2012 Annual Workplan and Budget

Appendix I
Regional Public Safety Communications Program Strategic Plan
DRAFT
Progress and Plans

In 2010, the Public Safety Communications Board approved the 2011–2015 Regional Public Safety Communications Program Strategic Plan. The plan defines objectives and strategies within regional 9-1-1 and interoperable communications activities. The following is an update of progress made in the past year and actions planned for 2012 that are supported by the proposed budget.

Goal A: Enhance the quality of the regional 9-1-1 system to ensure those in the region have 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.

2011 Progress
All routing errors received via 9-1-1 error reports were reported to the appropriate carrier for research and resolution. During the fourth quarter of 2011, cell-tower data was requested from AT&T and Sprint-Nextel. An audit will be conducted once the data is received from the carriers.

2012 Action Plan
Conduct an audit of wireless cell sectors that have not been reviewed within the past three years. Work with wireless carriers and 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.
2011 Progress

Mid-year 2011, MARC staff was contacted by NeuStar advising that the FCC had contracted their company to supply and maintain pANI-type numbers (ESRK, ESQK, etc.,) beginning March 2012. Since the region maintains the non-traditional network, these records are provided by the carriers or their third-party database provider and loaded into the region-owned database. MARC staff identified nine carriers with blocks of pANI-type numbers that would no longer be recognized by the FCC. In fourth quarter 2011, staff notified those carriers of the change and began working with them on a solution and timeline to change routing numbers to follow the national standard.

Staff is working with carriers to update existing records that currently meet national standards to a more consistent format. There are currently 9,630 records in the database and approximately 75 percent need action.

2012 Action Plan

Continue to work with carriers and their third-party providers to make database records more consistent and to follow national standards. This is an ongoing project. Records are added, modified and deleted throughout the year. MARC will continue to work with NeuStar to ensure carriers follow the national standard and supply information they may need.

Project: Wireless Accuracy Testing

MARC public safety communications technicians will continue to perform test 9-1-1 calls with a goal of annually testing 30 percent of the region’s wireless cell sectors. 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. Testing results are presented to the Public Safety Communications Board annually.

2011 Progress

For the majority of 2011, due to a position vacancy, the maintenance program had one communications technician to respond to service calls and request for assistance for the nine-county region. Because calls for service are the top priority for the maintenance program, the wireless accuracy testing project was impacted significantly. Once a second communications technician was hired, training further impacted progress. Staff did not meet the 2011 goal.

2012 Action Plan

Based on information gathered through testing in previous years, MARC staff will review the project and its overall objectives. Staff will also review results and lessons learned to redevelop the testing and information sharing processes for the future.
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 annually contact each service provider to review existing agreements, provide updates on changes to 9-1-1 in the MARC region and gather information on new technologies.

2011 Progress
In 2011, an agreement was established with DASH Carrier Services, a new ALI provider.
MARC staff continues to work with other non-traditional and third-party providers to establish or update agreements as needed.

2012 Action Plan
In 2012, staff will contact non-wireline service providers to review existing agreements and ensure all information is up-to-date and still applicable. Staff will continue to identify and complete service agreements with carriers if an agreement is not already in place.

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.

2011 Progress
No new telematics providers were identified in 2011. Telecommunicators should be able to plot telematics calls once a new version of GeoLynx is installed.

2012 Action Plan
MARC staff will complete interconnection agreements with new telematics providers.

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

Project: Last-Mile Study
In 2011, 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 for improving last-mile network redundancy and geographic diversity to the Public Safety Communications Board.
2011 Progress
MARC staff met with LECs to gather data for the last-mile study. AT&T’s 9-1-1 Resolution Center is working on providing equipment diversity for all wireline trunks.

2012 Action Plan
MARC staff will continue to work with AT&T’s 9-1-1 Resolution Center to identify and develop action plans to repair wireline trunks with chronic issues. Staff will use the data from the last-mile study to determine a cost-effective way to improve last-mile network redundancy and geographic diversity for PSAPs. Possible solutions include: implementing a ring network topology; installing additional access points; or adding a PSAP to the microwave network. This project is ongoing.

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.

2011 Progress
MARC staff provided an updated list of PSAP ten-digit numbers and verified the correct number was associated with each LEC’s central office isolation plan.

2012 Action Plan
MARC staff will continue to work with LECs to ensure a current list of PSAP ten-digit numbers is maintained in LEC databases. In the event of a central office isolation, which affects one or more MARC PSAPs, 9-1-1 calls can be rerouted to a back-up PSAP. The PSAP microwave upgrade will provide diversity and redundancy for MARC PSAPs. This project is ongoing.

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 the maintenance services activities. The survey will be distributed each July, beginning in 2011. MARC staff will review and consider the results when preparing the following year’s action plans.

2011 Progress
In 2011, MARC staff researched and developed a customer satisfaction survey for distribution among the PSAPs. Staff discussed the most efficient and cost-effective method to reach the target audience. The survey will be available online and the public safety intranet by year end.

2012 Action Plan
MARC staff will continue to conduct the customer satisfaction survey annually as a quality assurance measure.
Project: Equipment and Maintenance Reference Information
MARC public safety communications technicians analyze call history to identify common maintenance and service requests handled by the Systems Operation 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.

2011 Progress
In 2011, maintenance staff reviewed the content on the intranet to ensure the information is accurate and helpful. The maintenance staff is working towards a goal of inputting work orders for each call for service. This will help staff better identify common calls for service.

2012 Action Plan
The maintenance staff will enter a Track-It work order for every call for service.

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.

2011 Progress
In 2011, various members of the maintenance staff attended APCO International’s annual conference as well as NENA’s URISA conference which focused on next generation technology and standards. The newly hired communications technician was certified in the installation and maintenance of Cassidian 9-1-1 equipment.

2012 Action Plan
In 2012, maintenance program staff will attend conferences and meetings, as necessary, to remain engaged in Next Generation 9-1-1 technology and standards development.

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

Project: MARC Public Safety Program COOP
MARC staff will review and conduct an exercise of the program COOP annually and whenever significant programmatic changes occur.

2011 Progress
In 2011, MARC staff activated the COOP plan when the area was experiencing blizzard-like weather conditions. The MARC office was closed due and most staff was able to work from home in a seamless manner. PSAPs were informed as planned.
**Project: PSAP Re-Route Plans**

MARC staff will work with PSAPs and service providers to implement a schedule to test, at least every two years, the effectiveness of each PSAP’s re-route plans. MARC staff will prepare an after-action report after every re-route.

*2011 Progress*

Several PSAPs conducted training exercises by activating their back-up plans in 2011. Re-routes to other PSAPs were successful in each instance.

*2012 Action Plan*

MARC staff will continue to work with PSAPs to determine appropriate back-up strategies, and exercise these strategies to ensure their effectiveness.

**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 Next Generation 9-1-1.

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 regularly distributes articles and stories to keep addressing professionals informed of topics and issues relevant to 9-1-1 addressing and mapping.

*2011 Progress*

2011 marked the second year of working with the MARC GIS department for maintenance of the regional GIS data. This partnership has proven to be successful. MARC GIS provides monthly and quarterly reports and meets monthly with MARC Public Safety staff.

MARC staff distributed the annual database true-up request to 42 service providers in the region in September and October 2011. The service providers were asked to conduct a true-up by comparing their in-house customer database information to their 9-1-1 database service provider’s information. To date, nine providers have either completed the data scrub or are in the process of completing it. This project is expected to be complete by year end.

Comcast transitioned from traditional landline service to “true VoIP” resulting in the removal of landline records from the ALI database. Those records are now housed by a third party. Staff worked closely with Comcast to ensure records were removed properly.
2011 Database Totals (as of Nov.1, 2011):

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>2011</strong></td>
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<tr>
<td>MSAG Changes</td>
<td>11,022</td>
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<tr>
<td>MSAG Corrections resulted in correcting customer records</td>
<td>247,130</td>
</tr>
<tr>
<td>MSAGs Reviewed</td>
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<tr>
<td>Address Verifications</td>
<td>305</td>
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<tr>
<td>Customer Records Reviewed</td>
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<tr>
<td>Customer Records Corrected (not involving MSAG changes)</td>
<td>4,127</td>
</tr>
<tr>
<td>Error Reports</td>
<td>2,672</td>
</tr>
</tbody>
</table>

MARC Public Safety staff continues to work with local governments to review, address and map new and 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 NG 9-1-1 because the MSAG will be absorbed into the map data. Staff provided reports to communities in eight of the nine counties in the region. This information came from a quarterly geocode project that includes the match rate of map data to customer records in the 9-1-1 database and a list of addresses that did not match. Staff received and completed more than 20 full reviews from local governments and is working on others that have been received but not completed.

In June, PSAPs were encouraged to submit every valid 9-1-1 and map error as part of an error report contest. The number of reports received increase and staff was able to correct many records. Prizes were awarded to the top three agencies that submitted the most valid errors based on 9-1-1 call volume. The top PSAP was awarded a trophy and a perpetual plaque was hung in the 9-1-1 training center.

**2012 Action Plan**

MARC Public Safety staff will continue to work with MARC GIS staff to receive and enhance regional map data. A robust Quality Assurance program will be established to ensure the data is as accurate as possible. Additionally, staff will continue to work with local governments to incorporate new addressing and map updates and review existing data. Staff will continue to review geocode reports and provide data to local governments in an effort to ensure the match levels continue to improve. In June 2012, PSAPs will have the opportunity to participate in the annual error report contest. Participation is anticipated to continue to increase.
Project: Database Provider

MARC staff will continue to work closely with the 9-1-1 database provider by 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 twice each year.

2011 Progress
In 2011, MARC staff received quarterly VLQ database downloads. Staff uses this data to run reports, study record totals and trends and to help identify areas that need special attention.

MARC staff worked with AT&T to establish a new department that helps customers who subscribe to PS9-1-1/Private Switch 9-1-1 service. Staff also contacted all known PS9-1-1 customers to advise of the new department and help in correcting database records.

Nearly 700 invalid records were identified and removed from the database from the VLQ reports.

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

2012 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. MARC staff will continue to request the VLQ on a quarterly basis, and will analyze the data and provide a summary. 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. Staff will provide a recommendation, based on research results, to the Public Safety Communications Board in 2011.

2011 Progress
MARC 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.

2012 Action Plan
MARC staff will continue to watch for technology or software 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.

2011 Progress

MARC staff assisted local governments with agreements, data requests and analyses to ensure proper information has been provided for their emergency notification systems.

2012 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 Public Safety 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.

2011 Progress

Several jurisdictions completed a large number of map data reviews. MARC staff received more than 260 tracking packets of map data from nearly 50 different sources. Some jurisdictions such as Johnson, Miami and Wyandotte counties provide digital map data for multiple communities. As of Oct. 31, 10,633 street segments and 56 boundaries were added or corrected. The city of Kansas City, Mo., also completed a very large review.

2012 Action Plan

MARC Public Safety 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 NG 9-1-1 in which the MSAG will be absorbed into the map data.

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

In 2011, 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.

2011 Progress
MARC GIS received the 2010 enhanced aerial imagery in 2011 and made it available to MARC Public Safety staff. MARC Public Safety will work with MARC GIS to load the data on a test workstation and analyze its functionality with the GeoLynx software for the first quarter of 2012.

2012 Action Plan
MARC Public Safety will work in 2012 to build the test workstation and install the regional aerial imagery. The results of the test will dictate the next steps. If staff determines that the file functions properly without slowing the system down, then an action plan will be developed to install the data on all workstations around the region. This may be done in conjunction with 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.

2011 Progress
MARC Public Safety staff continues to work closely with the map maintenance providers to provide the best possible end product to regional PSAPs. Additional map data layers, such as mile markers on major highways and waterways, have been identified. MARC GIS staff is trying to determine the most accurate source of data to use.

2012 Action Plan
In 2012, MARC staff will attempt to identify additional data layers that could be helpful in answering and dispatching emergency calls. Staff will begin collecting and reviewing address point files, from counties that maintain this data, for use in NG 9-1-1.

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.
2011 Progress
MARC staff continued to work with local government to implement trails mapping and signage in their jurisdiction. In 2011, 399 trails were mapped and added to the regional file. Numerous trail signs were installed and incorporated into the GeoLynx mapping software.

2012 Action Plan
MARC staff will continue to help local governments with trails mapping projects. MARC staff facilitates the mapping group and other MARC program areas. This is an on-going, 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 Next Generation 9-1-1 system that will include the migration of the existing T1 wireless network onto the RAMBIS microwave system and a complete upgrade to Next Generation 9-1-1 compatible answering equipment from the legacy ECS-1000 structure.

Debt service for the current ECS-1000 controllers, selective routers and 9-1-1 answering equipment will be complete December 2010. In 2011 MARC public safety will continue to collect the funds from the counties, formerly allocated for debt service, to create an equipment replacement fund. MARC staff will begin connecting PSAPs to the RAMBIS microwave network in 2011.

In 2012, following the installation of the microwave network, the region will begin the transition to Next Generation 9-1-1 by installing new servers and user equipment on an annual basis. Several PSAPs will be connected to a server located at one PSAP to create a node or pod of the 9-1-1 network. One or two nodes will be upgraded each year. MARC staff will ensure the PSAPs’ essential function of processing 9-1-1 calls is never negatively affected throughout the Next Generation 9-1-1 implementation process. This approach will minimize the financial impact of the equipment upgrade on the counties.

It is estimated that the finished network will consist of six nodes. Upgrades or replacements will become an ongoing process. An outside consultant will review pricing, network configuration and maintenance for the transition of the regional 9-1-1 network to Next Generation 9-1-1.

MARC staff will monitor developments in Next Generation 9-1-1 technologies, and will work with the Public Safety Communications Board and its subcommittees to develop regional Next Generation 9-1-1 standards that align with national standards. MARC staff will continue to participate in local, state and national organizations and activities to learn about Next Generation 9-1-1 technologies and services.
2011 Progress

In 2011, MARC staff met with various service providers to determine the microwave and Patriot upgrade schedule for 2012 and 2013. In August, the regional maintenance service provider created a microwave lab to provide an environment to design and test microwave network configurations. Currently, a microwave path from the RAMBIS network to the Lee’s Summit selective router and a path from the RAMBIS network to the MARC offices have been installed. A path from the RAMBIS network to the Shawnee Police Department is currently being designed and should be in place by year end.

2012 Action Plans

In 2012, some PSAPs in the MARC region will start to receive new Patriot premise equipment and microwave equipment to connect to the RAMBIS microwave network. When these microwave paths are installed, existing wireless T1s can be disconnected, which will reduce network costs. Over the next four years, the remaining regional PSAPs 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

In 2011, 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.

2011 Progress

A CAD-to-CAD interface has been developed between Intergraph and TriTech, two of the larger CAD systems used in the region.

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 and MARC Board of Directors have approved a Memorandum of Understanding for the formation of the Metropolitan Area Regional Radio System
Management Council. This board provides policy guidance and oversight for MARRS — the region-wide P-25 radio system of systems — to ensure a high-quality, equitably financed and reliable system is available to the metropolitan area.

This project includes operational, technical and procedural planning. The three host-agencies — the city of Independence, Mo.; 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. This is an ongoing project.

2011 Progress

MARC staff is working with the city of Kansas City, Mo., and service providers to complete the microwave upgrade. This project is nearing the final stages and is projected to be completed in 2012.

Additionally, MARC staff worked with the city of Independence and Alcatel-Lucent to complete this microwave upgrade. This project included the completion of the microwave channel plan, installation of new microwave and radio equipment in the microwave hops, and the removal of old microwave equipment. The old microwave equipment has been placed in a storage facility for later use. This project was completed in 2011.

2012 Action Plan

MARC staff will support the Management Council, Users Committee and Technical Committee to implement the final recommendations for Motorola provided services. These services will cover the RAMBIS network, city of Independence, Mo., Johnson County, Kan., and city of Kansas City, Mo. The final product will include RAMBIS and the three host-agencies bundled together as a regional package under MARRS. This project will complete first quarter 2012.

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.

2011 Progress

No system upgrades were scheduled in 2011.

2012 Action Plan

MARC staff will continue to assist agencies with system upgrades as needed.

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 staff will continue to represent the region at the Kansas and Missouri State Interoperability Executive Committee meetings.

2011 Progress
The state of Missouri is continuing to build the statewide system. Discussions have been underway with various agencies in Jackson County to connect to the state system and to ultimately connect to MARRS.

2012 Action Plan
This project is on-going. At this time, there is no specific action planned for 2012.

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

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

2011 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.

2012 Action Plan
MARC 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 and monitoring software and equipment. The methods and procedures will be given to the vendor(s) responsible for monitoring, repairing and upgrading the RAMBIS microwave network. This project is an ongoing.

Project: RAMBIS Access
At the direction of the Regional Interoperability Communications Committee, MARC staff will assist with training and provide technical advice to area agencies that wish to access RAMBIS.
2011 Progress
On-site RAMBIS training was conducted at the Independence Police Department and the Kansas City, Mo., Fire Department. Additionally, COML training was also held at the MARC offices during the year. A Memorandum of Understanding is being prepared for the Missouri State Highway Patrol to join RAMBIS, and the FBI has requested to join RAMBIS in preparation for the Major League Baseball All-Star game to be held July 2012.

2012 Action Plan
Both RAMBIS and COML training have been scheduled for 2012. MARC staff will continue to research opportunities to expand the usage of RAMBIS among other local, state and federal partners.

Project: RAMBIS Standard Operating Procedure
MARC staff will continue to work with public safety committees to review and update RAMBIS standard operating procedures as needed. All operating procedures will be incorporated into the TICP upon approval by the Public Safety Communications Board.

2011 Progress
No significant changes were made to the RAMBIS SOP in 2011.

2012 Action Plan
The RAMBIS SOP will be reviewed in 2012, and changes may be made to promote increased utilization.

Goal B — Objective 4:
Ensure that the TICP continues to be exercised, evaluated and modified as needed.

Project: TICP Review
MARC staff, along with the Regional Interoperability Communications (RIC) Committee, will review the TICP annually. MARC staff and the RIC Committee will coordinate with the Regional Homeland Security Coordinating Committee’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.

2011 Progress
MARC staff conducted two classes in 2011 that covered the basics of the TIC Plan. The program conducted one COML course where the TIC Plan was used as a reference documents in activities and exercises.

MARC staff modified the TICP as changes were requested or needed. Various TICP resources were tested during local activities like Snake Saturday and routinely
during roll calls and maintenance. RIC Committee leadership continues to have an active presence locally and on the state level with the State Interoperability Executive Committee (SIEC).

2012 Action Plan
The TIC Plan will continue to be reviewed and updated as new changes impact regional communications assets. The TIC Plan will be used as a reference document for COML classes in 2012.

**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 based on the sensitivity and target audience of the correspondence.

In 2011, MARC will transition the Metro Communicator newsletter from print to an electronic format that will be published on a quarterly basis. The electronic newsletter will be emailed to MARC public safety committees, training participants, other public safety contacts and regional appointed and elected officials. The newsletter will be posted to the public safety intranet and the MARC public safety program website.

**2011 Progress**
The first electronic Metro Communicator newsletter was sent to all public safety communications contacts and committees in January. A total of six issues will be published by the end of the year. Links to the current and past issues are available on the MARC Public Safety website, the PSAP Managers Forum and the public safety intranet.

**2012 Action Plan**
MARC staff will continue to encourage local agencies to share their stories with the rest of the region through this electronic newsletter.

**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 Next Generation 9-1-1 standards and coordinating the implementation of the MARRS system with the transition to narrowband technology. This is an ongoing project.

2011 Progress

MARC staff worked with multiple committees throughout the year on a variety of issues, including 9-1-1 legislation in Missouri and Kansas, implementation of both the MARRS and RAMBIS systems, and forthcoming 9-1-1 system upgrades that will meet Next Generation 9-1-1 standards.

2012 Action Plan

MARC staff will continue to interact with existing committees to address regional and state-wide public safety issues, and will consider modification of committee structures if necessary.

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 Public Safety staff will schedule the orientation within 60 days of the position's start date. The orientation will provide an overview of MARC's services and role in regional public safety communications. This is an ongoing project.

2011 Progress

PSAP Manager Orientation sessions were held for two new managers this year, from Kansas City, Kan., Police Department and the Miami County Sheriff's Office.

2012 Action Plan

MARC staff will conduct orientation sessions as needed in 2012.

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.
2011 Progress
The public safety database and mapping manager is involved in a National Emergency Number Association (NENA) working group for data transition for Next Generation 9-1-1.

MARC staff has taken on a more active role with committee work and board memberships with various state associations. The training program provided training material and presented at the Kansas and Missouri Association of Public Safety Communications Officials (APCO) conferences. The training program has also submitted a presentation for a national 2012 conference.

MARC staff attended the Kansas APCO Spring Conference held in April 2011. Staff used the opportunity to promote the regional training program and the benefits it has to offer. MARC staff presented to 9-1-1 directors and managers from around the state during the Missouri APCO Training Symposium held in September 2011.

2012 Action Plan
MARC staff will continue to take on a more active role with associations, committees and groups related to public safety communications. The public safety training coordinator anticipates presenting at a 2012 national conference. MARC staff has been asked to present a class at the 2012 APCO International Conference. MARC staff will look for other opportunities to participate 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.

2011 Progress
There is no progress to report on this project at this time. However, the state of Missouri is in the process of creating new rules and regulations for state 9-1-1 training standards.

2012 Action Plan
MARC staff will continue to monitor activities at the state level in support of the new rules and regulations. Staff will use the new rules and regulations to create regional training standards in 2012.
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 will be adjusted to reflect the 2010 U.S. Census results. Future budgets and monthly 9-1-1 system allocation billing for the counties will reflect this adjustment beginning January 2012.

MARC staff will implement the financial planning policies enacted by the Public Safety Communications Board as part of the 9-1-1 system budget process. This project will be completed annually.

2011 Progress
In 2011, money previously collected for debt service was allocated to the 9-1-1 Equipment Replacement Fund, which will pay for the upgrade of regional 9-1-1 systems over the next several years.

2012 Action Plan
2010 Census data will be implemented to ensure current population figures are used to collect appropriate funding from participating counties. MARC staff will continue to monitor the Equipment Replacement Fund to ensure that upgrade projects are scheduled with consideration of current balances and cash flow.

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.

2011 Progress
In 2011, MARC communications technicians modified the regional inventory as additions/moves/changes occurred.

2012 Action Plan
MARC communications technicians will continue to modify the regional inventory as needed. This is an ongoing project.
Goal D — Objective 2: 
Seek additional funding sources to support regional public safety communications systems.

Project: Grants

The MARC public safety program will continue to aggressively pursue homeland security and other grants to support enhancements to communications interoperability 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. MARC will research and seek grant funding on an annual basis and as new grant opportunities arise.

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 staff will research and seek grant funding on an annual basis and as new grant opportunities arise.

2011 Progress

Changes in the Kansas City region’s UASI status in 2011 have prompted an agency-wide review of grant funding. Throughout the year, MARC staff has worked with multiple committees to ensure that projects are completed prior to grants closing, and that sustainability plans are in place for the future.

2012 Action Plan

MARC staff will continue to seek grant funding as needed.

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 staff will continue to support wireless legislation to provide a stable funding mechanism for 9-1-1 in the state of Kansas.

2011 Progress

New legislation was passed by the Kansas Legislature that simplified the statutes related to emergency telephone service and established a statewide fee for 9-1-1. It also established a single Local Collection Point Authority (LCPA) to receive all funds from service providers including prepaid wireless users.

The Speaker of the House of the Missouri Legislature established an interim subcommittee to study the issue of 9-1-1 in the state. Several hearings were held to provide representatives with information to help them understand the problems and challenges facing 9-1-1 centers in Missouri.
2012 Action Plan
MARC staff will work with various public safety associations to draft legislation that could be introduced during the 2012 Missouri legislative session.

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 begin the process of migrating wireless and VoIP 9-1-1 traffic off of the current commercial T1 network and over to the microwave network used by RAMBIS. This migration will occur in phases over a period of two years, beginning in 2011.

2011 Progress
In 2011, MARC staff met with various service providers to determine the microwave and Patriot upgrade schedule for 2012 and 2013. In August, the regional maintenance service provider created a microwave lab to provide an environment to design and test microwave network configurations. Currently, a microwave path from the RAMBIS network to the Lee’s Summit selective router and a path from the RAMBIS network to the MARC offices have been installed. A path from the RAMBIS network to the Shawnee Police Department is currently being designed and should be in place by year end.

2012 Action Plan
In 2012, some PSAPs in the MARC region will start to receive new Patriot premise equipment and microwave equipment to connect to the RAMBIS microwave network. When these microwave paths are installed, existing wireless T1s can be disconnected, which will reduce network costs. Over the next four years, the remaining regional PSAPs will be upgraded with microwave and Patriot equipment. This project is ongoing.

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.

2011 Progress
MARC staff worked with multiple vendors to ensure that pricing was competitive and appropriate for work performed and services provided.

2012 Action Plan
Staff will continue to ensure pricing for vendor services continues to be appropriate as upgrade projects take place throughout the year.
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
In 2011, 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 regulations, when applicable. Pilot classes will help measure the effectiveness of alternative training delivery methods.

2011 Progress
MARC training staff attended three conferences in 2011. These conferences provided staff with ideas for new and innovative ways to deliver training. MARC staff provided 9-1-1 equipment training, a RAMBIS overview and use course, and volunteer orientations on-site at several regional PSAPs.

2012 Action Plan
MARC staff will complete cost-benefit analysis of alternative training methods for consideration in 2012. 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. Beginning in 2012, the public safety training coordinator will conduct an annual instructor workshop to provide new teaching techniques and continue to develop instructors’ teaching abilities.

2011 Progress
MARC staff updated 12 classes with new materials, examples, case studies and the latest industry information.

2012 Action Plan
MARC staff will continue to review and update classes on a quarterly basis. An instructor workshop will be scheduled in the third quarter of 2012 to provide new teaching techniques to training program instructors. New curriculum and textbooks will be purchased to enhance and update the current Basic Telecommunicator course.

Outside instructors will teach three new or revised classes in 2012. Furthermore, at the request of several agencies, MARC staff has developed or will contract with outside instructors to develop other content-specific courses in 2012.

Project: Training Needs Assessment

In 2011, 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. Approved recommendations will be implemented by 2012.

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.

2011 Progress
MARC staff conducted a regional training needs assessment. The needs assessment indicated that staffing levels, training budgets and training program topics were the main determining factors in sending personnel to training. The report was presented to the Public Safety Communications Board in June 2011. The recommendations in the needs assessment were used to guide the development of the 2012 training program course offerings.

Public safety communications technicians and the training coordinator meet periodically to discuss the training needs of the region’s PSAPs.

2012 Action Plan
MARC staff will continue to meet on a periodic basis to discuss any training issues and to continue to look for future training opportunities.
Project: Regional Interoperable Training
MARC staff will work with the Regional Homeland Security Coordinating Committee’s Training and Exercise Subcommittee to continue to fund and provide interoperable communications training to public safety personnel.

A minimum of two Communications Unit Leader 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.

2011 Progress
In 2011, only one COML course was presented. A second course offering was scheduled, but was canceled due to low enrollment.

The MARC public safety program received an Interoperable Emergency Communications Grant Program (IECGP) grant to develop interoperable communications curriculum. MARC staff and a small committee of PSAP personnel selected a contractor, through an RFP process, to develop interoperable training curriculum for the region.

2012 Action Plan
Two COML courses are scheduled for 2012. The training coordinator is working with the state of Missouri’s State Wide Interoperability Coordinator (SWIC) to schedule other interoperable communications training courses for the region.

MARC staff will complete the development of the interoperable communications training curriculum first quarter 2012.

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.

2011 Progress
MARC staff instructed two public outreach volunteer orientations at the MARC Conference Center. In an effort to make training accessible to more people, MARC staff conducted on-site orientations at PSAPs and for a group of AT&T Pioneers.
2012 Action Plan

MARC will host two public outreach volunteer orientations at the MARC Conference Center and will conduct on-site orientations whenever requested by local agencies.

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.

In 2011, MARC staff will develop and maintain a Next Generation 9-1-1 fact sheet.

2011 Progress

MARC staff continues to maintain brochures and fact sheets. Staff reviewed two options and selected the Cell Phone Sally “9-1-1: Getting Help Is Easy!” video to replace the out-of-date Red E. Fox “Great Adventures of 9-1-1” video. The new video and corresponding activity sheets were implemented in the 9-1-1 school program outreach and education materials.

Because industry standards have not yet been developed for Next Generation 9-1-1, MARC has not prepared an NG 9-1-1 fact sheet. When standards are issued, MARC staff will create and distribute information to public safety agencies and the public.

2012 Action Plan

The program will purchase the Cell Phone Sally costume which will be available for all regional public safety 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.

2011 Progress

MARC staff participated in 911 Day at the Capitol where several public safety associations met with legislatures to discuss the issues related to funding 9-1-1 in Missouri. A member of MARC staff serves on the 9-1-1 Coordinating Council for Kansas.

MARC staff will meet with officials in each county, on an annual basis, to discuss emerging regional public safety communications issues.
## Public Safety Program
### Annual Coordination Budget 2012

### Coordination Services Revenue Comparison 2012

<table>
<thead>
<tr>
<th>REVENUE</th>
<th>2011 Budget</th>
<th>2012 Budget</th>
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<tbody>
<tr>
<td>Coordination Fee</td>
<td>$939,745</td>
<td>$979,628</td>
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<tr>
<td>Carryover Funds</td>
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<tr>
<td>9-1-1 Service Agreements Revenue</td>
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<td>PS Public Education/Promo Revenue</td>
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<td>PS Training Registrations/Other Revenue</td>
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<td>PS Training Memberships</td>
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<td>FY06 UASI-Interoperability</td>
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<td><strong>Total Revenue</strong></td>
<td><strong>$1,423,633</strong></td>
<td><strong>$1,459,239</strong></td>
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### Coordination Services Expenses Comparison 2012

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<tr>
<th>EXPENSES</th>
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<th>2012 Budget</th>
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<tbody>
<tr>
<td>Salaries and Wages</td>
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<td>Employee Benefits</td>
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<td>Supplies and General Expense</td>
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<td>Equipment Rental</td>
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<td>Other Expense</td>
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<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$1,423,633</strong></td>
<td><strong>$1,459,239</strong></td>
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