS system was connected to the Missouri Statewide Interoperability Network (MoSWIN) in 2016. Users on both systems were able to communicate successfully in 2017 during multiple incidents.

2018 Action Plan
There are no plans to connect to the Kansas state radio network in the near future. The MARRS system will continue to interoperate with the MoSWIN system as needed in 2018.

Goal B — Objective 3: Maintain RAMBIS to support communications among public safety professionals.

Project: Support Web Emergency Operations Center (WebEOC) Activities
Provide administrative support for the monthly WebEOC subcommittee meetings and serve as a liaison between end users and vendors to address the software functionality as it relates to the needs of the region.

2017 Progress
The WebEOC administrators tested the fused system at the Kansas City EOC in early spring. In May, the WebEOC administrators met with upper level management and engineers to discuss several outstanding projects. As a result, an action plan was developed and weekly status calls were scheduled for awareness of the overall progress. The decision was made to relocate all regional boards to the Johnson County server, after which the regional server in Leavenworth County would be decommissioned.

Staff provided support to the WebEOC subcommittee co-chairs and members during monthly meetings and as needed throughout the year.

2018 Action Plan
Staff will continue to provide support to the WebEOC subcommittee co-chairs and members during monthly meetings and as needed throughout the year.

Project: RAMBIS Maintenance and Upgrades
Continue to monitor the RAMBIS network and other connected systems to ensure optimal performance. This will be accomplished by system monitoring, routine maintenance and upgrading components as needed.

2017 Progress
Annual RAMBIS maintenance activity for antennas, HVAC units, generators and UPS units were performed throughout the year. Before activities commence, PSAPs receive a brief summary of the maintenance work to be completed. These activities included replacing batteries in UPS units, replacing failed equipment and repairing HVAC units. Staff also worked with site owners to address issues concerning facility upkeep, as well as with service providers and vendors to upgrade alarm monitoring capabilities in each of the RAMBIS sites.
2018 Action Plan

MARC staff will continue to develop and implement RAMBIS maintenance procedures for all microwave network components and interconnection facilities. Staff will work to plan and implement a microwave overlay, one of the three capital projects identified by the Public Safety Communications Board. This overlay will add 190 Mb of bandwidth to the RAMBIS microwave network.

Additionally, staff will review and enhance procedures for monitoring, repairing and upgrading network elements of the radio equipment, microwave equipment, DC power equipment and antennas. Staff will continue to work with a consultant to update the existing map indicating all interconnections and their respective capacities used in the regional microwave system.

Project: Monitoring and Participating in FirstNet Activities

Coordinate with members of the RIC committee and the state points of contact to remain current on FirstNet activities. This will include gathering information as requested and coordinating outreach efforts.

2017 Progress

MARC staff helped facilitate a FirstNet working group to review and analyze the AT&T solution. The working group developed a list of concerns to share with both AT&T and the state points of contact (SPOCs) for both Kansas and Missouri. Letters of support were sent by the MARRS FirstNet working group and the Regional Homeland Security Coordinating Committee (RHSCC) to the Missouri Governor’s office.

2018 Action Plan

The state of Kansas chose to opt-in to the FirstNet network in August, 2017 and Missouri announced its decision to opt-in in December. With both states joining FirstNet, much of the work will involve a regional effort for pricing and implementation. The focus will be on ensuring interoperability between both states and a coordinated implementation plan with emphasis on little to no service impact.

Goal B — Objective 4:

Ensure that the TICP continues to be exercised, evaluated and modified as needed.

Project: TICP Review

MARC staff, along with RIC committee members, will annually review the Tactical Interoperable Communications Plan (TICP). The Communications Unit (COMU) subcommittee has identified training objectives, which include ensuring the TICP is a component in yearly training exercises. MARC staff will present revision recommendations to the Public Safety Communications Board.

2017 Progress

In September, the COMU subcommittee met and began reviewing both the TICP and Tactical Interoperable Communications Field Operations Guide (TICFOG) for updates. The edits will be presented to the RIC for approval in October.
2018 Action Plan

The TICP will be exercised during the next regional communications exercise (COMMEX) in the second quarter of 2018.

Goal C: Enhance communications, networking and information exchange among public safety agencies and strengthen relationships with public service agencies and professional organizations.

Goal C — Objective 1: Enhance communications with and among agencies.

Project: Information Sharing

MARC will use various existing resources, such as the public safety intranet, the PSAP managers’ forum, the MARC website and the Metro Communicator newsletter to provide up-to-date public safety communications information. MARC will ensure information is distributed using the most appropriate method based on the sensitivity and target audience of the correspondence.

2017 Progress

Two issues of the Metro Communicator newsletter were sent electronically to all public safety communications contacts and committees in 2017. Links to current and past issues are available on the MARC public safety website and the 911 intranet. The yearly training calendar, which includes class schedules and other information, was provided to agencies.

2018 Action Plan

MARC staff will continue to encourage local agencies to share stories with the rest of the region through the Metro Communicator and other regional events. Staff will also continue to provide valuable information to agencies through the 911 intranet site.

Project: Assist Agencies in Implementing Operational Changes

Assist PSAPs with operational requests that will allow them to work in an effective and efficient manner.

2017 Progress

MARC staff assisted a number of agencies in operating more efficiently by evaluating circuit usage, diagnosing and repairing microwave connection issues and eliminating unused resources. Staff also helped agencies coordinate with vendors when necessary.

Staff assisted Birmingham, Grandview and North Kansas City Fire Departments with changes to their PSAP or dispatch provider by working with the database provider, GIS department and PSAP notifications.

Project RETAINS was used by Kansas City, Missouri, Police Department, Raytown Police Department and Johnson County ECC to help determine appropriate staffing level needs.
A memorandum of understanding was completed between 911 and United Way 211. This request was initiated by 211 as part of their accreditation process which establishes roles and responsibilities between the two entities.

2018 Action Plan
MARC staff will continue to assist regional PSAPs with operational changes as needed.

Goal C — Objective 2:  
Continue to involve and expand stakeholder participation in various committees.

Project: Regional Network Facilitation
Work with individuals and agencies to facilitate and create opportunities for members of the public safety community to meet and discuss issues of common interest.

2017 Progress
In 2017, MARC staff held quarterly meetings for PSAP supervisors to meet and discuss relevant issues. Additionally, MARC hosted an annual PSAP Managers Luncheon and other meetings that gave agencies the opportunity to interact.

2018 Action Plan
MARC will continue to provide PSAP staff opportunities to discuss relevant issues

Project: PSAP Manager Orientation
Continue to provide orientation and a PSAP managers’ handbook for new public safety communications personnel at the management level on an as-needed basis. The orientation will provide an overview of MARC’s services and role in regional public safety communications.

2017 Progress
Three orientation sessions were held for new PSAP managers in 2017.

2018 Action Plan
Orientation sessions will be held as needed throughout the year.

Goal C — Objective 3:  
Participate in national associations to support professional development and technical proficiency.

Project: Public Safety Association Participation
MARC staff will continue to take an active role in public safety communications committees, including training, database, technical, public outreach, education and other industry-related committees.
2017 Progress
MARC staff members continued to play an active role with state associations by participating in committee work and obtaining board memberships. The 911 database manager is a member of a NENA NG911 workgroup, and the training coordinator is a member of the Missouri Governor’s Advisory Council on EMS and the Kansas Training Standards Subcommittee. Three staff members continue to provide active support to the Kansas 911 Coordinating Council.

2018 Action Plan
MARC staff will continue to take an active role with associations, committees and groups related to public safety communications. Staff will also look for other opportunities to represent the region by participating in regional, state and national meetings and conferences.

Project: Regional Training Standards
Using the MARC committee structure, MARC staff will review and reference state and national standards to develop regional training standards for telecommunicators. Due to their dynamic nature and seeking continuous improvement, the regional training standards are refined and modified to address changes in the profession annually.

2017 Progress
The Kansas Training Standard for 911 Telecommunicators was completed and submitted for approval by the Kansas communications working group.

2018 Action Plan
Staff will work with the Kansas communications working group on writing standards for the communications training officer position and others requiring standards for continuing education and minimum qualifications.

Project: Maintenance Activity Professional Development
In an effort to stay current with technological advances, MARC staff will seek out annual training on emerging technologies.

2017 Progress
All technicians attended either the APCO or NENA national conference in 2017.

2018 Action Plan
MARC staff will continue to attend relevant conferences and training.

Goal C — Objective 4: Ensure program excellence through quality assurance.

Project: Customer Satisfaction
MARC staff will use various quality assurance methods to measure program quality and satisfaction. Public safety staff will distribute surveys through email and online, as well as offer feedback forms at the conclusion of trainings and outreach events. MARC staff will review and consider the results when preparing the following year’s action plans.
2017 Progress

A customer satisfaction survey will be distributed online and via email in November to allow staff to report findings at the final Public Safety Communications Users Committee and Communications Board meetings of the year.

2018 Action Plan

Customer satisfaction is an ongoing goal of the maintenance team. The survey is a tool used to measure both performance and the needs of the region. Staff will continue to distribute the survey to PSAP management, which will be enhanced to include all appropriate program areas.

Goal D: Ensure the financial stability of the regional 911 and public safety communications systems to sustain their long-term viability as models of excellence.

Goal D — Objective 1:
Ensure that the costs of 911 and public safety interoperability systems are shared equitably among participating jurisdictions.

Project: Financial Planning
Implement the financial planning policies enacted by the Public Safety Communications Board as part of the 911 system budget process. A new MARRS cost model and long-range financial infrastructure sustainment plan will be developed.

2017 Progress
The Public Safety Communications Board approved an increased contribution to the capital projects fund in December, 2016, to pay for three significant upgrades over the next few years. The first of these projects, the migration to the GeoLynx Server mapping platform, began in 2017. Staff is currently researching options for replacement selective routers and a microwave overlay. Projects are being completed on a pay-as-you-go basis, and are therefore dependent on cash on hand.

2018 Action Plan
Staff will continue to work with the Public Safety Communications Board to ensure that appropriate financial planning policies are in place to maintain the integrity of both the 911 and regional radio systems.

Project: System Inventory
Continue to keep a detailed inventory of the region’s growing physical and digital assets. An annual true-up will be conducted to ensure that all assets are accurately accounted for.

2017 Progress
New equipment was added to the system inventory as it was installed at PSAPs. With several PSAPs remaining on the legacy equipment, the annual true-up will be deferred to 2018.
2018 Action Plan
   Once all PSAPs upgraded to the VESTA 911 platform, a full system inventory will be conducted.

Goal D — Objective 2: Seek additional funding to support regional public safety communications systems.

Project: Grant Opportunities
   Research and seek out grant funding on an annual basis and as new grant opportunities become available.

   The MARC Public Safety program will continue to seek funding to strengthen survivability and disaster recovery for the regional 911 system and to support the national priorities established by the U.S. Department of Homeland Security.

   As part of the Complex Coordinated Terrorist Attack (CCTA) grant, funding was received to review the effectiveness of public safety communications during multiple simultaneous critical events. Included are communications between PSAPs, emergency management organizations via WebEOC and eICS, which is a hospital incident command software that indicates bed availability.

Project: Missouri and Kansas 911 Legislation
   Monitor legislation at the state and federal level that could have an impact on 911 and communications in the region. When necessary, MARC staff will represent the region by presenting testimony or providing information to elected officials.

2017 Progress
   A bill was introduced in the Missouri House of Representatives that would enable individual counties to place a question on the ballot to tax any device capable of contacting 911. The bill would have also created a grant fund to assist areas of the state that did not have enhanced 911 by taxing prepaid wireless services. The bill passed the House by a wide margin but encountered resistance in the Senate. Ultimately, non-controversial elements of the bill were amended to Senate Bill 503 and passed, with the Governor signing the bill on August 28, 2017. SB 503 provides the following:

   • Modifies the existing 911 Oversight Committee to the Public Safety Service Board with 15 members. This board is charged with assisting and advising the state in ensuring the availability, implementation and enhancement of a statewide emergency telephone number common to all jurisdiction through research, planning, training and education.

   • The board has no authority over PSAPs or communications providers in the state.

   • The board shall represent all entities and jurisdictions before appropriate policy-making authorities and the general assembly and shall strive toward the immediate access to emergency services of all citizens of this state, including text to 911.

   • The board will designate a state 911 coordinator who shall be responsible for overseeing statewide 911 operations and makes the state eligible for federal grants for 911 funding.
• Requires the Department of Public Safety to complete a study of the number of PSAPs necessary to provide the best possible 911 technology and service to all areas of the state in the most economical and efficient manner possible. It also requires the issuance of a state public safety answering point consolidation plan based on the study.

The Missouri 911 Coalition met in September and October and agreed to submit the legislation that would enable Missouri counties to place a question on the ballot to tax any device capable of contacting 911 and create a grant fund that would assist those areas that did not have enhanced 911 by taxing prepaid wireless services. MARC staff met with the sponsor of the bill and public safety communications leadership from the Missouri side of the MARC region to discuss strategies for the upcoming session. Changes in leadership roles in the General Assembly were discussed to determine how they might impact the bill.

There was no Kansas 911 legislation in 2017.

2018 Action Plan
MARC staff will provide information as needed to members of the Missouri Legislature and work with the Missouri 911 Coalition to develop legislation that will address the 911 funding needs of the region.

Goal D — Objective 3: Seek innovative cost-saving initiatives while maintaining or improving the quality of regional systems.

Project: 911 Migration to ESINet
Work with service providers, wireline carriers, wireless carriers, committees and Airbus to continue migrating 911 traffic from the present network to an ESINet platform. MARC staff will ensure the ESINet platform is built with redundancy, diversity and has a high level of network security.

2017 Progress
MARC staff and the regional service provider installed new microwave links and upgraded some older 4.9 GHz links to licensed links. Replacing these links with licensed links resolved inference issues. Staff worked with local government representatives and service providers to identify and implement new network interconnections, increase network capacity and open up new facility access. New tower agreements were completed, which were necessary for MARC to interconnect with other networks, other service providers and provide network links to regional PSAPs.

2018 Action Plan
MARC staff and the regional service provider will continue to install new microwave links and upgrade PSAPs. Staff and local government representatives will work closely to identify the best backbone options. These collaboration activities help determine the best network options available.
Project: Public Safety Vendor Review

MARC staff will continue to review contracts, services and financial reports provided by existing vendors, and ensure the region is receiving the most competitive pricing for vendor services.

2017 Progress
Staff reviewed vendor pricing and services on a regular basis. Research into vendors that provide 911 selective routing equipment and services began in the fourth quarter of 2017.

2018 Action Plan
Staff will continue to ensure vendors are providing competitive pricing for services.

Goal E: Provide high-quality training and education programs for public safety professionals.

Goal E — Objective 1: Explore and implement alternative training delivery methods.

Project: Training Delivery Methods

MARC staff will research new and innovative ways to deliver training to the region’s public safety communications professionals. Pilot classes will help measure the effectiveness of alternative training delivery methods. Alternate methods planned for consideration and further study include taking certain courses on the road, developing online courses and use of alternate facilities to increase capacity.

2017 Progress
Several training classes were conducted offsite, and two large courses were provided at two other training sites. The forty-hour Basic Telecommunicator Training course was taught over a three-week period in one regional county PSAP, and the four-day Communications Training Officer course was offered at an offsite location in November. This is the first time either course has been offered offsite. Both courses are being provided in addition to previously scheduled published courses.

Meetings were conducted and discussion continues in regard to making training opportunities available on the 911 intranet.

2018 Action Plan
Staff will continue offering courses offsite to help meet the needs of regional agencies and will continue to work on developing online curriculum.

Project: Cost-Benefit Analysis

A cost-benefit analysis will be used to determine what alternative training methods might be viable options for the region. The public safety training coordinator will verify that alternative methods comply with state and federal training regulations when applicable.
2017 Progress

A cost-benefit analysis was conducted using online learning platforms that varied in price considerably. It was determined that the fee-based course platforms were too expensive to install and maintain to make the staff time required to administer them worthwhile.

2018 Action Plan

A handful of free online education platforms were located. Utilizing them, at least one online class will be developed, conducted and evaluated in 2018.

**Goal E — Objective 2:**
Ensure that the regional public safety training program is kept current, with contemporary training topics that appeal to various constituencies, and provides participants the opportunity to meet all applicable training requirements.

**Project: Training Program Development**

MARC staff will attend appropriate local, state and national conferences to learn about new and emerging topics in public safety and monitor industry publications for material that can be used to update the program’s curriculum. The public safety training program will strengthen its instructor pool by seeking knowledgeable and effective teaching professionals. The public safety training coordinator will conduct an annual instructor workshop to provide new teaching techniques and continue to develop instructors’ teaching abilities.

2017 Progress

Six new topics were developed in 2017. Three of these were provided as courses based on input from the region. Four Professional Development Series (PDS) sessions were conducted during the year.

2018 Action Plan

Staff will attend national and state APCO conferences for new training opportunities and topics. Additionally, contracts will be developed with speakers for the PDS sessions and other special classes to enhance and further develop the training program. An annual instructor workshop will be hosted.

**Project: Training Needs Assessment**

MARC staff will conduct a training needs assessment to identify any gaps within the public safety training program. The public safety training coordinator will develop recommendations, based on the results of the assessment, to be presented to the Public Safety Communications Board.

2017 Progress

Staff delivered 18 classes (totaling 27 training days) at PSAPs, and for the first time, took the 40-hour Basic Telecommunicator Training and Communications Training Officer (CTO) class out to regional training facilities. The basic class was offered at a
regional PSAP to provide required training for four telecommunicators. The CTO class took place in November 2017 in Johnson County, Kansas.

The GeoLynx Server Train-the-Trainer workshop is scheduled for 2018. MARC will send a subject matter expert to each PSAP in the region to provide training and updates for each agency. In addition, active shooter events and increased stress-related issues in communications centers have increased demand for training sessions on these subjects.

2018 Action Plan

The training coordinator will continue to solicit input from PSAP managers to help meet their specific needs with onsite courses, offsite courses, frequency of specific course offerings, and development of new courses. Integration with PSAP staffing levels and retention is a critical factor in content and the delivery processes. Solicitation of input from the technology sector, guest instructors and subject matter experts will continue to help the region address changes in the profession and communities before they become issues. Peer support training and GeoLynx training are two recent examples.

**Project: Regional Interoperable Training**

MARC staff will work with the RHSCC Training and Exercise Subcommittee to continue to fund and provide interoperable communications training to public safety personnel. Communications Unit Leader (COML) courses will be offered annually. MARC’s public safety training program will host applicable interoperable communications courses as they become available.

2017 Progress

In 2017, the following classes were provided:

- one COML course
- two Interoperability courses
- three MARRS courses
- two TICP Courses

Each class was updated and modified to assist in providing the latest information to attendees due to the dynamic nature of regional systems. Partial funding assistance was provided through RHSCC training funds, though it appears this assistance will be decreasing or unfunded in the future. Communications exercises and task book completion opportunities were conducted two times during the year at the Kansas Speedway in coordination with other regional training events.

2018 Action Plan

Staff will work with the state training coordinator and the emergency services training coordinator to try to obtain federal and state approval for a COML course in 2018. Staff will also continue to update and conduct classes in the other areas of interoperability to enhance the understanding of the MARC regional system. A COMMEX will be integrated into interagency exercises to allow for task book completion and hands-on training for COML personnel.
**Project: Stress Reduction Research Study for 911 Telecommunicators**

The need for stress reduction for PSAP personnel is greatly important especially with the desire to move forward with NG911. A study was designed specifically for the call center environment and stressors faced by 911 Telecommunicators. The goal is to reduce 911 telecommunicator burn-out and turnover, resulting in cost savings, within our regional PSAPs.

2017 Progress:

MARC partnered with Major Darren Ivey, the Kansas City, Missouri, Police Department’s crisis intervention team commander, to present two four-hour in-person training sessions in June and July called Building Resiliency: Surviving Secondary Trauma. The training taught 911 personnel how to recognize and identify secondary trauma and risk factors and described the mind-body connection to secondary trauma. Participants also completed a variety of assessment tools and practiced developing coping skills to build resiliency for self and peer support. Attendees received four Continuing Education Unit (CEU) credits through MARC’s 911 Training Facility.

In September, MARC contracted with Hinkle & Associates, a highly trained team of licensed mental Psychologists, to present a 40-hour customized training session addressing the needs and stress characteristics of 911 personnel. The Train-the-Leader PSAP Peer Support Workshop certified a peer support leader to train co-workers how to provide emotional support through times of personal or professional crisis. This person will also build and manage their PSAP’s peer support program, and will become part of MARC’s first-ever regional roving 911 Telecommunicator Peer Support Team which will respond to crises of fellow dispatchers within the MARC region.

2018 Action Plan:

MARC staff will continue offering resiliency and secondary trauma training in-person and in electronic format, posted on the 911 intranet for use at call taking consoles.

MARC agencies are encouraged to build and manage Peer Support teams within their individual PSAPs. This is compliant with the NENA Standard on 911 Acute/Traumatic and Chronic Stress Management.

Alumni PSAP personnel from the Hinkle & Associates workshop are encouraged to form the regional roving 911 Telecommunicator Peer Support Team which will respond to crises of fellow dispatchers within the MARC region. Alumni will also form a new 911 Telecommunicator Peer Support Advisory Committee under the Public Safety Communications Board.

**Goal F: Educate the public and elected officials about regional public safety communications services and the resources needed to provide them.**

**Goal F — Objective 1:**

Educate and reach out to the public about the proper use of 911.
**Project: Volunteer Base**

MARC will conduct volunteer orientations for current and prospective public outreach and education volunteers on an as-needed basis. These orientation sessions will ensure a consistent message is delivered throughout the region and will provide volunteers with the tools, information and confidence to make presentations in schools and at outreach events.

2017 Progress

MARC staff provided materials and helped coordinate multiple outreach events that took place in 2017, including numerous community events, 911 Hero ceremonies, the annual Telecommunicator Appreciation Celebration and 911 Day at the Ballpark. Additionally, several thousand students from area school districts were educated in the proper way to use 911. A regional job fair will take place in November, and information about 911 dispatching and calltaking careers will be shared.

2018 Action Plan

Staff will continue to partner with agency personnel to deliver 911 education to schools around the region, and participate in regional events to provide 911 information to the public.

**Project: Education and Outreach Materials**

MARC staff will continue to update the Important Tips about Calling 911 and Text-to-911 brochures, as well as the 911 legislation, interoperability and mapping fact sheets. Other education and outreach resources will be updated as needed.

2017 Progress

Two children were recognized as 911 Heroes for using 911 to get help for family members who needed emergency medical attention. The Important Tips brochure was updated and reprinted, and a tent was purchased for use at outreach events.

2018 Action Plan

Outreach materials will continue to be available for all regional agencies to reserve and use in their public education and outreach efforts.

**Project: Wounded Warrior Project**

MARC staff will work with the region’s local governments to identify, develop and maintain an ongoing list of employment opportunities. These job listings will be shared with the regional Wounded Warrior Project contact to be used in their employment acclimation efforts for returning veterans.

2017 Progress

MARC staff continued to maintain a weekly listing of available employment opportunities based on data obtained with the cooperation of local governments. Over 2,900 employment opportunities have been listed for the Warriors to Work and Wounded Warrior Project.

MARC staff also partnered with the KC Degrees program to provide job opportunities weekly.
2018 Action Plan
Staff will continue to work with local governments and the Wounded Warrior program to coordinate the available employment opportunities. These job postings will be organized, recorded and shared with the Wounded Warrior and Warriors to Work Projects. Tracking of the submissions on a year-to-date fashion will be digitally stored at MARC.

Goal F — Objective 2: Educate elected officials about policy and financial issues related to public safety communications.

Project: Inform Regional Leadership
MARC staff will respond promptly to requests from local officials to provide updates on projects and activities within the program. MARC staff will also provide timely information for the Metro Communicator, ReMARC and other news outlets.

2017 Progress
MARC staff met with officials in each county to discuss emerging regional public safety communications issues, such as funding options and emerging technologies, as well as ongoing legislative initiatives.

2018 Action Plan
Staff will continue to work with local leaders and regional agencies to ensure they are fully informed of regional projects and plans.
### Coordination Services Revenue Comparison 2018

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<thead>
<tr>
<th>Revenue</th>
<th>2017 Budget</th>
<th>2017 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS Coordination Fee</td>
<td>$1,779,648</td>
<td>$1,778,837</td>
</tr>
<tr>
<td>PS Pub Ed/Promo Revenue</td>
<td>$8,000</td>
<td>$9,000</td>
</tr>
<tr>
<td>PS Training Registrations/Other Revenue</td>
<td>$10,400</td>
<td>$16,000</td>
</tr>
<tr>
<td>PS Training Memberships</td>
<td>$60,000</td>
<td>$60,000</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>$1,858,048</strong></td>
<td><strong>$1,863,837</strong></td>
</tr>
</tbody>
</table>

### Coordination Services Expenses Comparison 2018

<table>
<thead>
<tr>
<th>Expenses</th>
<th>2017 Budget</th>
<th>2017 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>$744,136</td>
<td>$787,401</td>
</tr>
<tr>
<td>Employee Benefits</td>
<td>$384,719</td>
<td>$385,037</td>
</tr>
<tr>
<td>Indirect Costs</td>
<td>$415,418</td>
<td>$354,078</td>
</tr>
<tr>
<td>Contractual Services</td>
<td>$49,310</td>
<td>$59,160</td>
</tr>
<tr>
<td>Legal Fees</td>
<td>$2,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>In Region Travel</td>
<td>$3,100</td>
<td>$4,700</td>
</tr>
<tr>
<td>Out of Region Travel</td>
<td>$49,225</td>
<td>$50,250</td>
</tr>
<tr>
<td>Rent</td>
<td>$66,115</td>
<td>$69,821</td>
</tr>
<tr>
<td>Cell Phone</td>
<td>$5,840</td>
<td>$6,080</td>
</tr>
<tr>
<td>Insurance</td>
<td>$12,684</td>
<td>$13,260</td>
</tr>
<tr>
<td>Postage</td>
<td>$1,100</td>
<td>$1,400</td>
</tr>
<tr>
<td>Supplies and General Expense</td>
<td>$22,390</td>
<td>$22,150</td>
</tr>
<tr>
<td>Equipment Rental</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Automotive-Exp. Maintenance (gas, oil, tires)</td>
<td>$11,618</td>
<td>$16,818</td>
</tr>
<tr>
<td>Equipment</td>
<td>$7,080</td>
<td>$4,080</td>
</tr>
<tr>
<td>Meeting</td>
<td>$34,750</td>
<td>$36,750</td>
</tr>
<tr>
<td>Registration Fees</td>
<td>$7,685</td>
<td>$7,750</td>
</tr>
<tr>
<td>Professional Memberships</td>
<td>$2,533</td>
<td>$2,602</td>
</tr>
<tr>
<td>Training</td>
<td>$7,045</td>
<td>$10,200</td>
</tr>
<tr>
<td>Printing</td>
<td>$12,300</td>
<td>$9,300</td>
</tr>
<tr>
<td>Vehicle Depreciation</td>
<td>$18,000</td>
<td>$17,000</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>$1,858,048</strong></td>
<td><strong>$1,863,837</strong></td>
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