2013 Annual Workplan and Budget

Appendix J
Regional Public Safety Communications Program Strategic Plan
DRAFT
Goal A: Enhance the quality of the regional 9-1-1 system to ensure access to public safety communication services that are reliable, current, redundant, secure and diverse.

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

Project: Call Routing Validation
MARC staff will continue to annually review call routing for at least 30 percent of all wireless sectors with a goal of validating routing on each tower facing at least once every three years. This project is ongoing.

2012 Progress
All routing errors received via 9-1-1 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. During the fourth quarter of 2012, cell tower data was requested from Alltel/Verizon, CommNet and U.S. Cellular. An audit will be conducted once the data is received from the carriers. Due to PSAP changes for Smithville, Northmoor and Claycomo, 37 cell tower facings were reviewed and changes made according to coverage.

2013 Action Plan
An audit of wireless cell sectors that have not been reviewed within the past three years will be conducted. This consists of working with wireless carriers and our map provider to compare and update cell tower data.

Project: Database Audit
MARC staff will implement 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. This project is ongoing.
2012 Progress
Beginning in March 2012, the FCC began contracting with NeuStar to supply and maintain pANI-type numbers (ESRK, ESQK, etc.). Since the region maintains the non-traditional network, these records are provided by the carriers or their third-party database provider and loaded in the region-owned database. Nine carriers were identified as having blocks of pANI-type numbers within their systems that would no longer be recognized as valid by the FCC. MARC staff notified these carriers of the change and began working with them on a solution and timeline to change routing numbers to follow the national standard. Four of the identified carriers replaced their routing numbers in the database, but five chose not to do so.

With the closing of the Claycomo PSAP in October 2012, 91 records had to be changed to the Clay County Sheriff’s Office in both databases. Once updated, the entire dataset was exported by carrier for each to review and validate.

2013 Action Plan
MARC staff will continue to work with carriers and their third-party providers to make database records more consistent, and follow national standards. This is an ongoing project in which records are added, modified and deleted throughout the year.

Project: Wireless Accuracy Testing (WAT)
MARC public safety communications technicians will continue to make test 9-1-1 calls with a goal of testing 30 percent of the region’s wireless cell sectors annually. The wireless accuracy testing results will be reviewed with the wireless service providers. Wireless accuracy testing is an ongoing program that is performed throughout the year. Test results are presented to the Public Safety Communications Board annually.

2012 Progress
Since the implementation of the WAT program in 2006, the goal has been to improve caller location information. To date, carriers have made significant improvements in this area, reducing the need for such an aggressive testing plan.

2013 Action Plan
MARC maintenance staff will work with the database team and other PSAP personnel to conduct testing as it relates to researching error reports and other accuracy-related issues.

Project: Communication with Non-Wireline Service Providers
MARC staff will continue to proactively identify and complete interconnection agreements with non-wireline service providers. These interconnection agreements ensure service providers are correctly connected to the region’s selective routers, 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 9-1-1 in the MARC region and gather information on new technologies.

2012 Progress
In 2012, an agreement was established with CenturyLink for the portion of Qwest VoIP service it acquired.

MARC staff has continued to work with other non-traditional and third-party providers to establish or update agreements as needed. Staff also continues to work with providers to correct invalid database records identified during 9-1-1 calls and validate addresses as requested.

2013 Action Plan
In 2013, MARC staff will reach out to non-wireline service providers to review existing agreements and ensure all information is up to date and relevant. Staff will also continue to identify carriers with which MARC does not have agreements and work with them to develop agreements.

Project: Telematics Services
MARC staff will continue to coordinate with telematics vendors to verify an interconnection agreement has been executed, ensure vendors are properly connected to the region’s selective routers and verify that calls accurately plot on the regional map. This is an ongoing project.

2012 Progress
During the second half of 2012, Sprint requested assistance from MARC staff and one PSAP for testing of a new Chrysler in-vehicle product. Information and results of the tests were shared with Sprint to ensure programming and performance accuracy. MARC staff also consulted with the National Emergency Number Association (NENA) to certify that proper steps were being taken and standards met.

2013 Action Plan
MARC staff will continue to identify new telematics providers and reach out in an effort to complete interconnection agreements with them. Staff will also continue to assist existing carriers.

Goal A — Objective 2:
Improve the redundancy and geographic diversity of the wireline 9-1-1 system.

Project: Last-Mile Study
MARC staff will analyze the wireline network last-mile study information requested from the local exchange carriers (LECs) for each PSAP in the region. MARC staff will make recommendations to the Public Safety Communications Board for improving last-mile network redundancy and geographic diversity.
The last-mile study will provide the necessary network data to develop redundant and diverse options available to each of the MARC region PSAPs. In 2011, MARC staff requested last-mile network configuration data from AT&T for each of the PSAPs in their service area.

**2012 Progress**

MARC staff worked with LECs to identify and repair wireline trunks and T-1s with chronic issues. In one instance, Central Jackson County Fire repeatedly experienced echo and line noise on 9-1-1 calls transferred from the Jackson County Sheriff’s Department. MARC staff worked with AT&T and the regional service provider to determine that central office equipment was causing the echo and noise impairment. Equipment was replaced and audio levels were adjusted to resolve the issue. Staff also worked with the regional service provider and AT&T’s 9-1-1 Resolution Center to resolve network issues, and used data from the last-mile study to determine cost-effective ways to improve last-mile network redundancy and geographic diversity for PSAPs. This was accomplished using a variety of network options, such as ring network topology, installing additional access points, or adding the PSAP to the microwave network.

**2013 Action Plan**

MARC staff will continue to work with LECs and service providers to identify and develop action plans to repair wireline trunks with chronic issues. Staff will also continue to update LEC network configurations to determine a cost-effective way to improve the last-mile network redundancy and geographic diversity for PSAPs. This is an ongoing project.

**Project: Review Service Provider Central Office Isolation Plans**

MARC staff will annually review and update wireline service providers’ central office isolation plans. These plans will be distributed to each PSAP annually or when a change is made.

MARC staff will review service provider central office isolation plans to ensure all MARC 9-1-1 circuits have diverse and redundant routes available in case an LEC experiences a central office isolation event. In 2011, MARC staff requested central office boundary information from CenturyLink and AT&T.

**2012 Progress**

MARC staff worked with LECs to update PSAP 10-digit numbers in their databases. In the event of a central office isolation event that affects one or more MARC PSAPs, 9-1-1 calls can be rerouted to a backup PSAP or an alternate public safety agency. AT&T was provided with public safety agency contact information by central office boundary. The PSAP microwave upgrade project will provide regional PSAPs with additional diversity and redundancy.

**2013 Action Plan**

MARC staff will develop an isolation plan specifically for CenturyLink, due to differences in how the carrier handles central office isolations. In the event of a central office isolation
which affects one or more MARC PSAPs, 9-1-1 calls can be rerouted to a backup PSAP or the public safety agency designated to answer 9-1-1 calls. This is an ongoing project.

**Goal A — Objective 3:**
*Ensure ongoing quality maintenance and operation of the regional 9-1-1 system.*

**Project: Customer Satisfaction Survey**

MARC staff will develop and conduct a customer satisfaction survey to identify successes and areas of improvement for maintenance services activities. The survey has been conducted each year since 2011. MARC staff reviews and considers the results when preparing the following year’s action plans.

**2012 Progress**

In 2012, the maintenance staff distributed the customer satisfaction survey to PSAP personnel online. The survey was publicized in the Metro Communicator as well as in email communications. Fifteen surveys were completed during the year, and feedback was very favorable regarding both the maintenance staff and the program as a whole.

**2013 Action Plan**

In addition to being offered online, the survey will be made available at the annual PSAP Managers Luncheon.

**Project: Equipment and Maintenance Reference Information**

MARC public safety communications technicians analyze call history to identify common maintenance and service requests handled by the System Operations Center. The communications technicians develop tech tips and how-to information — posted on the public safety intranet — as a quick reference guide to address and resolve simple but common service calls. This is an ongoing project.
2012 Progress
In 2012, the maintenance staff began receiving daily emails from the after-hours vendor regarding call activity. Receiving daily notifications has helped staff improve documentation of service calls. As of Nov. 23, 2012, maintenance staff had entered 324 work orders for the year.

2013 Action Plan
The maintenance staff will continue to improve on the goal of creating a work order for each service call.

Project: Maintenance Activity Professional Development
MARC maintenance staff will participate in local and national conferences and activities, as appropriate, in an effort to gain knowledge about new and innovative technologies that may benefit the region.

2012 Progress
In 2012, members of the maintenance staff attended either the Association of Public-Safety Communications Officials (APCO) or NENA annual conferences. The newest communications technician continued to develop his support skills and has become the point person for the GeoLynx mapping software.

2013 Action Plan
In 2013, the maintenance staff will be heavily engaged in the phased regional upgrade project. This project will provide training and development in the support of NG9-1-1 capable equipment. Additionally, staff will attend regional and national conferences, as the budget allows, in order to remain informed of the latest trends and developments.

Goal A — Objective 4:
Ensure the effectiveness of back-up plans and disaster recovery procedures.

Project: MARC Public Safety Program Continuity of Operations Plan (COOP)
In 2012, MARC staff exercised the notification system for internal events at MARC. Staff will review and conduct an exercise of the COOP annually, or whenever significant programmatic changes occur.

Project: PSAP Reroute Plans
MARC staff will work with PSAPs and service providers to periodically test the effectiveness of each PSAP’s reroute plans, and will review the success of reroute procedures with agency staff after every reroute.

2013 Action Plan:
MARC staff will review on-file contingency plans with the AT&T Resolution Center as well as Commencol to ensure timely reroutes when needed, and will work with agencies that have not requested a reroute within the last two calendar years.
Goal A — Objective 5:
Ensure accuracy of the regional 9-1-1 database.

Project: MSAG and GIS Improvements

MARC staff will continue to work with local governments to improve the quality of the regional MSAG and map data layers through its annual review process. Communities are reviewed on a three-year cycle, and those that have never participated are contacted every year. Matching the MSAG and map datasets is imperative to the region’s transition to NG9-1-1.

MARC staff will continue to conduct annual meetings, one-on-one sessions and an annual review and outreach process with MSAG coordinators, addressing and mapping personnel and PSAP constituents to explain the importance of accurate map data for locating a 9-1-1 caller. MARC staff distributes articles and stories to keep addressing professionals informed of topics and issues relevant to 9-1-1 addressing and mapping.

2012 Progress

2012 marked the third year that staff worked with the MARC GIS department to maintain the regional GIS data. MARC GIS provides quarterly and annual reports and meets regularly with MARC staff.

MARC staff distributed the annual database true-up request to 55 service providers in the region in October 2012. Service providers were asked to conduct a true-up by comparing customer database information in-house with information the 9-1-1 database service provider had on record. Thus far, staff has heard from 10 providers that have either completed the data scrub or are in various stages of the process. More than 2,500 corrections had been made as of Nov. 14, 2012. This project was expected to be completed at year end.

### 2012 Database Totals
(As of Nov. 1, 2012)

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>MSAG Changes</td>
<td>3,440</td>
</tr>
<tr>
<td>MSAG Corrections (resulted in correcting customer records)</td>
<td>73,634</td>
</tr>
<tr>
<td>MSAGs Reviewed</td>
<td>16,306</td>
</tr>
<tr>
<td>Address Verifications</td>
<td>264</td>
</tr>
<tr>
<td>Customer Records Reviewed</td>
<td>12,634</td>
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<tr>
<td>Customer Records Corrected (not involving MSAG changes)</td>
<td>182</td>
</tr>
<tr>
<td>Error Reports</td>
<td>1,726</td>
</tr>
</tbody>
</table>
MARC staff has 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 9-1-1 calls will plot correctly on the regional map used by PSAPs. This project is also directly related to NG9-1-1, in which the MSAG will be absorbed into the map data. Staff provided reports to communities in all counties in the region. This information came from a geocode project that is conducted quarterly, which includes the match rate of map data to customer records in the 9-1-1 database, along with a listing of the addresses that did not match. By the beginning of third quarter 2012, more than 40 communities had worked with MARC staff to clean up address data from the geocode project.

During the month of June, an error report contest was conducted in which PSAPs were encouraged to submit every valid 9-1-1 and map error they discovered. Staff saw an increase in the number of reports received and were able to correct many records. The winning PSAP was awarded a trophy and a perpetual plaque was hung in the 9-1-1 training center. MARC staff visited every participating PSAP and provided donuts to express appreciation.

2013 Action Plan
MARC public safety staff will continue working with MARC GIS staff to receive and enhance regional map data. A robust quality assurance program will also be established to ensure the data being built and modified is as accurate as possible. Additionally, staff will continue to 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.

Project: Database Provider
MARC staff will continue to work closely with the 9-1-1 database provider, conducting monthly conference calls to address current projects and outstanding issues. MARC staff will also continue to request and analyze VLQ reports from the 9-1-1 database provider for comparison with the community, county, carrier and telephone exchange totals previously provided. Cleanup work will continue based on trends and discrepancies found in the data that may not be identified using other methods. MARC staff will provide progress reports to the Public Safety Communications Board.

2012 Progress
In 2012, MARC staff received quarterly VLQ database downloads. From this data, reports were run to study totals and trends and help identify areas in need of special attention. Three phone companies were identified as being no longer in service, with approximately 140 records in the 9-1-1 database. MARC staff worked with AT&T to determine that the records were no longer valid, but AT&T refused to remove them from the database without proper authorization to do so.

In September 2012, the regional database totals had decreased by 0.35 percent from the previous year, but increased 1.91 percent from the second quarter of 2012. A five-year review indicated that a decrease of 17.07 percent had occurred, though the majority of
this decrease was due to Time Warner Cable and Comcast moving to true VoIP, which eliminated their database records. The average decrease of other years was 1.15 percent.

The Private Switch (PS9-1-1) project continued in 2012. MARC staff worked with AT&T to provide a webinar for customers who subscribe to PS9-1-1 service. Several PS9-1-1 customers participated in the training on March 6, which was recorded for further use. Before the new school year started, MARC staff contacted every school district in the region that subscribes to PS9-1-1, requesting they review and update any database records as appropriate. Lastly, one entity that subscribes to PS9-1-1 was identified as making 9-1-1 calls almost daily with “No Record Found” as the location. While each call was reported to the local contact, no corrections were being made. The concern was escalated, and the problem is now being addressed.

MARC staff continues to conduct monthly database conference calls with AT&T to discuss concerns and projects.

2013 Action Plan
MARC staff will continue to monitor services provided by the regional landline database provider and other carrier activity by participating in monthly conference calls. The 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.

2012 Progress
MARC staff was not able to identify sources of technology or software that could easily automate identifying database discrepancies or errors. However, with the geocode project, discrepancies between map data and addresses are being identified and corrected continually.

2013 Action Plan
MARC staff will continue to seek out technology or software that is capable of automating error reports.

Project: Emergency Notification Systems
MARC staff will continue to work with local governments — by completing agreements and obtaining, analyzing and providing data — to establish or improve their emergency notification systems.

2012 Progress
MARC staff assisted one local government with agreements, data requests and analyses to ensure proper information was provided for their emergency notification systems.
2012. MARC staff has been advised that this service is not being maintained due to budgetary restrictions.

2013 Action Plan

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

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

Project: GIS Constituents

Accurate map data is critical to locate a 9-1-1 caller. GIS coordinators, addressing personnel and PSAP constituents will continue to work together to provide and maintain accurate map data.

MARC staff will continue to identify strengths and opportunities for improvement of the mapping software such as streamlining map updates on 9-1-1 workstations, working with MARC GIS staff to simplify internal use of the data, reducing operating costs and improving workflow efficiency.

2012 Progress

In 2012, several jurisdictions completed a large number of map data reviews. MARC staff received more than 255 tracking packets of map data from nearly 50 different sources in 2012. Some jurisdictions, such as Johnson and Wyandotte counties, provide digital map data for multiple communities. As of Oct. 12, 17,067 street segments and 47 boundaries were added or corrected. Leavenworth County, Jackson County, and Kansas City, Mo., also completed very large reviews.

MARC staff is supporting the state of Kansas GIS project by ensuring survey distribution and by providing information for regional or 9-1-1 related questions.

2013 Action Plan

MARC staff will continue working with MARC GIS staff to receive and enhance regional map data. Staff will also continue 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 9-1-1 calls will plot correctly on the regional map used by PSAPs. This project is also directly related to NG9-1-1, in which the MSAG is absorbed into the map data. Lastly, staff will work with local governments to collect trail data and sign locations to be displayed on the GeoLynx mapping software.

Project: Regional Aerial Imagery

MARC staff will research the opportunity to include aerial imagery in the regional 9-1-1 map as part of the next 9-1-1 equipment upgrade which started in late 2012.
2012 Progress

MARC GIS received its 2010 enhanced aerial imagery in 2011, and another fly-over was completed in 2012. Data was expected to be made available to MARC staff by the end of 2012 but was not finalized and approved as anticipated. MARC staff should have access to the aerial imagery in early 2013. Staff has also been working with GeoComm, the mapping software vendor, on software updates for PSAP workstations. This process has taken much longer than expected and a great deal of coordination has taken place with no positive outcome as of yet.

2013 Action Plan

MARC staff will work with the mapping software vendor to resolve issues with the mapping software and receive necessary updates to display aerial imagery. This installation may be done in conjunction with other PSAP or software upgrades.

Project: Map Data Layers

MARC staff will incorporate existing map data to enhance the 9-1-1 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 meet them.

2012 Progress

MARC staff continued to work closely with the map maintenance providers to ensure the best possible end product was provided. Additional map data layers such as mile markers on major highways and waterways have been identified.

MARC public safety and GIS staff are establishing a subcommittee to the KC Metro GIS group. The subcommittee will focus primarily on address points and street centerline attribute fields to determine what steps are needed to prepare for NG9-1-1.

Additionally, MARC staff identified liquid pipeline data through the U.S. Department of Transportation’s National Pipeline Mapping System for use in the 9-1-1 mapping software. This information identifies the location of large buried pipelines, whether the pipeline is active or not, who it belongs to and contact information. A formal request for the map data has been submitted.

2013 Action Plan

In 2013, MARC staff will attempt to identify other additional data layers that could be beneficial to 9-1-1. Also, staff will begin to collect and review address point files from those counties that maintain them for use in NG9-1-1.

Project: Trails Mapping for Public Safety

MARC staff will continue to work with local constituents to identify and develop trail data to be incorporated into the regional 9-1-1 map. MARC will continue to provide information to communities interested in installing emergency location signage.
2012 Progress
MARC staff continued to work with local governments to implement trails mapping and signage in their jurisdictions. In 2012, 1,441 trail lines and 217 trail sign address points were added to or modified in the regional file, and numerous trail signs were installed and incorporated into the GeoLynx mapping software.

2013 Action Plan
MARC staff will continue to assist local governments with the trails mapping project.
Staff also assists with collaboration between the mapping group and other MARC program areas. This is an ongoing, as-needed project.

Goal A — Objective 7:
Plan for and begin implementation of Next Generation 9-1-1 technologies.

Project: Next Generation 9-1-1
Under the direction of the Public Safety Communications Board and its subcommittees, MARC staff will implement a regional NG9-1-1 system that will include the migration of the existing T-1 wireless network onto the RAMBIS microwave system and a complete upgrade from the legacy ECS-1000 platform to NG9-1-1 compatible answering equipment. MARC staff will research NG9-1-1 equipment and the capabilities available in the public safety industry. Due to the complexity of IP technology and the microwave network design, these projects will be completed in phases over the next three years. MARC staff will ensure the PSAPs' essential function of processing 9-1-1 calls is never negatively affected throughout the NG9-1-1 implementation process. This approach will also minimize the financial impact of the equipment upgrade on the counties.

MARC staff will monitor developments in NG9-1-1 technologies, and will work with the Public Safety Communications Board and its subcommittees to develop regional NG9-1-1 standards that align with national standards. MARC staff will continue to participate in local, state and national organizations and activities to learn about NG9-1-1 technologies and services.

2012 Progress
In 2012, MARC staff met with various service providers to determine the microwave and Patriot upgrade schedule for 2012 and 2013. The microwave paths were installed between the RAMBIS microwave network and the two MARC selective routers. The host sites for Pod 1 (Johnson County Communications Center and Shawnee Police Department) were installed. When Shawnee was added as the second host site, it was determined that the server recommended by Cassidian Communications could not handle the additional traffic. The Patriot upgrade was placed on hold until Cassidian Communications replaced the servers with new, more powerful models at no cost to MARC. The microwave links for the remote sites of Pod 1 (Leawood Police Department, Raymore Police Department, MARC Training Center, Prairie Village Police Department, and Miami County Sheriff’s Office) were projected to be installed before the end of the year. The Patriot upgrade for
these sites was also projected to be completed prior to the end of 2012. However, due to the need to upgrade server equipment at the host sites to accommodate configuration changes, these installations were delayed. The upgraded servers were installed the first week of January, and installations at these sites will be completed in early 2013. There are 17 leased T-1s to be disconnected after the Pod 1 host and remote PSAPs are upgraded.

2013 Action Plans

In 2013, the PSAPs in Pod 2 (Kansas City, Mo., South Patrol, Johnson County Communications Center, Riverside Police Department, Lee’s Summit Police Department, Cass County Sheriff, Lenexa Police Department, Raytown Police Department and Grandview Police Department) will begin to receive new Patriot network equipment and microwave equipment to connect to the RAMBIS microwave network. When these microwave paths are installed, additional wireless T-1s will be disconnected, which will result in reduced network costs. Though an early termination fee will apply to some of the T-1s that will be disconnected, the elimination of these circuits should save the region approximately $80,000 in 2013. Over the next three years, the remaining PSAPs in the region will be upgraded with microwave and Patriot equipment.

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

Goal B — Objective 1:
Implement a region-wide public safety data exchange.

Project: CAD-to-CAD Interface

MARC staff will work with agencies to develop an overall capability matrix of various CAD system infrastructures used throughout the region. MARC staff will seek funding to support the enhancement of a regional CAD interface with coverage and compatibility throughout the region.

Working through the Regional Interoperability Committee, MARC will develop and recommend operational procedures for the data system. Once the operational procedures are approved by the Public Safety Communications Board, they will be incorporated into the TICP.

2012 Progress

A CAD-to-CAD interface has been developed between two of the larger CAD systems in the region, Intergraph and TriTech. An upgrade to the Intergraph system has delayed implementation of portions of the interface.

2013 Action Plan

Facilitate discussions with large CAD system users on the feasibility of expanding the interface to other vendors.
Goal B — Objective 2:
Support the implementation and coordination of MARRS.

Project: Metropolitan Area Regional Radio System (MARRS)

The Public Safety Communications Board, Regional Homeland Security Coordinating Committee (RHSCC) and MARC Board of Directors have approved a Memorandum of Understanding for the formation of the MARRS Management Council. This board provides policy guidance and oversight for MARRS — the region-wide P-25 radio system of systems — to ensure that a high-quality, equitably financed and reliable system is available to the metropolitan area.

This project includes operational, technical and procedural planning. The host-agencies — Johnson County, Kan., and the city of Kansas City, Mo. — will finalize the upgrades to their respective radio systems. MARC will work with the MARRS Management Council and its supporting committees to assist with the build-out of this system and the interconnection of local agencies.

2012 Progress
MARC staff worked with the city of Kansas City, Mo., the city of Independence, the city of Blue Springs, Platte County, Jackson County, and multiple service providers to complete microwave upgrades. MARC staff also assisted the MARRS Management Council, Users Committee and Technical Committee with the implementation of final recommendations for Motorola-provided services. These projects are scheduled to be completed in 2012. Cass County, Jackson County and the city of Raytown have executed agreements with Motorola to join MARRS. The Unified Government of Wyandotte County/Kansas City, Kan., is also considering joining the system.

2013 Action Plan
MARC staff will continue to support the Management Council, Users Committee and Technical Committee. This is an ongoing project.

Project: MARRS Maintenance Upgrades

The MARRS Technical Committee will implement a maintenance upgrade plan. MARC staff will assist host and user agencies and vendors with system upgrades. This is an ongoing project.

Project: Connection of MARRS to State Systems

MARC staff, with guidance from the MARRS Management Council, will continue its communication with the Kansas and Missouri interoperability offices to coordinate interconnection plans for MARRS and the respective state radio systems. MARC will continue to be represented by the Regional Interoperability Communications (RIC) Committee co-chairs at the Kansas and Missouri State Interoperability Executive Committee meetings.
2012 Progress
The MARRS Technical Committee has met with the director and deputy director of the Missouri Statewide Interoperability Network (MoSWIN) to discuss connecting the state system to MARRS via the Kansas City system.

2013 Action Plan
MARC staff will continue to work with the state of Missouri to connect MoSWIN to MARRS.

Project: Support WebEOC Operations
WebEOC is a web-based information management system that provides a single access point for the collection and dissemination of emergency or event-related information. It was designed to aid decision making by providing authorized users real-time information in a user-friendly format. WebEOC can be used during the planning, mitigation, response and recovery phases of any emergency.

2012 Progress
In 2012, MARC staff provided support for the WebEOC committee co-chairs, coordinated training with local vendors, and assisted in processing contracts. Staff also served as the primary point of contact for end users to report technical issues, and worked with vendors to resolve these issues.

2013 Action Plan
Staff will continue to support the WebEOC program as needed.

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

Project: RAMBIS Maintenance
In 2011, MARC staff began to develop and implement RAMBIS maintenance procedures using monitoring tools currently in place. MARC staff also began coordinating with the local service provider for 24/7 regular and emergency maintenance services.

2012 Progress
MARC staff worked with service providers and Alcatel-Lucent to design and purchase software necessary for monitoring the 11 RAMBIS tower sites. The alarm monitoring system includes site environmental status and on-site equipment health. The RAMBIS network is monitored by the regional service provider 24 hours a day, seven days a week. During the course of the year, Alcatel-Lucent personnel visited each site to perform physical checks and gather performance data to ensure equipment was operating as designed. Also in 2012, the regional service provider began supplying maintenance and repair services for the microwave equipment at the 11 RAMBIS sites, a task which had previously been handled by Alcatel-Lucent.
MARC staff is in discussions with Motorola regarding the continued usage of VHF licenses for RAMBIS.

2013 Action Plan

MARC staff will continue to develop and implement RAMBIS maintenance procedures for all of the microwave network components and interconnection facilities. Additionally, staff will develop and implement methods and procedures for monitoring, repairing and upgrading network elements of the radio equipment, microwave equipment, DC power equipment, antennas, monitoring software and equipment. The new methods and procedures will be given to the vendor or vendors responsible for monitoring, repairing and upgrading of the RAMBIS microwave network. This is an ongoing project.

Project: RAMBIS Access

At the direction of the RIC Committee, MARC staff will assist with training and provide technical advice to area agencies that wish to access RAMBIS. This is an ongoing project.

2012 Progress

RAMBIS training was conducted for the Federal Protective Service. A Memorandum of Understanding is being prepared by the Department of Homeland Security to allow all federal agencies under DHS to use RAMBIS.

Project: RAMBIS Standard Operating Procedures (SOPs)

MARC staff will continue to work with public safety committees to review and update RAMBIS SOPs as needed. All operating procedures will be incorporated into the Tactical Interoperable Communications Plan (TICP) upon approval by the Public Safety Communications Board. This is an ongoing project.

2012 Progress

In 2012, the process used to test RAMBIS was changed. The change was endorsed by the RIC Committee and formally approved by the Public Safety Communications Board. The RAMBIS SOP was updated to reflect the new testing procedure. The new procedure was emailed to regional contacts at their respective agencies.

Goal B — Objective 4:
Ensure that the Tactical Interoperable Communications Plan (TICP) continues to be exercised, evaluated and modified as needed.

MARC staff, along with the RIC Committee, will review the TICP annually. MARC staff and the RIC Committee will coordinate with the RHSCC’s Training and Exercise Subcommittee to develop and execute training exercises to test and evaluate TICP procedures. MARC staff will present recommendations to the Public Safety Communications Board.

2012 Progress

MARC staff delivered two classes in 2012 that covered a basic orientation of the TICP. In addition, the TICP was used as a reference document for activities and exercises in one
Communications Unit Leader (COML) class. Furthermore, MARC staff, with the assistance of the Interoperable Communications Technical Assistant Program (ICTAP), has modified the TICP into a new, nationally recognized format. RIC leadership continues to have an active presence locally and on the state level as requirements for the exercise are shared. In addition, a Tactical Interoperable Communications Field Operations Guide (TICFOG) is being developed for the region.

The Kansas City region was the host for the 2012 Major League Baseball All-Star Game. The TICP was used extensively to help coordinate communications needs during the six-day event.

2013 Action Plan

The TICP will continue to be reviewed and updated as new changes impact regional communications assets. The TICP will be distributed once the final version has been completed with up-to-date information, and will again be used as a reference document for upcoming COML classes in 2013.

Once the TICFOG has been completed, MARC staff will review content, as points of contact and radio information has changed since the last major modification. The TICFOG will be distributed to local agencies to be used as a reference document at emergency incidents, exercises and planned events that require communications resources.

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 and the MARC website, to provide up-to-date public safety communications information. MARC will ensure information is distributed using the most appropriate method(s), based on the sensitivity and target audience of the correspondence.

In 2011, MARC transitioned its Metro Communicator newsletter from print to an electronic format that is published on a quarterly basis. The electronic newsletter is emailed to MARC public safety committees, training participants, other public safety contacts and appointed and elected officials across the region. The newsletter is also posted to the public safety intranet and the MARC public safety program website.

2012 Progress

Three issues of the Metro Communicator newsletter were sent electronically to all public safety communications contacts and committees in 2012. Links to current and past issues
are available on the MARC public safety website, the PSAP Managers Forum and the public safety intranet.

2013 Action Plan

MARC staff will continue to encourage local agencies to share their stories with the rest of the region through this electronic newsletter. Additionally, the MARC website will be upgraded in 2013, which will provide constituents and public safety personnel easier access to information.

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

Project: Regional Networking Facilitation

MARC will coordinate regional collaboration on important multi-jurisdictional issues by ensuring that the public safety committee structure is conducive to effective participation by appropriate agency representatives. MARC and its committees will identify key initiatives that support interagency cooperation, such as proposing legislation for 9-1-1 funding in Missouri and Kansas, enhancing 9-1-1 training requirements, upgrading 9-1-1 equipment to NG9-1-1 standards and coordinating the implementation of the MARRS system with the transition to narrowband technology. This is an ongoing project.

2012 Progress

One MARC communications technician is a member of the state of Kansas NG9-1-1 technical subcommittee. Having representation at the state level allows MARC to remain engaged in the progress of the state project and ensure the alignment of regional plans to best serve our agency and citizens.

Project: PSAP Manager Orientation

MARC staff will continue to provide orientation and a PSAP manager’s handbook for new public safety communications personnel at the management level. MARC staff will schedule the orientation within 60 days of the manager’s start date. The orientation provides an overview of MARC’s services and role in regional public safety communications. This is an ongoing project.

2012 Progress

A PSAP Manager Orientation session was held for two new managers this year, from the Platte County Sheriff’s Office and Ray County 9-1-1.

2013 Action Plan

Orientation sessions will be held as needed in 2013.
Goal C — Objective 3:
Participate in establishing standards related to public safety communications.

**Project: National Association Participation**

MARC staff will take an active role on public safety communications committees, including training, database, technical, public outreach and education, and other industry-related committees.

**2012 Progress**

The public safety database manager participated in a NENA working group for data transition to NG9-1-1. Also, MARC staff has taken on a more active role with state associations by participating in committee work and obtaining board memberships. The public safety training coordinator has presented a leadership class at both the APCO national conference and the MoAPCO training symposium. Other MARC staff members have also attended or presented at various state conferences this year. Staff used these opportunities to share information about our regional training program and the benefits it has to offer. Information was also presented about the MARC Public Safety program, as well as regional cooperation and collaboration.

**2013 Work Plan**

MARC staff will continue to take an active role with associations, committees and groups related to public safety communications. The public safety training coordinator has submitted a class for the 2013 national conference. MARC staff will also look for other opportunities to represent the region by participating in regional, national and state 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 telecommunications within the regional 9-1-1 system. Regional training standards will be completed and adopted by 2013 and will be reviewed annually.

**2012 Progress**

The state of Missouri published new rules and regulations that outline the recommended training for telecommunicators in August 2012. Part of the new regulations will allow MARC Public Safety to become a certified training provider for telecommunicator training. All existing courses have been reviewed and assigned new training modules based on the new training regulations.

**2013 Action Plan**

Staff will use the new rules and regulations to create regional training standards in 2013.
Goal D: Ensure the financial stability of the regional 9-1-1 and public safety communications systems to sustain their long-term viability as a model of excellence.

Goal D — Objective 1:
Ensure that the costs of 9-1-1 and public safety interoperability systems are shared equitably among participating jurisdictions.

Project: Financial Planning
The existing cost-share structure, per the 9-1-1 Interlocal Agreement, is based on population. The current county population allocations reflect the 2010 U.S. census results.

MARC staff implemented the financial planning policies enacted by the Public Safety Communications Board as part of the 9-1-1 system budget process. An important component of the 9-1-1 upgrade plan is to avoid unnecessary financing costs and to develop an ongoing equipment replacement plan. MARC staff will closely monitor expenditures to ensure the timing of upgrades meets this objective. This project will be completed annually.

Project: System Inventory
MARC staff will conduct regional 9-1-1 equipment and RAMBIS system inventories as appropriate. In addition, MARC communications technicians will continue to make adjustments to the regional inventory when equipment is added or removed. All equipment in the regional inventory is covered under MARC's insurance plan.

2012 Progress
In 2012, MARC maintenance staff modified the regional inventory as additions, moves and changes occurred. Maintenance staff was also tasked with the inventory and redistribution of more than 100 re-purposed XTL1500 mobile radios.

2013 Action Plan
MARC maintenance staff will continue to track regional assets as needed.

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

Project: Grants
MARC staff will continue to aggressively pursue homeland security and other grants to support enhancements to interoperable communications systems. The system enhancements will continue to guide homeland security investments, expand and improve interagency coordination and communications, and achieve optimum levels of interoperability, as defined in the SAFECOM Interoperability Continuum.

The MARC Public Safety program will continue to seek funding to strengthen survivability and disaster recovery for the regional 9-1-1 system and to support the national priorities.
established by the U.S. Department of Homeland Security. MARC will research and seek out grant funding on an annual basis and as new grant opportunities arise.

**Project: Missouri and Kansas 9-1-1 Legislation**

MARC staff will continue to work with public safety associations and industry representatives to secure wireless funding legislation. As wireline revenue decreases because more and more regional households are replacing wireline phones with non-wireline technologies, it is becoming even more critical for the state of Missouri to enact wireless funding legislation. MARC will continue to support wireless legislation to provide a stable funding mechanism for 9-1-1 in both Kansas and Missouri.

**2012 Progress**

The emergency telephone statutes in Kansas were modified to make compliance easier for both carriers and users.

Two bills were introduced in the Missouri House of Representatives but were not passed out of committee. Over the summer, various public safety associations met with other interested stakeholders, including telephone service providers, to develop a strategy to pass legislation in 2013. This group, called the Missouri 9-1-1 Coalition, has developed a framework to draft legislation to be introduced in 2013.

**2013 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 9-1-1 funding needs of the region.

**Goal D — Objective 3:**

*Seek innovative cost-saving initiatives while maintaining the same or better quality regional systems.*

**Project: 9-1-1 Migration to RAMBIS Network**

Under the direction of the Public Safety Communications Board and Users Committee, MARC staff will continue the process of migrating wireless and VoIP 9-1-1 traffic off of the current commercial T-1 network and over to the microwave network used by RAMBIS. This migration, which began with planning in 2011, will occur in phases.

**2012 Progress**

In 2012, MARC staff met with various service providers to determine the microwave and Patriot upgrade schedule for 2012 and 2013. The microwave paths were installed between the RAMBIS microwave network and the two MARC selective routers. The host sites for Pod 1 (Johnson County Communications Center and Shawnee Police Department) were installed. When Shawnee was added as the second host site, it was determined that the servers recommended by Cassidian Communications were unable to handle the additional traffic. The Patriot upgrade had to be placed on hold until Cassidian Communications replaced the servers with new, more powerful models at no cost to MARC. The microwave
links for the remote sites of Pod 1 (Leawood Police Department, Raymore Police Department, MARC Training Center, Prairie Village Police Department, and Miami County Sheriff’s Office) were projected to be installed before the end of the year. The Patriot upgrade for these sites was also projected to be completed prior to the end of 2012. However, due to the need to upgrade server equipment at the host sites to accommodate configuration changes, these installations were delayed. The upgraded servers were installed the first week of January, and installations at these sites will be completed in early 2013. MARC staff has worked with service providers to access bandwidth on the city of Independence, city of Kansas City, Mo., Johnson County, and Leavenworth County microwave networks. Several of the AT&T leased T-1s will be disconnected, providing some savings to the network budget.

2013 Action Plans

In 2013, the PSAPs in Pod 2 (Kansas City, Mo., South Patrol, Johnson County Communications Center, Riverside Police Department, Lee’s Summit Police Department, Cass County Sheriff, Lenexa Police Department, Raytown Police Department and Grandview Police Department) will start to receive new Patriot network equipment and microwave equipment to connect to the RAMBIS microwave network. When these microwave paths are installed, existing wireless T-1s can be disconnected, which will result in reduced network costs. Over the next three years, the remaining PSAPs in the region will be upgraded with microwave and Patriot equipment. This is an ongoing project.

Project: Public Safety Vendor Review

MARC staff will continue to review contracts, services and financial reports provided by existing vendors. Staff will also continue to ensure the region is receiving the most competitive pricing for vendor 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. MARC staff will attend appropriate local, state and national conferences and gather information about training methods used in similar industries and disciplines.

MARC staff will complete a cost-benefit analysis 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 training...
Pilot classes will help measure the effectiveness of alternative training delivery methods.

2012 Progress
MARC’s public safety training coordinator attended two conferences in 2012. These conferences provided staff with ideas to explore in 2013 as possible solutions for delivering training in new and innovative ways. MARC staff provided customized training for two PSAPs throughout the year and to the Federal Protective Services on the use of RAMBIS.

New training delivery methods were not evaluated in 2012 because the new state training rules and regulations not published until August.

2013 Action Plan
MARC staff will complete cost-benefit analyses of alternative training methods for consideration in 2013. New methods will be used to deliver pilot classes to determine the effectiveness of the new delivery methods.

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 will monitor industry publications for material and information that can be used to update program trainings and special presentations.

MARC staff will update material — including case studies, audio examples and videos, when applicable — for four courses per quarter. The public safety training program will strengthen its instructor pool by seeking out 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.

2012 Progress
MARC staff updated eight classes with new materials, examples, case studies and updated industry information. In addition, MARC staff used new instructors in 2012 to deliver classes to the region. New classes offered in 2012 included Officer Down and Firefighter Maydays, Tactical Dispatch, and Active Shooter.

2013 Action Plan
MARC staff will continue to review and update classes on a quarterly basis. Several instructor workshops have been scheduled in the 2013 to provide new teaching techniques to training program instructors.
Project: Training Needs Assessment

MARC staff will conduct training needs assessments 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 Public Safety Communications Board for approval.

MARC public safety communications technicians will meet with the training coordinator at least every six months to address possible training opportunities identified by their analysis of common service and maintenance call histories. This project is ongoing.

2012 Progress

MARC staff conducted a needs assessment for the region in 2011. The needs assessment revealed that staffing levels, training budgets and training program topics were the main determining factors in sending personnel to training. Recommendations from the needs assessment were used to guide the development of the 2012 training program course offerings.

Public safety communications technicians and the training coordinator met periodically to discuss training needs in PSAPs across the region.

2013 Action Plan

MARC staff will continue to meet on a periodic basis to discuss training issues and to continue to look for training opportunities for the future. MARC staff solicits input from students when completing course evaluations for any new classes they would like to see brought to the region. MARC staff will continue to review each course evaluation to make needed adjustments.

Project: Regional Interoperable Training

MARC staff will work with the RHSCC’s Training and Exercise Subcommittee to continue to fund and provide interoperable communications training for public safety personnel.

A minimum of two COML courses will be offered annually. MARC’s public safety training program will host applicable interoperable communications courses as they become available. In addition, public safety communications personnel will have the opportunity to practice using regional interoperable communications assets during various trainings and exercises.

2012 Progress

In 2012, only one COML course was presented. A second delivery was scheduled, but was canceled due to reduction in available grant funds. An Interoperable Emergency Communications Grant Program (IECGP) grant was received in 2011 to develop interoperable communications curriculum. An RFP was drafted and released, a contractor was selected, and the training curriculum was developed for the region. One train-the-trainer class was delivered to approximately 30 students, who are now able to deliver the training at their respective agencies.
2013 Action Plan

Two COML courses and two additional Interoperable Communications Training Curriculum train-the-trainer courses are scheduled for 2013. In addition, the training coordinator is working with the state of Missouri State-Wide Interoperability Coordinator (SWIC) and the Department of Homeland Security Office of Emergency Communications to schedule other interoperable communications training courses for the region. MARC staff will work with area basic training academies to try and implement the interoperable communications training curriculum into the course of study at these academies.

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:
Public Education and Outreach

Project: Volunteer Base

Twice a year, MARC will conduct volunteer orientations for current and prospective public outreach and education volunteers. The orientation 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.

2012 Progress

MARC hosted two public outreach volunteer orientations at the MARC Conference Center during the year.

2013 Action Plan

MARC will host public outreach volunteer orientations at the MARC Conference Center and will conduct on-site orientations as needed.

Project: Education and Outreach Materials

MARC staff will continue to update the “Important Tips about Calling 9-1-1” brochure, as well as the 9-1-1 funding legislation, interoperability and trail mapping fact sheets, and other education and outreach resources as needed.

2012 Progress

A costume for the region’s new 9-1-1 mascot, Cell Phone Sally, was purchased, as were school kits, DVDs, and other materials for the regional outreach program. The costume and materials were used at several outreach events in 2012, including 9-1-1 Day at the Zoo. Through October 2012, approximately 6000 children have been educated in the proper usage of 9-1-1 through these efforts. Additionally, two children were recognized as 9-1-1 heroes this year for using 9-1-1 to get help for family members who needed emergency medical attention.
2013 Action Plan

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

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

**Project: Informed Regional Leadership**

MARC staff will continue to work with the MARC Board of Directors, elected officials and public safety professionals to support legislative priorities for 9-1-1 funding in Missouri and Kansas.

2012 Progress

MARC staff participated in 9-1-1 Day at the Capitol, at which several public safety associations met with legislators to discuss issues related to funding 9-1-1 in Missouri. A member of the MARC staff serves on the 9-1-1 Coordinating Council for Kansas.

2013 Action Plan

MARC staff will meet with officials in each county, on an annual basis, to discuss emerging regional public safety communications issues.

Goal F — Objective 3:  
**Project: Update Interlocal Agreement**

The 9-1-1 Interlocal Cooperation Agreement was originally executed in June, 1995, and has been amended on two occasions. Since the original agreement was executed, there have been several significant changes that must be addressed.

2013 Action Plan

MARC staff will work with legal counsel to develop a new interlocal agreement that accurately reflects the responsibilities and duties of the counties, the Cass County Emergency Services Board, the MARC Board of Directors, and the Public Safety Communications Board.
### Coordination Services Revenue Comparison 2013

<table>
<thead>
<tr>
<th>REVENUE</th>
<th>2012 Budget</th>
<th>2013 Budget</th>
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<tbody>
<tr>
<td>PS Coordination Fee</td>
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<td>Carryover Funds</td>
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<td>9-1-1 Service Agreements Revenue</td>
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<td>PS Pub Ed/Promo Revenue</td>
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<tr>
<td><strong>Total Revenue</strong></td>
<td><strong>$1,459,239</strong></td>
<td><strong>$1,529,378</strong></td>
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### Coordination Services Expenses Comparison 2013

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<tr>
<th>EXPENSES</th>
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<th>2013 Budget</th>
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<td>Salaries and Wages</td>
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<td><strong>$1,529,378</strong></td>
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