

## **OUT WITH THE OLD AND IN WITH THE NEW**

### **A Report on the New Mendocino County Microwave System**

May 18, 2009

#### ***Summary***

On December 15, 2008, Mendocino County accomplished an ambitious project to replace its 20-year-old, failing and outdated analog microwave communications system. The County's size, mountainous terrain and the wide distribution of its communities posed many challenges.

In November 2007 the Board of Supervisors authorized staff to proceed with installation of a new, state-of-the-art microwave system. The primary user of microwave emergency communications has been the Sheriff's Department. The new system has sufficient capacity to serve all County agencies. One benefit is the opportunity for expanding the use of video conferencing. The system also is a potential source of revenue from contracts with private entities for use of the excess broadband capacity.

The new system cost more than \$4 million. The General Services Agency spearheaded efforts by several County departments to secure the necessary funding from a wide variety of sources.

The microwave project was completed between November 2007 and December 2008 despite delays encountered in obtaining permits from the California Coastal Commission and State Department of Forestry. Still to come, is additional upgrading of Sheriff's Department radio equipment that is slated for completion in January 2009. This will eliminate most communication "dead" spots for the Sheriff's Department. Once operational, radio dispatchers will have the ability to track patrol units using Global Positioning (GPS) technology. This feature is important to the safety of Sheriff's Department personnel in the field especially during emergency situations.

#### ***Methods***

The Grand Jury interviewed key personnel from County departments involved in the microwave project and reviewed relevant financial documents and maps. The amount of unfamiliar terminology encountered led to preparation of the Glossary provided at the end of this report.

## **Background**

The need to upgrade or replace the County microwave communication system was the subject of discussion and recommendation by the 2006-07 Grand Jury. Although the project was authorized in November 2007, inordinate delays occurred while obtaining two important permits. These delays caused the completion date to be projected forward to mid-December 2008. In order to track the progress of the project, the matter was referred to the 2008-09 Grand Jury for oversight. This report is the culmination of that effort.

## **Findings**

1. In 2006 the County of Mendocino's existing microwave system was determined to be obsolete with replacement parts difficult, if not impossible, to obtain. In some cases it became necessary to search e-Bay for parts. The existing number of towers did not adequately meet communication needs. (See Exhibit A)
2. Recognizing the public safety aspects of a failing communication system, the County Board of Supervisors authorized complete replacement of the microwave system on November 20, 2007.
3. On November 30, 2007, the County issued the initial purchase order authorizing the selected contractor to design, procure and install a new broadband microwave system.
4. The microwave project financing plan incorporated an innovative combination of funding sources including a Capital Lease/Purchase Contract through a private financial firm, City of Point Arena's Citizens Office for Public Service (COPS), a State Public Safety Interoperable Communications grant (PSIC), a Federal grant (HR-3093) obtained with the help of Congressman Thompson's office, the Gang of Five and asset forfeiture funds.<sup>1</sup>
5. According to the County General Services Agency, total project costs will be in excess of \$4 million budgeted from the following sources:

Capital Lease/Purchase (Koch Financial)	\$2,600,000
Gang of Five Funding	178,327
Gang of Five Supplemental	29,703
DA and Sheriff Asset Forfeiture	410,000
Sheriff State Funding (PSIC Grant	200,000
City of Point Arena (State COPS Grant)	215,000
House Resolution (HR-3093) Public Safety Communication <sup>2</sup>	491,033

6. In order to maximize radio communication coverage in remote areas, the Sheriff has allocated additional asset forfeiture funds in the amount of \$235,000 to update radio equipment.

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<sup>1</sup> Descriptions of the funding agencies are provided in the Glossary.

<sup>2</sup> HR-3093 funding is committed but had not been received as of January 2009.

7. The original microwave project completion date was to be October 1, 2008. Due to delays in obtaining required California Coastal Commission and Department of Forestry permits, this date needed to be extended. The system became operational on December 15, 2008.
8. The new microwave system can be upgraded easily to accommodate new or expanded uses.
9. All microwave towers have backup power supplies.
10. Exhibit B illustrates tower placement in the new system. Information can be re-routed (looped) along selected pathways in the event of damage to a tower.
11. Although the Sheriff's Department is the primary user of the new system, there is substantial unused broadband capacity that can be made available to other public entities such as fire and utility districts. Remaining surplus capacity might be available for lease to private communication companies.
12. The system has additional communication potential for uses such as video conferencing between coastal and inland public agencies.
13. The new system will be maintained by the Information Services Division of the General Services Agency. Personnel have received in-depth training by the supplier and installation contractor. The Capital Lease/Purchase Contract provides funding for training and five (5) years of maintenance costs.

### ***Recommendations***

The Grand Jury recommends that:

1. the County Executive Office and the Sheriff's Department continue efforts to obtain funds committed through Congressman Thompson's office under HR-3093. (Findings 4, 5)
2. the Board of Supervisors appoint an individual or committee to establish procedures to receive suggestions regarding upgrades to the system, to evaluate any new or expanded uses and to initiate planning and budgeting for such improvements that are found to have merit. (Findings 8, 11, 12)
3. the Board of Supervisors direct staff to develop a long-range plan for Board review and adoption to ensure maximum emergency communication coverage by expanding the rerouting (looping) concept to all microwave towers and communication links in the system. (Finding 10)
4. the Board of Supervisors direct staff to pursue income potential from utilization of unused capacity in the system by other public and private entities with the goal of offsetting the costs of ongoing maintenance and upgrades. (Finding 10)
5. the Board of Supervisors direct staff to begin a concerted effort to inform all public entities in the microwave system service area of the potential uses and benefits of the system. (Findings 8, 11, 12)

## ***Discussion***

Great creativity has been shown in identifying and acquiring funds for this project including contributions from the City of Point Arena, state grants, Homeland Security and asset forfeiture funds and an innovative Capital Lease/Purchase Contract negotiated through a private financial service.

The citizens of Mendocino County can be proud of the Board of Supervisors, County Executive Office, Sheriff's Office and the General Services Agency for bringing this project to a successful conclusion. Special recognition is given to the Director of the General Services Agency who spearheaded this project.

Disposal of obsolete, surplus equipment and parts from the old system will be in accordance with the Mendocino County Surplus Property Policy and Procedure.

## ***Glossary***

### ***Gang of Five***

Local officials authorized to distribute State funds from the Homeland Security Funding Authority, including the following:

- Mendocino County Sheriff's Department
- Chief of Police of the largest city in the county
- County Fire Chief (representative of the County Fire Chief Association)
- Fire Chief of the largest city in the Mendocino County
- County Public Health Representative

### ***COPS***

Citizens Office for Public Service (State grant funds available to cities from the Supplemental Law Enforcement Service Fund)

### ***PSIC***

Public Safety Interoperable Communications (State grant funds secured through the Sheriff's Department)

### ***GPS***

Global Positioning System

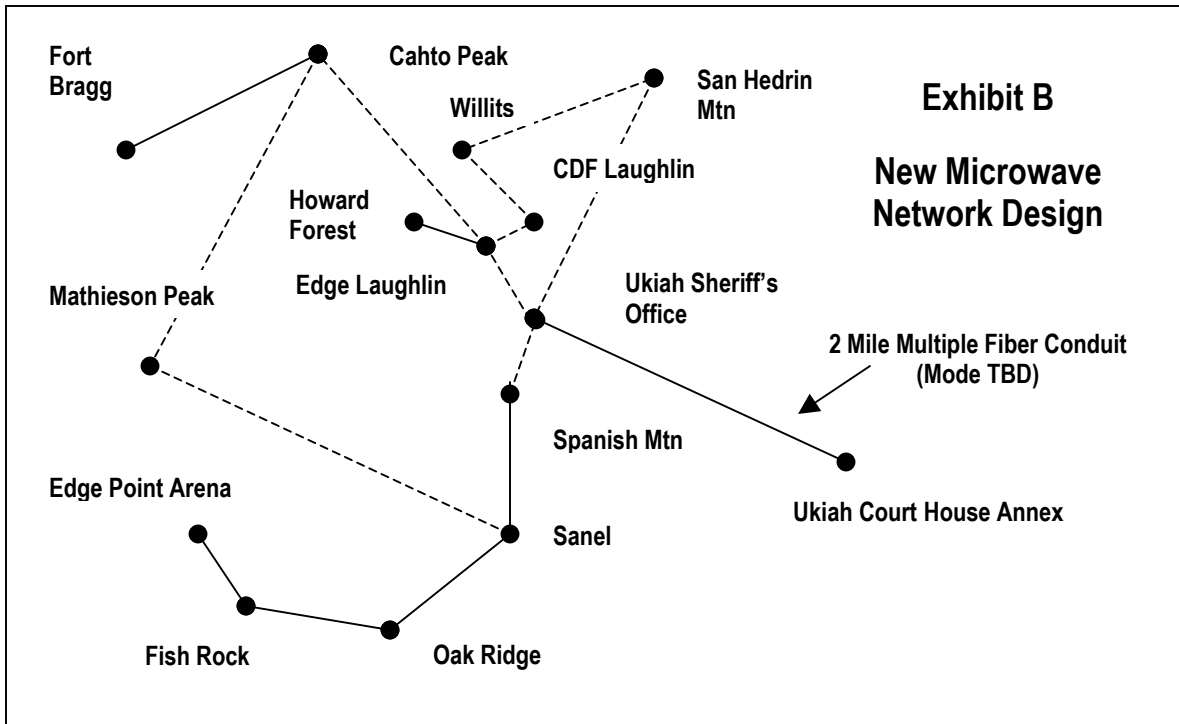
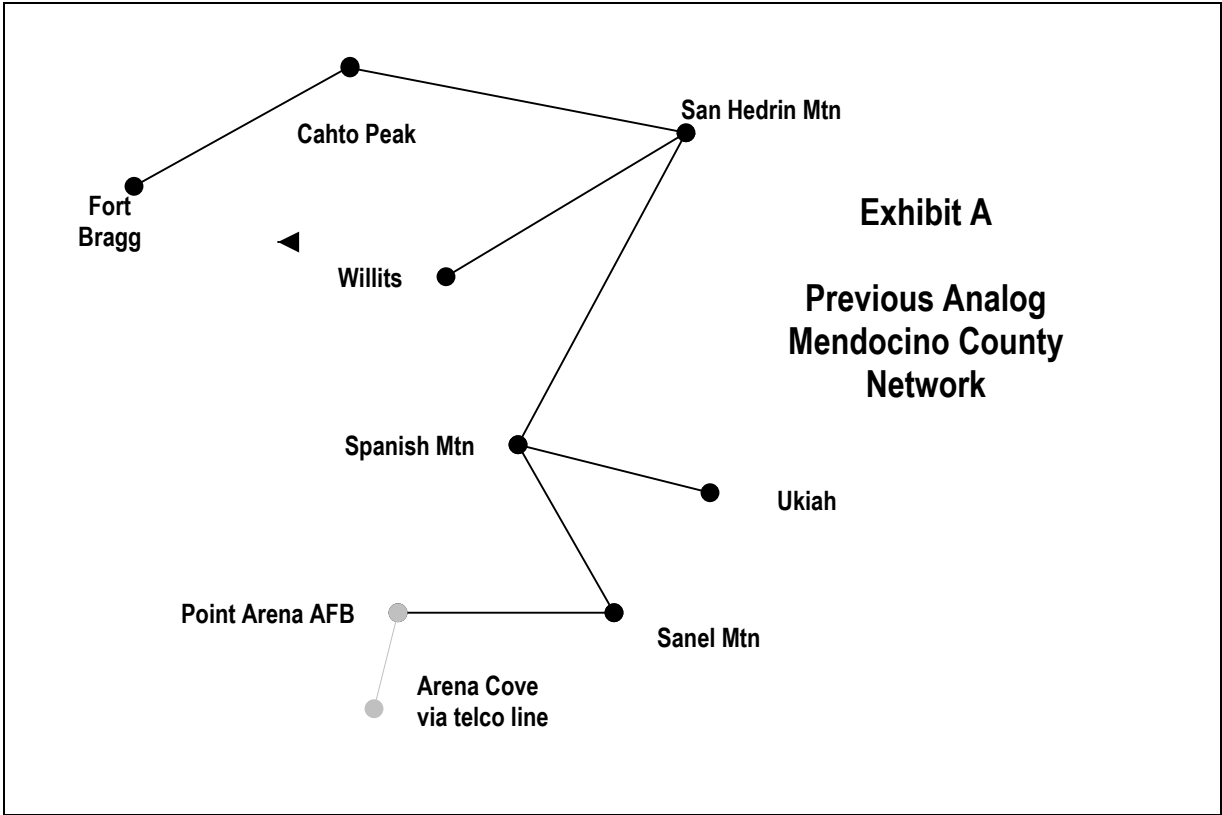
## ***Required Responses***

Mendocino County Board of Supervisors (All Findings; All Recommendations)

Mendocino County Chief Executive Officer (Findings 1-5, 7-8, 11-13; All Recommendations)

Mendocino County Sheriff (All Findings; All Recommendations)

Director, Mendocino County General Services Agency (All Findings; All Recommendations)



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