

## **Monterey County Operational Area Emergency Communications System (also known as the NGEN Radio System Project)**

### **Project Background and Information**

#### **Background:**

The Next Generation (NGEN) Radio System Project replaces the existing public safety and local government voice and data radio networks; which includes: portable and mobile radios, radio base station equipment, repeaters, and radio control systems with inter-operable narrowband and digital trunking technologies.

This project was initiated pursuant to a Federal Communications Commission (FCC) mandate that required the current technology adhere to narrowband technology and requirements by January 2013 per the *FCC's Report and Order*, FCC 03-34, adopted on February 25, 2003, and released on February 12, 2003 implementing Sections 309(j) and 337 of the Communications Act of 1934 as Amended. In order to meet the FCC deadline, an interim solution was applied but has resulted in coverage and capacity issues for users of the current legacy systems.

During the design of the project, a number of technological and value engineering options were considered to provide as much functionality as possible and minimize tradeoffs while keeping within a price ceiling of \$12,000,000 for the infrastructure portion of the project.

As a result of extensive discussions and negotiations, combined with a rigorous review of proposals, the group of current radio system users secured an agreement that not only satisfies the narrowband mandate but also provides for improved coverage throughout the County, increased capacity, increased functionality, and improved reliability.

Improvements include:

- Agencies will no longer need to “share channels”. While retaining as much of our existing radio infrastructure and VHF radio channels where possible, the new system uses newer digital trunked technology. Many specialized “talk groups” can be created, optimizing the use / reuse of the radio frequency spectrum.
- Reductions in interference from other agencies using nearby channels.
- Improved coverage in areas of the County that previously had poor to no radio coverage, particularly in North Monterey County, South County, and the Big Sur Coast.
- Encryption is available as an option on high-end user radios for law enforcement operations.
- Improvements in reliability including redundancy for critical system components.
- Improved ability to administer and monitor the system. The system will have alerting capability to notify support staff of problems even before users are aware of them.
- Interoperability across all law agencies, and across disciplines such as between law and fire, including the ability for Salinas PD to communicate with all system users.

MONTEREY COUNTY BOARD OF SUPERVISORS  
ATTACHMENT 1 TO NGEN PROJECT REPORT 06/XX/2015

**Timeline:**

- **2005:** Because of the narrowband mandate imposed by the FCC, Monterey County radio users, including fire, police, emergency medical, public works and local government began working together on a strategy to meet the narrow-band mandate.
- **April 2006:** A “Monterey County Operational Area Emergency Communications System Strategic Plan” was developed and accepted by the Board of Supervisors.
- **April 22, 2009:** The Board of Supervisors approved the Memorandum of Agreement Re Next Generation Radio System Joint Governance and Financing (NGEN Financing Agreement). This Agreement requires that the County collect each agency’s share of cost for soft costs and for annual debt service payments as estimated in the NGEN Financing Agreement.
- **June 16, 2009:** The County Contracts / Purchasing Officer released RFP # 10122. Responses to the RFP were received on September 16, 2009. A Next Generation Selection Panel representing all the participating agencies and composed of law enforcement, fire, technical, and city administrative officials was created. The selection panel reviewed the proposals and recommended award of an Agreement to Harris Corporation as the highest scoring proposer. After making that recommendation, a NGEN Negotiating Team reviewed all contract details to ensure that the highest value system is procured.
- **December 7, 2010:** The Board of Supervisors approved a Radio System Purchase Agreement with Harris Corporation as well as debt financing for the project.
- **September 26, 2012:** The Monterey County Planning Commission adopted Mitigated Negative Declarations and issued use permits for four wireless communications sites.
- **December 4, 2012:** The Board of Supervisors directed staff to prepare an Environmental Impact Report (EIR) on the proposed Combined Development Permit for the Huckleberry Hill Radio Site for NGEN.
- **June 1, 2012:** The Board of Supervisors approved Amendment 1 to the purchase agreement regarding subscriber units.
- **March 19, 2014:** The Board of Supervisors approved Amendment 2 to the purchase agreement that provided for phased installation, changes in site and radio frequency acquisition, extended the contract duration and added prolongation costs and stand-down provisions.
- **April 24, 2015:** RMA Plans notified to cease work on the Huckleberry Hill EIR in favor of alternate locations.
- **June 4, 2015:** Amendment 3 proposed to modify the agreement by modifying the project scope, design, and project schedule and upgrade system and component technologies.

There is a tenuous relationship between suitable radio site locations and the use of radio transmission and received frequencies at those locations. Some combinations do not

MONTEREY COUNTY BOARD OF SUPERVISORS  
ATTACHMENT 1 TO NGEN PROJECT REPORT 06/XX/2015

work or will not provide the coverage required. An aggressive search for suitable radio site locations and the acquisition of available radio frequency resources has resulted in significant system redesign efforts. Radio Site and Radio Frequency Plan changes with Amendment 3:

- Original Frequency Plan
  - 11 – VHF simulcast channels
  - 3 – 700MHz multisite channels
- Amendment 3 Frequency Plan Changes
  - 7- VHF simulcast channels
  - 8 – 700MHz simulcast channels
  - 5 (Bryant) / 4 (King City) – VHF multicast frequencies channels
  - 4 (Williams Hill) – 700 MHz multicast frequency channels
- Amendment 3 Radio Site Changes (original to alternate locations)
  - Marina Airport to DMDC and Marina Coast Water
  - Huckleberry Hill to La Mesa Housing and Pebble Beach Corp Yard
  - Lewis Road Snodgrass to Lewis Road SVSWA Landfill
  - Williams Hill to Williams Hill and King City Ag

**Stakeholders:**

County Departments impacted by the project include: Sheriff, Probation, District Attorney, Parks, Public Works, Health (Animal Control), and Emergency Medical Services (EMS). In addition to affected County departments, the stakeholders involved in the project include the City of Carmel, City of Del Rey Oaks, City of Gonzales, City of Greenfield, City of King, City of Marina, City of Monterey, City of Pacific Grove, City of Salinas, City of Sand City, City of Seaside, City of Soledad, California University Monterey Bay, Big Sur Volunteer Fire Brigade, Greenfield Fire Protection District, North County Fire Protection District, Monterey County Regional Fire Protection District, Spreckels Volunteer Fire Company, and Monterey Regional Airport District.

The collaborative effort is led by the Emergency Communications Department and advised by the Emergency Communications Users Advisory Council (ECUAC). The ECUAC represents the agencies that receive regional 9-1-1 and emergency dispatch services. This body has been designated as the governing body for the NGEN project and for future operation and maintenance of the system, with the concurrence of the Emergency Communications Policy Advisory Council (ECPAC). The County is represented on ECUAC by: Sheriff Steve Bernal, EMS Agency Director Mike Petrie, and, as non-voting members, Emergency Communications Director, William Harry, and Assistant County Administrative Officer, Nicholas Chiulos. Information Technology executive managers also participate actively in ECUAC meetings. The County is represented on the ECPAC by Supervisors Fernando Armenta and Simon Salinas.

**Cost:**

MONTEREY COUNTY BOARD OF SUPERVISORS  
ATTACHMENT 1 TO NGEN PROJECT REPORT 06/XX/2015

The initial strategic plan estimated the total project expense at \$24 Million divided into two parts; infrastructure and subscriber radio equipment. The NGEN Financing Agreement addresses approximately one half of the total project cost for the design build of the shared infrastructure and soft costs of project management.

Cost sharing for this system is based on the number of mobile and portable radios each agency expects to deploy on the new system. The County's pro rata share is approximately 33%. This figure is adjusted annually as agencies increase or decrease the number of radios that they use on the system. The County has contributed \$410,844 in up-front costs and has paid its share of debt service for four years. A summary of project costs is below:

- Project Infrastructure includes
  - Trunked VHF System – a digital replacement that covers most of the populated regions of the County
  - 700 MHz Sites to improve in-building coverage
  - Control Stations for all radio systems
  - Backhaul (Microwave and Fiber-optic Systems)
  - Site Development for all radio sites in Trunked VHF, 700 MHz, and Microwave
  - Vehicular Repeaters to improve coverage in rural areas
  - Replacement of Dispatch Consoles
  - Network Hardening and Backup (Information Technology and Security)
  - All associated services including vendor project management
- An “Analog Overlay” conventional VHF radio system to be installed by ITD that will provide additional coverage, particularly in rural areas
- Soft Costs including Project Management, Grant Writing, Grant Matches, ITD Staffing Costs (in addition to costs for Analog Overlay), and Selection Team Costs
- Project Contingency for site issues and unanticipated project needs.
- Sales Tax

Grants have been awarded to project participants who have reduced the amount needed to be financed. The various grant terms have affected participants differently. As a result of distribution of these grants, the County's share of costs has been reduced by approximately \$453,435.

In 2010, as a follow up to the approval of the Radio System Purchase Agreement, the Board of Supervisors approved the County Debt Manager to execute agreements to secure debt financing for the project.

The County was responsible for 100% of the cost of subscriber radios for County Departments. Funds for the subscriber radios for County departments were sourced from Capital Project Funds. Most required radios have been purchased and are operating. A few remain to be installed.

MONTEREY COUNTY BOARD OF SUPERVISORS  
ATTACHMENT 1 TO NGEN PROJECT REPORT 06/XX/2015

The Emergency Communications Department is managing the NGEN Radio Project Capital Project Fund which has been established by the Auditor-Controller. Funds were deposited by all agencies for the first and second year of project costs including project management costs, grant matches, and special counsel. Grant funds and proceeds from financing will also be deposited to this account. The Department of Emergency Communications invoices agencies annually for their share of debt service and deposits funds for annual payments which are made by the Auditor Controller's Office.

**Sources of Projects Funds for Infrastructure:**

Amendment #2 project extension costs increased the project cap to \$13,950,000. Funding sources are detailed below. An Agreement RE 2007 COPS Technology Grant between Monterey County and City of Salinas was executed for use of those grant funds and is an attachment to the NGEN Financing Agreement. Agreements have also been executed with other agencies that were awarded grant funds that were applied to the project.

▪ Soft Costs (Paid in Advance)	\$ 1,000,000
▪ Salinas COPS Grant (Federal Share)	\$ 2,165,250
▪ Seaside AFG Grant (Federal Share)	\$ 221,500
▪ Amount to be financed (See Attachments 2 and 3)	\$ 8,518,629
▪ Agencies paying in advance (Spreckels Volunteer Fire Company and Monterey County EMS Agency)	\$ 94,621
▪ Costs of Project Extension	\$ 1,950,000
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▪ TOTAL	\$13,950,000

**Source of NGEN System Operations and Maintenance Funds:**

In addition to sharing project infrastructure costs, user agencies also contribute funds towards the operations and maintenance of the system. These funds are collected by the Department of Emergency Communications on a yearly basis. Per ECUAC Policy Action, each system subscriber pays \$30 per month per radio to support O & M requirements. By agreement any surplus funds are deposited in the NGEN reserve accounts and may be used as determined by the ECUAC. The ECUAC approved using surplus NGEN O&M

- FY 13-14 O&M Surplus \$ 864,617
  - Of this amount, \$864,617 will be used for fund Amendment #3 Costs.
- FY 14-15 O&M Surplus Estimate \$ 876,875
  - Of this amount, \$130,400 will be used for fund Amendment #3 Costs.