

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

909



FROM: Riverside County Information Technology Department and Sheriff-Coroner-PA

SUBMITTAL DATE:
January 11, 2005

SUBJECT: Progress report on 800 MHZ Radio System

RECOMMENDED MOTION: That the Board of Supervisors receive and file the attached report.

BACKGROUND: Following is the status report on the 800 MHz Radio System for the month of December 2004. The report incorporates updates to the first report submitted to the Board on November 25, 2003. The updates are dated as of 12/31/04 and are noted in bold italics throughout the report.

Riverside County Information Technology, Sheriff, Fire, Purchasing, Facilities Management, CHA/Bio-Terrorism, TLMA/Planning and Executive Office continue to work to address coverage issues.

Departmental Concurrence

Bob Doyle

Bob Doyle
Sheriff-Coroner-PA

Matthew W. Frymire

Matthew W. Frymire
Chief Information Officer

FINANCIAL DATA	Current F.Y. Total Cost:	\$ 0	In Current Year Budget:	N/A
	Current F.Y. Net County Cost:	\$ 0	Budget Adjustment:	N/A
	Annual Net County Cost:	\$ 0	For Fiscal Year:	N/A

SOURCE OF FUNDS:	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION: **APPROVE**

County Executive Office Signature _____
[Signature]

- Policy
- Consent
- Dept't Recomm.:
- Policy
- Consent
- Per Exec. Ofc.:

Prev. Agn. Ref.: 3.33, 10/26/04;
3.17, 12/14/04 | **District:** ALL | **Agenda Number:**

Progress Report on
Radio System Issues



December 31, 2004

(Updates are inserted on the following pages and are noted in bold italics.)

Executive Summary **Identified Action Items**

The IT Department, in conjunction with the Executive Office, Sheriff's Department, and Purchasing Department, is aggressively addressing the action items directed by the Board on October 7, 2003. These action items are:

1. Radio Coverage Options
2. Radio Action Plan
3. Control of Radio System Assets
4. Development of a Regional Radio System
5. Radio Site Acquisitions

The progress for each of these items is detailed in this report.

Introduction and Background

The current system was designed in 1988 with an initial investment of \$13.2 million for the 800MHz equipment purchase and implemented in 1992 to provide coverage to the populated areas during that time. Plagued with various engineering, site development and contractor issues, further improvements were identified by the Sheriff and IT that required additional funding of \$3.8 million. Digital upgrades to the in-field radio equipment and repeater sites also occurred at a cost of \$17.2 million. Although there have been multiple upgrades to enhance coverage and improve performance, coverage issues continue to exist. During the same period, the County's population has grown by 32%, much of the development in areas that did not require coverage in the past. It is anticipated that this trend will continue at the current pace, and that future coverage issues will occur as the County and Sheriff Contract cities approve new development.

On October 7, 2003, the Board directed the Executive Office to work with the Sheriff's Department, Information Technology Department, and the Purchasing Department to secure the services of a consultant to review and analyze the existing 800MHz radio system for effectiveness, coverage, and safety. In addition, the Board directed that the consultant define an interim fix to ensure that coverage is provided at some level for areas that do not have coverage today.

The following action items were identified: (1) Radio Coverage Options, (2) Radio Action Plan, (3) Control of Radio System Assets, (4) Development of a Regional Radio System, and (5) Radio Site Acquisitions. The Information Technology Department was directed to provide monthly status reports to the Board detailing progress on the issues and action items identified. The status of each of these action items is included in this report.

Radio System Direction **Radio Coverage Options**

The IT Department has contracted with Gartner Group to provide consulting services for the purpose of developing consensus from all the 800MHz department users on what needs to be addressed, and from this consensus, to validate strategies for deploying both an interim and long term solution for public safety radio services.

The interviews with all the involved departments have already been conducted, and their report will be published in mid-November. This report will provide the road map required to move forward with defining and deploying both an interim fix to the existing 800MHz system, and the strategic direction required to provide a future solution to public safety radio services in Riverside County.

At this time, we understand that the recommendation of the consultant will be to develop two RFPs:

The first RFP will be used to define and price out an interim fix to the existing 800MHz radio system that will address the immediate coverage area issues that exist today. This RFP will define the Sheriff's coverage objectives, the County's existing radio sites and equipment assets, and will require the radio equipment vendors to design and engineer a solution that will meet the Sheriff's coverage objectives and reuse as much of the existing sites and assets as possible. This RFP should be completed and out to bid within the next two months. The RFP will only be sent to Motorola and MA/COM. This will ensure that the solution is defined by one of the radio equipment manufacturers, so that the County can hold them accountable for delivering a system that will meet the objectives stated in the RFP.

The second RFP would be sent to industry consulting firms, including such firms as Motorola and MA/COM, to identify a long-term "strategic" direction / solution to address the future requirements of not only the County, but all public safety agencies within the County. This RFP should be completed and issued for bid within the next six months.

Status Update 12/31/03:

Gartner's report was delivered in November 2003 and has been reviewed by the participating Departments. Gartner's recommendation is as follows;

Development of RFP for interim resolutions to existing coverage issues

This RFP will be used to define and price out interim fixes to the current 800MHz radio system that addresses the immediate coverage area issues that exist today. The County submitted an RFP on November 22, 2003 for consulting services to develop this first RFP recommended by Gartner. Award of this consulting contract is scheduled for January 16, 2004. Completion and submission of this first RFP should occur by mid-May 2004.

Development of RFP for the radio system strategic direction

This RFP would be sent to industry consulting firms, including such firms as Motorola and MA/COM, to identify a long-term strategic direction / solution to address the future radio requirements of not only the County, but all public safety agencies within the County. This RFP should be completed and issued for bid by October 2004. A similar approach using consulting services for the development of this strategic RFP is being recommended.

Status Update 01/31/04

Development of RFP for interim resolutions to existing coverage issues

The RFP was awarded to RCC Consultants on January 20, 2004. A committee made up of Fire, Sheriff, and IT made the selection. Purchasing worked with both the consultant and County Counsel to finalize and execute the contract, and has prepared the Form-11 to the Board of Supervisors.

In preparation for the consultants to come on board, existing coverage maps are being prepared for review by each station to identify issues in coverage. The coverage maps will be overlaid on GIS maps for the consultant to review.

A joint effort with MWD, UCSD and County of Riverside to build a shared communications site in Idyllwild is pending feedback to determine if the parties will remain involved in this effort. State budget cutbacks may impact the ability of UCSD and MWD to continue with this joint effort. The Radio working group has agreed though that the County should proceed in obtaining the site as coverage is an issue in Idyllwild.

Status Update 3/16/04:

Sheriff, Fire and Information Technology had the initial meeting held with RCC on February 18, 2004. System documentation and coverage maps were provided to RCC at this time. Project start date was February 24, 2004. On this day, RCC met with IT Engineering and Sheriff Dispatch personnel to gather current details about the radio system. RCC has created interview questions for their meetings with the ten (10) Sheriff stations, and has forwarded them to the Sheriff for review. The Sheriff has scheduled the station interviews. It is anticipated that all interviews will be completed in a two week period.

Coverage maps have been provided to the Sheriff and are being distributed to the stations. Thanks go to County Fire for their assistance in creating the coverage map overlays onto their GIS street mapping making it easier to identify street names and station boundaries.

The Idyllwild joint effort with County, UCSD/Scripps and MWD is underway. An on-site meeting was conducted to establish the joint requirements between the County, UCSD/Scripps and Metropolitan Water District. Because of inclement weather, several key participants did not show. However, the main principals (MWD and County of Riverside) agreed to preliminary site locations and discussed what the Water District can contribute to the project. A project plan will be created to lay out a timeline for the construction of the tower.

Status Update 04/30/04:

RCC Consultants interviewed staff at ten (10) Sheriff Stations including Deputies, Mid-level Management and the Captain at each station. RCC is completing the first draft of their report from these interviews. They have also prepared some site models from the data provided by Information Technology. Phase I and II of this project continues to track toward its June 1, 2004 completion date.

Coverage maps were edited and returned from the Sheriff Stations and provided to RCC for review and inclusion in their report deliverables.

Although the County continues toward leasing of the Idyllwild property, efforts at the Idyllwild site have slowed some. Facilities Management is working with the property owner on finalizing the lease agreement. MWD is standing by to contribute a tower to the site. UCSD is also prepared to contribute funding toward this effort. Once the lease agreement is completed, a finalization of the project plan will be completed.

Status Update 06/15/04:

RCC Consultants completed the first draft of their report of Findings and Analysis. Sheriff and RCIT reviewed the draft and met with RCC Consulting to assure completeness and that all requirements for this report were met. The final report was delivered on June 17, 2004, but after initial review an error was discovered and RCC Consulting delivered the corrected page on July 1, 2004. Phase I and II of this project continue to track toward the June 30, 2004 completion date. This completion date was misstated in last months report as June 1, 2004.

At the request of the Sheriff, RCC Consulting also prepared a Preliminary Budget Estimate report that sited two alternatives for resolution to existing 800MHz coverage and growth issues; Expansion of Existing Cells and Reconfiguration of Cells. Cost estimates range from \$33 Million to \$64 Million depending upon the alternative selected.

Facilities Management is continuing to work with the Pine Cove Water District on the lease agreement for the selected property. MWD met with RCIT and reconfirmed their commitment to the site partnership, by supplying the tower to be constructed. As this is not one of the higher priority sites, resources are focusing on this site as time allows.

Status Update 08/31/04:

RCC Consultants completed the first draft of their Conceptual Design report on July 8, 2004. Sheriff and RCIT reviewed the draft and met with RCC Consulting to assure completeness and that all requirements for this report were met. There were several questions regarding directions recommended by RCC Consulting. After discussion, it was determined that the recommendations were based on incorrect or incomplete information. Because of this, RCC requested additional time to evaluate the updated information and if warranted, re-draft certain sections of the report. The final report was delivered on August 19, 2004 and is currently under review by the Sheriff and RCIT. RCC Consulting's estimated costs range from \$42 Million to \$64 Million for the "fix" to the current 800MHz System. Phase III of this project, development of the RFP, is now tracking to a September 30, 2004 completion date. The RFP draft is at Purchasing for incorporation of Terms and Conditions and is soon to be released to the working group for initial review.

Status Update 11/30/04:

RCC Consultants provided the final draft of their Conceptual Design report on August 19, but in late September, the Sheriff identified several of the agreed upon corrections in this document were left out. Information was resent to RCC Consulting on October 12, 2004 and the final being delivered on November 2, 2004. RCC Consulting's high-end

estimated costs for the "fix" grew from \$64 Million to \$83 Million due to some of the corrections made.

Much of the time spent on this project for the months for September through November was in the development of the RFP. RCC Consulting delivered the first draft of the RFP on September 20, 2004. The RFP draft was reviewed by Sheriff, Purchasing, County Counsel, Fire and RCIT. All parties met on November 2 and 3, 2004 to review and modify the draft as necessary. These meetings ended with deliverables owed to RCC Consulting by the County. Over the next two weeks, information was provided to RCC Consulting and the next draft of the RFP is scheduled for delivery to the County on December 3, 2004.

Status Update 12/31/04:

All of the time spent on this project for the month of December was in the development of the RFP. RCC Consulting delivered the second draft of the RFP on December 3, 2004. The RFP draft was reviewed by Sheriff, Purchasing, County Counsel and RCIT. RCIT contracted with Dr. Henry Richter, from The Richter Group, to provide additional insight for evaluation of this RFP. All parties met and agreed that the RFP was not to the specifications and satisfaction of the County. This information was communicated to RCC Consulting and a request was made for RCC to resubmit the document in the format required and per the RFP awarded to RCC back in January of 2004. RCC Consulting has reviewed the County's issues, has reassigned a new resource to complete the RFP and committed to the RFP final document being delivered in January 2005.

Radio Action Plan

To address the immediate concerns of the Sheriff, the Information Technology Department is meeting weekly with Sheriff and Fire Communications staff to identify, track, and resolve radio coverage, operational, and system issues. Through these meetings the following key areas for coverage enhancements have been identified and prioritized by the Sheriff's Department: Cabazon / Banning, Norco, Jurupa, Hemet, Moreno Valley, Southwest Justice, and Idyllwild.

The IT department, with the concurrence and validation of the Sheriff Communications staff, has provided improved coverage in the Cabazon / Banning area by upgrading an antenna at the Mt. David site, and has designed a conventional radio solution at the Whitewater site that will further enhance coverage. The conventional radio solution is planned for implementation in mid-November 2003. Coverage maps that define the service area, and training on how to use additional new radio frequencies will be provided to station personnel once the solution is installed and tested.

In the Norco area, IT is reviewing potential new sites at the State Prison and the Corona Court House to enhance coverage. This solution would redeploy older equipment from other locations to provide a temporary improvement in coverage. IT and Facilities Management are currently in the process of contacting the State Prison to identify availability and costs to implement a new radio site at that location.

These solutions are designed to provide interim patches to the coverage areas, until the future solution can be implemented as defined in the "Radio Coverage Options" section

of this report. The other coverage area issues identified above are being addressed in the priority order set by the Sheriff.

In-building coverage is also being addressed within the radio action plan. Radio coverage in structures such as malls, schools, and other large public buildings can be problematic depending upon design and location. To address this, IT has proposed a new ordinance that will require builders/developers to provide the internal building infrastructure and technology to amplify public safety radio signals within any new buildings. Once approved, this ordinance will ensure adequate in-building public safety radio coverage in all new buildings built in the unincorporated areas. We will also be working with the Sheriff to ensure that this ordinance is presented to the incorporated entities that the Sheriff contracts service to, for adoption and approval in their jurisdictions. IT is also exploring options to address current in-coverage radio needs in existing large facilities.

Status Update 12/31/03:

In November 2003, the IT Department, with the concurrence and validation of the Sheriff Communications staff, implemented a conventional radio solution at the Whitewater site that has further enhanced coverage in the Banning / Cabazon area. Coverage maps that define this new service area, and training on how to use additional new radio frequencies, were provided to station personnel once the solution was implemented. Although the working group has received positive feedback on the new coverage, the Sheriff remains concerned as this solution lacks features available in the current 800MHz network and requires Deputies to manually switch channels as they move into and out of the two different coverage areas.

In the Norco area, IT identified two new sites at the State Prison and the Corona Court House to further enhance coverage. These sites were selected as they already have communications infrastructure in place; such as towers, backup generators, and communications rooms. Although the State Prison is currently scheduled for closure, costs to install further radio communications at both of these sites have been developed and distributed to the working group for their review. At present, a conventional solution, such as used in Banning / Cabazon, has been ruled out due to interference with other non-County conventional radio networks in the surrounding and neighboring areas. IT staff will continue to explore opportunities to enhance coverage in this area.

Implementation of an interoperability solution allowing communications with other public safety agencies within Riverside County is also currently underway. This interoperability project is a joint effort being funded by Homeland Security grants obtained by the County and participating agencies. At present, 800 MHz radios are being distributed to eighteen (18) participating agencies for installation in their current network consoles. Additional communication site upgrades have been designed and product is being procured to complete these efforts. The interoperability solution is scheduled to be completed by June 30, 2004. Once completed, all participating agencies will be able to communicate on common channels when the need occurs.

Efforts on a new ordinance that will require builders/developers to provide internal building infrastructure and technology to amplify public safety radio signals are

underway. In addition, an update to the Cell Tower ordinance is also being recommended to enable the County to co-locate on carrier towers if required. The Sheriff is providing IT with a list of the most critical buildings that should be considered for in-building coverage. IT has contracted with RiverOaks Communications to draft these ordinances; completion of the draft ordinances is scheduled by mid-January 2004.

Status Update 01/31/04:

In the Norco area, IT consulted with Dailey-Wells to validate the two recommended sites at the State Prison and the Corona Court House as potential sites to further enhance coverage. Upon completion of their review, Dailey-Wells recommended against the use of either site due to new interference issues that would occur if either of these sites were implemented. Dailey-Wells submitted other location options in the area as potential sites for the County's review, and has made a recommendation one of the sites. Findings from Dailey-Wells are due back to the County by February 2, 2004. IT staff will make final recommendation and provide cost estimations to construct the site per Dailey-Wells engineering.

The interoperability project, allowing common channel communications with other public safety agencies within Riverside County, is on track for June 30, 2004 implementation. At present, 800 MHz radios are being installed within the dispatch consoles of the eighteen (18) participating agencies. Additional communications product is being procured to complete the site upgrade efforts.

RiverOaks Communications has updated their second draft of the ordinance creations/modifications requested by the County. At present, IT, Sheriff and Planning are reviewing the drafts and have a meeting scheduled to discuss these document drafts on February 2, 2004. The Sheriff has received feedback from all stations identifying the critical locations requiring in-building coverage. After review, the Sheriff will forward this document to IT for inclusion in the awarded consultant's (RCC Consultants) project requirements and scope.

Status Update 03/16/04:

Dailey-Wells had recommended a fifth Cell 1 tower site in Norco located on the water tower by the High School. County IT requested a Statement of Work and cost estimate from Dailey-Wells to construct the site. Dailey Wells has not yet provided the requested costs. They have also declined to provide full turnkey costs, stating the County is better positioned to provide project management in those areas such as site development, permits, tower construction, etc.

County IT has since proposed an alternate fifth site in Cell 1 providing a multi-cast solution for the Norco area. This site will be implemented from Pleasants Peak, where most of the infrastructure already exists which will reduce cost significantly. The Sheriff supports this effort and IT Engineers will have the site active for testing, to include Sheriff Deputies within 30 days.

Sheriff has requested space requirements for a communication tower that may be located on top of the 26-story hotel currently under construction on the Morongo Indian

Reservation. Although there are no current plans to construct a tower at this location, it was determined that it would be prudent to assure there was space for future use.

Efforts are currently underway to provide in-building coverage throughout the Courts building at Southwest Justice Center.

The interoperability project, allowing common channel communications with other public safety agencies within Riverside County, remains on track for June 30, 2004 implementation. All 800 MHz radios will be installed within the dispatch consoles of the eighteen (18) participating agencies by March 5, 2004. Additional communications product is being procured to complete the site upgrade efforts. State Office of Emergency Services has required additional effort on behalf of the County before they will assign the frequency licenses for this project. These additional requirements call for a re-design of the antenna specifications. Once this is completed, the RFP for the Antennas can then go out to bid. An RFP for installation services of site equipment, including the antennas, has been distributed. The pre-bid meeting for this RFP was held on March 11, 2004.

On February 2, 2004, County Planning notified IT that the cell tower ordinance is being re-drafted and the first draft was distributed on February 26, 2004 for review. RiverOaks Communications has reviewed the draft and provided recommendations. The Sheriff has provided their critical locations requiring in-building coverage to IT and this document has been provided to RCC Consulting. RiverOaks Communication has delivered their latest draft of the in-building ordinance. County Planning and IT have spoken to RiverOaks regarding this document and will need to speak with the Sheriff on identifying the coverage percentages as well as presenting the details of the ordinance to developers.

Status Update: 04/30/04:

After further review and discussion, it was determined best to focus on the implementations of a quick, "band-aid" solution to the coverage issues in Norco and Jurupa. In lieu of installing the fifth site installation, IT will implement conventional solutions at two separate locations, one for Norco and one for Jurupa. It was determined that getting something operational quickly was the prudent move. Conventional radio systems, although not the best solution for Sheriff operations, can be implemented in a short timeframe. The fifth site solution recommended by IT will take several months, where a conventional solution in Norco will take several weeks. Information Technology has provided a project direction and timeline to the Sheriff for the Norco and Jurupa coverage issues. The Sheriff is currently reviewing the direction, timeline and coverage map for this area.

The interoperability project, allowing common channel communications with other public safety agencies within Riverside County, remains on track for June 30, 2004 implementation. Sixteen of the eighteen 800 MHz radios have been installed within the dispatch consoles of the participating agencies. The two remaining Agencies are CHP and are awaiting State authorization to proceed. Additional communications product has been procured to complete the site upgrade efforts. County Information Technology is actively working on readying each of the sites. State Office of Emergency Services has received the additional information required and is processing the County's request for

frequency licenses. The RFP for the Antennas has gone out for bid and been awarded. An RFP for installation services of site equipment has been distributed and responses received.

RiverOaks Communication has delivered updates to their draft of the in-building ordinance. County Planning has reviewed the RiverOaks document and has requested input from the Sheriff and Fire on identifying the coverage percentages for new building.

Status Update: 06/30/04:

In April 2004, the Sheriff determined that the working group needed to focus on the implementations of a quick, "band-aid" solution to the coverage issues in Norco and Jurupa. In lieu of installing the fifth site installation, IT implemented a conventional solution at Norco and is in the process of implementing one for Jurupa. It was determined that getting something operational quickly was the prudent move. Conventional radio systems, although not the best solution for Sheriff operations, can be implemented in a short timeframe. The fifth site solution recommended by IT will take several months, where a conventional solution in Norco took only several weeks. RCIT provided a project direction and timeline to the Sheriff for both coverage areas. The Sheriff concurred with moving forward on both solutions.

In May, 2004, the Sheriff requested that the Moreno Valley area be moved up in priority. IT has begun efforts to design conventional solutions in the Moreno Valley area.

On June 28, 2004, the Sheriff requested that efforts be refocused back to the Cabazon area where a conventional solution was implemented in November 2003. The Sheriff sited an area that currently has poor to no coverage, where law enforcement activity has increased over the past 5 months. RCIT is refocusing resources to the Cabazon effort, which will impact the Jurupa conventional timeline.

The interoperability project, allowing common channel communications with other public safety agencies within Riverside County, has been delayed as manufacturer equipment cannot be delivered until July timeframes. Sixteen of the eighteen 800 MHz radios have been installed within the dispatch consoles of the participating agencies. The two remaining Agencies are CHP and are awaiting State authorization to proceed. RCIT has readied each of the sites. State Office of Emergency Services has received the additional information for their required antenna design change and is processing the County's request for frequency licenses. The RFP for the Antennas was awarded. An RFP for installation services was also awarded.

In order to facilitate additional conventional solutions, as well as prepare for additional radio consoles and communication sites, RCIT is working towards an effort to upgrade the existing radio system switch (IMC). In order for this to occur though, the switch will need to be totally reconfigured. RCIT is developing an RFP calling for a turn-key solution to complete this upgrade.

RiverOaks Communication has delivered updates to their draft of the in-building ordinance. County Planning has reviewed the RiverOaks document and has requested input from the Sheriff and Fire on identifying the coverage percentages for new building.

RCIT met with TLMA representative to discuss growth projections for the next 10 years. This information will be included in the RFP.

Status Update: 08/31/04:

On July 8, 2004, the Sheriff requested that the working group focus on the implementation of a second conventional solution in the Cabazon area that was receiving a greater number of dispatch calls, but did not have appropriate radio coverage. RCIT implemented the second conventional solution at Cabazon on July 14, 2004 and followed up with training on this new channel as well as a refresher on the first channel.

Due to the new priority for a second conventional channel in Cabazon, resources were not able to complete their task of identifying a potential conventional site in the Moreno Valley area nor were they able to make progress on the Jurupa Station conventional solutions. RCIT has now re-initiated efforts to design conventional solutions in the Moreno Valley area. Engineering efforts for Jurupa are again underway and equipment orders are now in process.

The interoperability project, allowing common channel communications with other public safety agencies within Riverside County, continued to see delays in the delivery of manufactured equipment. The final deliveries were made on August 31, 2004. Current work levels and priorities have pushed this projects implementation date to November 1, 2004. The two remaining CHP consoles are still awaiting installation of the 800MHz radios. State authorization was provided for one of the CHP consoles in July, but no word has been given on the second console. The Sheriff has sent a letter to the CHP Commander for status on this project task. RCIT continues to install the communication site equipment as it is received. Time line is tracking at 1 site per week, but several of the sites will have to be revisited now that the last of the equipment has arrived. County has received no word from the State Office of Emergency Services regarding the processing of the County's request for frequency licenses.

In order to facilitate additional conventional solutions, as well as prepare for additional radio consoles and communication sites, RCIT submitted a statement of work to two providers to upgrade the existing radio system switch (IMC). Since this effort will require the switch to be totally reconfigured, RCIT is calling for a turn-key solution to complete this upgrade.

RCIT met with TLMA/Planning representative to continue discussions regarding growth projections and incorporation of the public safety radio requirements into development processes. TLMA/Planning is now including RCIT in the meetings with Developers to assure that consideration is given to public safety radio requirements for the new developed site/community.

RCIT and the Sheriff are jointly meeting with each Board member to provide updates and address any questions that they may have at this point in the project.

Status Update: 11/30/04:

After RCIT implemented the second conventional solution at Cabazon on July 14, 2004 efforts began to design a simulcast solution for the, now three, channels in the Cabazon

area. Design has been completed and equipment is on order to implement this solution by February 28, 2005.

Two potential conventional sites in the Moreno Valley area have been identified as conventional channel sites. Engineering is designing these sites and preparing to test the conventional coverage potential.

RCIT is working on implementation of the conventional solution for the Jurupa area. Conventional site will be developed at the Jurupa Station. Equipment orders are in process. SBC has installed a circuit at the location and RCIT is working with Facilities Management for the erection of an antenna pole at the site.

The infrastructure for the interoperability project, allowing common channel communications with other public safety agencies within Riverside County, was implemented on November 1, 2004. The two remaining CHP consoles are still awaiting installation of the 800MHz radios. The Sheriff is working on a training video for distribution to all agencies to show how this system operates. This video is scheduled for completion in January 2005. County has received authorization from the State Office of Emergency Services to use temporary licensing for the frequencies used in the interoperability system, but is still awaiting permanent frequency licenses.

RCIT received only one response for the statement of work to upgrade the existing radio system switch (IMC). Several options were provided and RCIT has requested the Sheriff identify the option that best meets their current business needs. Sheriff has committed to a decision by December 2, 2004.

RCIT and the Sheriff have jointly met with each Board member to provide updates, estimated costs, as provided by RCC Consulting and address any questions that they may have at this point in the project.

Status Update: 12/31/04:

Due to efforts on the RFP during the month of December, there was no progress made on designing and testing the two proposed sites for Moreno Valley coverage.

RCIT is working on implementation of the conventional solution for the Jurupa area, at the Jurupa Station. RCIT and Facilities Management have completed a job walk at the Station. Facilities Management is waiting for a quote for installation of the antenna mast.

Regarding the upgrade to the existing radio system switch (IMC), the Sheriff made their decision on the three options available. The cost of this option is over \$4 million and therefore, efforts toward implementation will likely need to be held until the award of the current RFP is made. RCIT is meeting with the Sheriff to determine if alternative options can be implemented between now and the RFP award.

Control of Radio System Assets

To ensure uninterrupted power is available to all County radio sites, the IT Department has secured verbal agreements, and is in the process of preparing formal Memorandums of Understanding, with the three leased site vendors to take over responsibility for preventative maintenance of the power generators at the eight sites under their control. In addition, we are also working with County Counsel to determine the best approach for attaining the existing leased sites through imminent domain or other legal means.

Status Update 12/31/03:

Facilities Management is in the process of conducting site analysis at all leased sites. IT will provide Facilities Management with performance standards to be included in amendments to the contracts. Site analysis and draft contract amendments will be completed by mid January 2004.

Status 01/31/04:

As part of the site analysis, Facilities Management has produced their Radio Tower Reliability Recommendations document to IT and the Executive Office. A meeting was held on 12/23/04 to review this document to assure validity. This document will be used as a guideline for the site analysis efforts in the future.

Status 03/16/04:

Facilities Management has contracted with GRD, Inc. to develop and support leasing agreements for communication sites. Site upgrades may need to be made to improve reliability of the site overall, and GRD will assist in determining if the cost should be borne by the Landlord or the tenant. Facilities Management and GRD will develop a new lease form to include better language on emergency back-up and system maintenance.

Status Update 04/30/04:

Facilities Management has completed their analysis of existing site leases and has brought all payment records to/from the County up-to-date.

Any additional efforts toward procuring or leasing new sites are on hold until RCC Consulting completes their analysis.

Status Update 06/30/04:

Facilities Management has completed their analysis of existing site leases and has brought all payment records to/from the County up-to-date. Facilities Management and RCIT met with Gerry Doak from GRD to discuss what will be required to purchase new sites in and around the current leased sites.

Any additional efforts toward procuring or leasing new sites are on hold though until RCC Consulting completes their analysis.

Status Update 08/31/04:

Facilities Management and RCIT have met regarding the potential to purchase/lease new sites in an effort to reduce the cost of operations. The sites being considered are essential to the operation of the radio network, and are considered necessary,

regardless of the RFP responses. RCC Consulting is aware of and supports this effort. An in-principal form-11 is being prepared to obtain Board authorization for the next steps in this effort.

Status Update 11/30/04:

Due to efforts pertaining to conventional site implementations and development of the RFP, no progress has been made in obtaining these new sites.

Status Update 12/31/04:

CIP funding has been made available this fiscal year to implement 3 communication sites that are operated by the County of Riverside. Two of the sites will replace existing sites owned and operated by third-party service providers, and one will be a new site to enhance coverage in the Idyllwild area. A form-11 in principle is being prepared for submission to the Board of Supervisors in January authorizing Facilities Management to negotiate lease/purchases of properties on behalf of Riverside County Information Technology for these communication sites. Efforts are underway for Facilities Management to submit bids for soil testing of potential radio communication sites.

Development of a Regional Radio System

To address the need for interoperability, and to reduce operating costs through resource sharing, the IT Department has made presentations to the CVAG City Managers, Elected Officials, and Public Safety administrators, the WRCOG City Managers, and the Riverside County Law Enforcement Administrators Association. These presentations were given to educate these organizations on the need for a regional system, and to ascertain their interest in forming a regional joint powers or consortium to develop a regional public safety radio system for all public safety agencies within and surrounding Riverside County. While the organizations all voiced interest in this concept and the benefits it would provide, this interest has also been tempered with concerns regarding potential budgetary impacts of such an initiative. Each of the organizations has requested that we provide follow-up progress reports as the initiative moves forward.

IT and Sheriff Staff have also scheduled meetings with the San Diego County consortium (RCS), and with the San Bernardino County consortium, to gather information on how these organizations function, and to determine if Riverside County would benefit from joining one of these regional radio system organizations. Additional meetings are also being scheduled with the counties of Orange and Los Angeles to review their implementations and to determine if there are any benefits or opportunities for share locations or frequencies.

Status Update 12/31/03:

IT continues to explore regional radio system alternatives with CVAG, WRCOG and RCLEA. IT and the Sheriff are scheduled to present concepts at the Fire Chiefs Association on January 8, 2004. IT and the Sheriff have agreed to co-present the regional radio system alternative at all future meetings of these organizations.

IT and Sheriff Staff have also attended meetings with the San Diego County consortium (RCS) and with the San Bernardino County consortium to gather information on how these organizations function, and to determine if Riverside County would benefit from

joining one of these regional radio system organizations. Additional meetings are scheduled with other neighboring counties to review their implementations and to determine if there are any benefits or opportunities for shared locations or frequencies.

Status Update 01/31/04:

IT presented the Regional Radio Concept to the Fire Chief's Association on January 8, 2004. Although Fire Chiefs are satisfied with the current radio system, they committed to participate in the regional public safety efforts. The Association will create a sub-committee that will participate on their behalf.

Also on January 8, 2004, the Radio Action Plan working group attended a presentation with counterparts in Orange County to review their new regional radio system. The Orange County System was implemented about eleven (11) months ago. The presentation was extremely informative and is being recommended as one model that the participating Riverside County public safety agencies should consider when our regional effort is underway.

IT and the Sheriff gave a presentation to staff for Congressman Ken Calvert on January 14, 2004 on the Regional Radio effort, in the hopes of potential funding opportunities from the Federal Government. Sheriff, Fire and IT are continuing to work together in identifying and applying for Homeland Security grant monies to assist in this effort as well.

IT met with Sheriff and Fire/OES grant staff to review joint opportunities for future grants to fund both interim and strategic resolutions to the County's radio issues.

Status Update 03/16/04:

IT and Sheriff presented a status on the Regional Radio effort and the Interoperability project to the Palm Desert Public Safety Commission on March 10, 2004.

At the request of the Sheriff Department, IT developed a two-page Executive Summary of the Regional Radio Effort being driven by the County of Riverside. Captain Randy Throne has taken this document to Washington in an effort to begin identifying potential funding sources for the regional project.

IT has recently become aware of Homeland Security funding being offered to manufacturers of radio equipment to implement interoperability solutions. The manufacturer has to partner with a public safety agency (ies) in order to qualify. IT will be contacting the manufacturers to obtain more details on this potential grant.

At the request of the Sheriff, IT will be meeting with Justice and Security Strategies to discuss how they may be able to assist in our efforts to obtain grant funding for the Regional Radio Project as well as for the current radio efforts.

Status Update 04/30/04:

IT and Sheriff presented a status on the Regional Radio effort and the Interoperability project to WRCOG on April 15, 2004. WRCOG gave their support to the effort and agreed to commit someone from their Board to participate in the Steering Committee.

Efforts continue to identify potential grant funding sources for these radio efforts. The working group will present an application for Homeland Security funding dedicated to Riverside County. Tentative date being scheduled for this presentation in mid-May 2004.

IT met with Justice and Security Strategies to discuss how they may be able to assist in our efforts to obtain grant funding for the Regional Radio Project as well as for the current radio efforts. Justice and Security Strategies felt, and IT agreed, that their role would be better suited in the strategic efforts for the regional radio efforts. Meeting did provide County with additional grant directions.

Status Update 08/31/04:

With the exception of the Fire Chiefs Association, all potential participants in the Regional Radio effort have identified a member to sit on the Steering Committee. Contact was made the last week of August in an effort to get this last member identified. The first meeting will be scheduled sometime in the Fall of 2004.

Efforts continue to identify potential grant funding sources for these radio efforts. The working group is still waiting on a new date for the presentation to the Riverside County "Committee of Five" in efforts to obtain some Homeland Security funds.

Status Update 11/30/04:

All participants in the Regional Radio effort have now identified a member to sit on the Steering Committee. The first meeting is being scheduled by the Executive Office for sometime in the December-January timeframe.

Efforts continue to identify potential grant funding sources for these radio efforts. The working group was informed in November that the Riverside County "Committee of Five" who oversees Homeland Security funds will not be holding further meetings this year and funds will be distributed per their original meeting last Spring 2004.

Status Update 12/31/04:

Efforts continued in scheduling the first Regional Radio Steering Committee meeting for January. As of December 30, 2004, no date has been set.

Radio Site Land Acquisition

IT is working with Facilities Management to aggressively pursue and acquire new radio sites through the County's Capital Improvement Program (CIP). In conjunction with the CIP program, we are working with the Executive Office to include the acquisition of the 70 sites we anticipate will be required in the future in the Development Impact Fee program. To address current and future radio coverage requirements, IT has also compiled a listing of all radio communication sites owned by government and non-profit agencies throughout Riverside County. It is our intention to work with these agencies to co-locate our radio equipment in as many of these sites as is feasible.

Status Update 12/31/03:

Facilities Management is evaluating the possibility of purchasing the leased sites. Due to the multiple tenants at the leased sites, purchase of the existing communication towers may be cost prohibitive. Further information will be provided when Facilities

Management completes the site analysis. IT has also requested Facilities Management to survey property in the Cabazon / Banning area for a potential tower site.

Status Update 01/31/04:

Facilities Management is in the process of soliciting firms that will perform the site evaluations pertaining to the leasing / purchasing of properties to be used for communications sites. Additionally, the awarded firm will be involved in reviewing leases with tenants of County-owned tower sites because the income received by these leases appears to be much lower than industry standards. It was also noted that what the County is paying for some of the leased sites may be higher than industry standards in some cases. Facilities Management is scheduled to select the firm by 2/9/04.

IT has also asked Facilities Management to survey three sites in the Cabazon/Banning area for a potential tower site. Facilities Management is scheduled to complete this review by end of February 2004.

Status 03/16/04:

Facilities Management is working on potential land leases for properties in the Cabazon and Idyllwild areas. In the Idyllwild area, Facilities Management has provided the site owners, Pine Cove Water District, with a draft lease but details still need to be worked out.

Status 04/30/04:

Any additional efforts toward procuring or leasing new sites are on hold until RCC Consulting completes their analysis.

Status 06/30/04:

Other than what has been reported, additional efforts toward procuring or leasing new sites are on hold until RCC Consulting completes their analysis.

11/30/04

Through the efforts of TLMA/Planning, RCIT is now included in Developer meetings (Charette) to assist in identifying and planning for new radio sites. The Executive Office is working with RCIT to identify the processes required to include radio site development funding as part of the Developer Fees paid for new construction. CIP has provided \$4 Million toward the development of radio sites in the current fiscal year.

In closing, the Information Technology Department would like to emphasize that officer safety is our number one concern / priority. To that end, the Executive Office, Sheriff's Department, Purchasing Department and the Information Technology Department are working closely to identify, review, and resolve officer safety issues associated with the 800MHz Radio system. An Action Plan has been executed and is reviewed weekly to address the Sheriff's immediate issues. RFPs are being developed to address both the short and long range issues and objectives, and should be out to bid in the next two months. Meetings with regional public safety and government organizations will continue in order to provide education on the issues and to strive for the formation of a regional public safety radio system. Draft ordinances are expected by the end of the year to address co-location with existing wireless communication company sites, and to address in-building coverage. Future public safety communication site land acquisition

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and equipment costs have been submitted for inclusion in the Development Impact Fee program, and lobbying efforts are being planned to increase the 911 surcharge rates to offset future public safety radio costs. The results from the various studies and the responses to the RFPs should provide us with an estimate of the anticipated costs associated with a short and long-term plan. We will provide the Board with this information as costs are validated.

12/31/03

Information Technology, the Sheriff's Department, Fire, Purchasing, Facilities Management and the Executive Office continue to meet on a weekly basis to review and update the Radio Action Plan. The Board of Supervisors has been added to the distribution list of the weekly updates.

01/31/04

As of January 1, 2004, CHA/Bio-Terrorism Division has joined the working group in representation of their radio and interoperability requirements.

08/31/04

It should be noted that TLMA/Planning has become a key partner in this effort and have been very helpful in incorporating the Public Safety Radio Network into appropriate processes.