



2010
MONTEREY COUNTY
GRAND JURY
FINAL REPORT

JANUARY 10, 2011

January 10, 2011

The Honorable Adrienne M. Grover
Presiding Judge, Superior Court of California
County of Monterey
240 Church Street
Salinas, CA 93901

Dear Judge Grover:

Looking back at this time last year I could not have imagined what was in store for me and my fellow members of the 2010 Monterey County Civil Grand Jury. I believe I speak for all of us when I say that none of us had any idea of the amount of time we would spend researching, discussing, and trying to reach agreement on the issues we present to you today. I truly believe our random selection was an excellent example of the cross section and diversity of our County. We often could not reach consensus on the issues we felt were worthy of attention on behalf of the residents of Monterey County.

We comprised ourselves into the following committees: Health and Environment, Government and Administration, Criminal Justice, Education, Communications, and an Ad Hoc Committee. In addition to our committee work, an “on-line” library has been created for future members of the Civil Grand Jury. This will enable them to easily access reference materials from wherever they happen to be working.

Our Jury received approximately 40 complaints, with more than half being received from inmates housed in facilities within the County. We also received several complaints from citizens within our cities. None of these complaints were within our jurisdiction. The issues we investigated are those we felt impacted our community as well those where we felt our efforts may make a difference in the future.

During our term, we also made the mandated site visits as outlined in Penal Code Section 919 (b). We chose only to inspect these facilities as the 2009 Civil Grand Jury did an extremely thorough investigation. We found many of the recommendations made by last year’s Jury were adopted; otherwise there was little change in the operations of the facilities.

From this experience each of us has learned more about our county government and how it functions. We have met many wonderful and dedicated employees and elected officials. We will walk away from this year as better citizens of Monterey County. Many of us have learned to take direction, to take a position of leadership, and how to manage our time better than we thought possible. Our listening skills, communications skills, attention to detail, and even our writing skills have all become better from our experience on the Civil Grand Jury.

It has been my sincere honor and privilege to have been selected and served as the Foreperson for the 2010 Monterey County Civil Grand Jury. I would like to thank each and every member with whom I worked and those who made this report possible. Their dedication to the task and the integrity with which they performed these duties is to be commended. In addition I would like to acknowledge the court staff for their assistance this past year.

Respectfully Yours,

A handwritten signature in cursive script that reads "Lisa L. Hyman". The signature is written in black ink and is positioned below the closing of the letter.

Lisa L. Hyman
Foreperson

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MEMBERS OF THE
2010 MONTEREY COUNTY CIVIL GRAND JURY



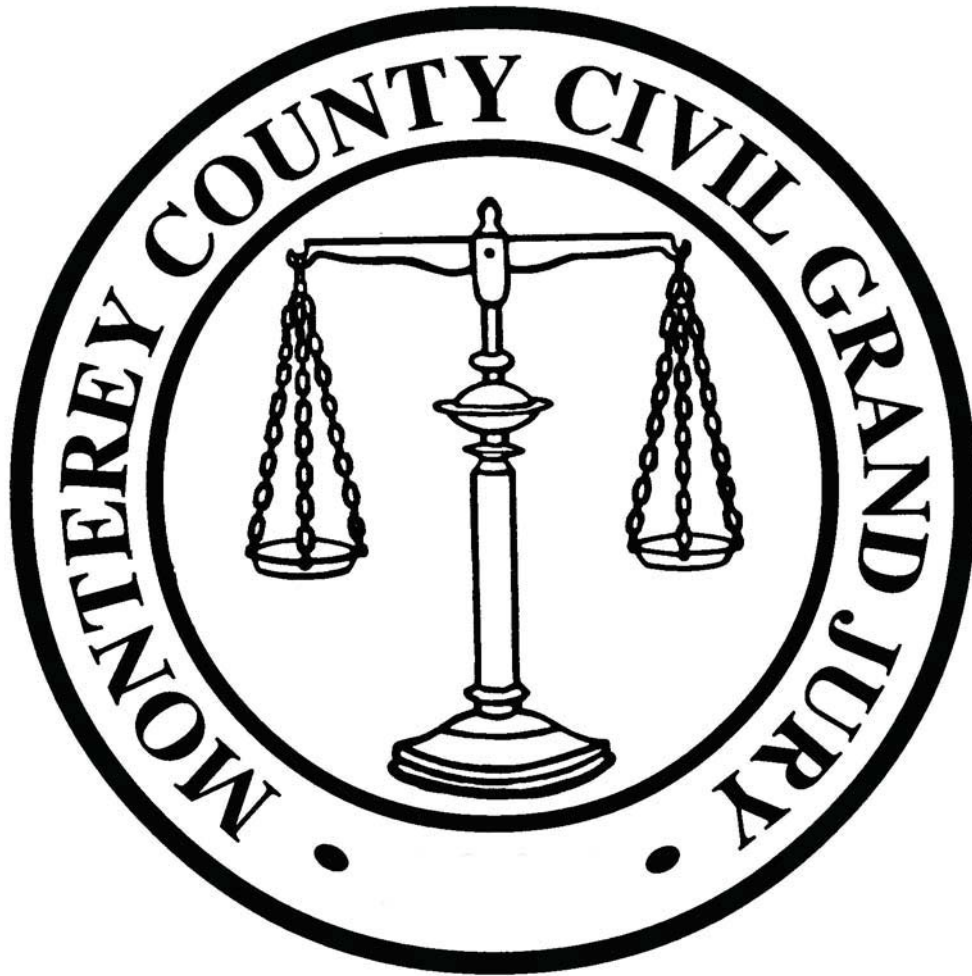
Grand Jury 2010: Left to Right: *David Willoughby, Michael Goldberg, Keith Windsor, Wade Einkauf, Lisa Hyman, Bill Wojtkowski, Jeraline Singh, Helen Casey, Stephen Millich, Kristi Ivie, Lucia Kaplan, Marcia Smullen, Heidi Zamzow, Not Pictured: Dewitt Gifford*

- | | |
|----------------------------------|------------------|
| Lisa Hyman, Foreperson | Pebble Beach |
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| Lucia Kaplan, Secretary | Royal Oaks |
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| Marcia Smullen | Big Sur |
| David Willoughby | Monterey |
| Keith Windsor | Corral de Tierra |
| Bill Wojtkowski | Monterey |

2010 Monterey County Civil Grand Jury

Mission Statement

The mission of the Monterey County Civil Grand Jury is to conduct independent inquiries and to respond to citizen complaints concerning any government agency, municipality, or special district within Monterey County. The reports of the Grand Jury will provide a clear picture of the functioning of the organizations. Recommendations for improvement will be made, and commendations will be offered when effectiveness, efficiency, or excellence is found.



CIVIL GRAND JURY MISSION AND RESPONSE REQUIREMENTS

The primary mission of a civil grand jury in the State of California is to examine county and city governments, as well as districts and other offices, in order to ensure that the responsibilities of these entities are conducted lawfully and efficiently. The civil grand jury is also responsible for recommending measures for improving the functioning and accountability of these organizations, which are intended to serve the public interest.

Jury Selection

Each year, citizens of the county who apply for civil grand jury service are invited to an orientation session for an overview of the process. The court then interviews them, and approximately 40 names are forwarded for inclusion in the annual civil grand jury lottery. During the lottery, 19 panel members are selected, with the remaining to serve as alternates. Those selected to serve are sworn in and instructed in their charge by the presiding judge. Civil grand jurors take an oath of confidentiality regarding any civil grand jury matters for the rest of their lives.

Investigations

Each civil grand jury sets its own rules of procedures and creates committees to investigate and create reports. California Penal Code Section 925 states, *“The grand jury shall investigate and report on the operations, accounts, and records of the officers, departments, or functions of the county including those operations, accounts, and records of any special legislative district or other district in the county created pursuant to state law for which the officers of the county are serving in ex officio capacity as officers of the districts.”* Additionally, Section 919 prescribes that, *“The grand jury shall inquire into the condition and management of the public prisons within the county,”* and that, *“The grand jury shall inquire into willful or corrupt misconduct in office of public officers of every description within the county.”*

The public may submit directly to the Monterey County Civil Grand Jury complaints requesting that it investigate issues of concern regarding public agencies or officials in Monterey County. The public may request complaint forms by contacting the office of the Monterey County Civil Grand Jury at (831) 775-5400, ext. 3014, or through the Grand Jury’s website address at www.monterey.courts.ca.gov/GrandJury. Grand juries conduct proceedings behind closed doors, as required by law, primarily for the protection of people who file complaints or who testify during investigations. All who appear as witnesses or communicate in writing with a grand jury are protected by strict rules of confidentiality, for which violators are subject to legal sanction.

Reports

Section 933(a) of California Penal Code declares: *“Each grand jury shall submit . . . a final report of its findings and recommendations that pertain to county government matters during the fiscal or calendar year.”* The civil grand jury summarizes its findings and makes recommendations in a public report, completed at the end of its yearlong term. Each report is presented to the appropriate department or agency.

Section 933(b) declares: *“One copy of each final report, together with the responses thereto, found to be in compliance with this title shall be placed on file with the clerk of the court and remain on file in the office of the clerk. The clerk shall immediately forward a true copy of the report and the responses to the State Archivist who shall retain that report and all responses in perpetuity.”*

Each report is distributed to:

Public officials

Libraries

The news media

Any entity that is the subject of any of the reports

The public may also view each year’s final report through the Monterey County Civil Grand Jury’s website at www.monterey.courts.ca.gov/GrandJury.

Content of Responses

Section 933.05 of the California Penal Code declares: *“(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:*

(1) The respondent agrees with the finding.

(2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

(1) The recommendation has been implemented, with a summary regarding the implemented action.

(2) The recommendation has not yet been implemented, but will be implemented in the future, with a timeframe for implementation.

(3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This timeframe shall not exceed six months from the date of publication of the grand jury report.

(4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.”

Timeline of Responses

Section 933(c) declares:

“No later than 90 days after the grand jury submits a final report on the operations of any public agency subject to its reviewing authority, the governing body of the public agency shall comment to the presiding judge of the superior court on the findings and recommendations pertaining to matters under the control of the governing body, and every elected county officer or agency head for which the grand jury has responsibility pursuant to Section 914.1 shall comment within 60 days to the presiding judge of the superior court, with an information copy sent to the board of supervisors, on the findings and recommendations pertaining to matters under the control of that county officer or agency head and any agency or agencies which that officer or agency head supervises or controls.... All of these comments and reports shall forthwith be submitted to the presiding judge of the superior court who impaneled the grand jury.”

Address for Delivery of Responses

The Honorable Adrienne Grover
Presiding Judge of the Superior Court
County of Monterey
240 Church Street
Salinas, CA 93901

PUBLIC EMPLOYEES' RETIREMENT SYSTEM IN MONTEREY COUNTY – CALPERS

SUMMARY

PURPOSE OF THE INVESTIGATION

The 2010 Monterey County Civil Grand Jury investigated the feasibility of maintaining the retirement system for public employees that is currently used by the County of Monterey and the twelve cities within Monterey County, i.e., the California Public Employees' Retirement System (CalPERS). The Civil Grand Jury also investigated the viability of alternatives to continued participation by local agencies in CalPERS. This investigation was conducted in an attempt to suggest how local agencies can maintain a sustainable retirement system that is beneficial and fair to employees while continuing to provide a desirable and affordable level of public service.

SUMMARY OF FINDINGS

The CalPERS retirement system is a defined benefit system, not a defined contribution system. As it operates locally it is funded by the taxpayers of agencies which participate in the system. CalPERS, many newspapers, syndicated columnists, and various governmental and private agencies have characterized the present public retirement system as unaffordable. The Civil Grand Jury concurs that the present system is unsustainable because the benefits are too costly.

The public retirement system is broken and needs fixing rather than replacing. Simple legislative enactments at the state level would go a long way to fixing the problems, but such statutory amendments applicable to local agencies may be unlikely at this time. Accordingly, desirable changes affecting Monterey County agencies need to occur at the local level if they are to be effective in the near term.

SUMMARY OF RECOMMENDATIONS

All 13 local agencies should remain in the CalPERS system. However, respective city councils and the Board of Supervisors should seek a legislative sponsor for, and support adoption of, amendments to the Public Employees' Retirement Law (Government Code Sections 20000 *et seq.*) to limit CalPERS basic benefits to 2% @ 55 for new Safety (i.e., law enforcement and fire) employees with a 90% of salary retirement cap, 2% @ 60 for new Miscellaneous (i.e., non-law enforcement and fire) employees, and a 36-month benefits base for both categories. Concurrently, each agency, following the guidance of its legal counsel, should adopt a two-tier system that limits the retirement benefits accorded to new employees as recommended above.

In addition, all future Memoranda of Understanding (MOUs) with employee bargaining units should provide that the agency reserves the right to reopen negotiations during the

term of the agreement if it determines that dire economic circumstances warrant it doing so. Further, all future MOUs should require each new employee to pay his or her fair share of CalPERS basic benefits and pay the entire costs of any optional CalPERS benefits. Lastly, any increase in retirement benefits should not occur without a vote of the electorate.

BACKGROUND FOR THE INVESTIGATION

CalPERS is a retirement system for public employees in the state of California. It has 1.6 million members who in the aggregate work for over 2,500 public agencies. The system classifies employees into one of two categories: (1) “Safety”- consisting of law enforcement personnel and firefighters, and (2) “Miscellaneous”- consisting of all others. In Monterey County, all twelve cities and the County of Monterey contractually participate in the CalPERS system for both categories. Usually, both the agency and its employees contribute to funding the system. In 1999, the California Legislature enacted Senate Bill 400 (signed into law by the governor and enrolled as Chapter 555 of the Statutes of 1999) allowing an increase in retirement benefits for public employees if the employing agencies chose to do so.

Many agencies subsequently increased retirement benefits for Safety employees to 3% at 50 and for Miscellaneous employees at a lesser but increased rate in order to stay competitive with other agencies. CalPERS retirement benefits are funded 63% from the return on its investments mostly in the stock market, 22% from the CalPERS member agencies’ taxpayers, and 15% from agency employees. In 1999, at a time when CalPERS was experiencing exceptionally strong investment portfolio performance, the profits from the CalPERS investments were available to be used to fund increased benefits contracted for by the agencies without any requirement that the agencies increase contributions to the system to cover the increase in benefits. This situation radically changed in 2001 when the “dot com” bubble burst and the stock market “tanked.” Benefits which were once super-funded at 138% became only 80% funded. Member agencies were then required to make up the 20% deficit through an increase in contribution rates paid by the agencies. Rather than requiring that the full deficit be funded immediately, CalPERS allowed the agencies to “smooth” the increases over a 30-year period beginning in 2010, thereby avoiding an immediate drastic jump in contribution rates. Nevertheless, pension costs today remain 7% unfunded, and such costs are not “sustainable” according to CalPERS’ chief actuary.

INVESTIGATIVE METHODOLOGY

- Interviewed various public employees and members of the public
- Communicated with CalPERS staff orally and in writing
- Reviewed newspaper articles in the Los Angeles Times, the Monterey Herald, the Carmel Pine Cone, the Pacific Grove Hometown Bulletin, and the San Francisco Chronicle

- Reviewed the following documents:
 - CalPERS- Optional Benefit Listing
 - CalPERS- Actuarial Valuations
 - CalPERS- Rate Table
 - CalPERS- PERSPECTIVE- Fall 2010
 - CalPERS- *Employer Rate Smoothing Policies* by Ron Seeling, Chief Actuary
 - CalPERS- miscellaneous documents
 - Monterey Bay Area Managers' Group, *Pension Reform Draft*, February 24, 2010
 - Various MOUs and ordinances
 - City council agenda packets from Pacific Grove and Vallejo
 - Responses to Civil Grand Jury questionnaires sent to local agencies
 - Summary of Testimony of Girard Miller before the Little Hoover Commission
 - Employee Benefits and City Budgets: "*Can the Planets Align?*" presented by Jeffrey C. Chang, Esq. at the League of California Cities Spring Conference in Santa Barbara, May 2010
 - McCauley Public-Employee Pension Reform Act Initiative (as amended)
 - Pacific Grove Pension Reform Initiative
 - How California's Public Pension System Broke (and How to Fix it)* by Adam B. Summers
 - League of California Cities documents:
 - A Framework for Public Pension Reform
 - Pension Reform in California, City Manager's Department, November 1, 2009
 - San Diego Division, Proposal for Regional Pension Standard, June 29, 2009
 - Ventura County Grand Jury Report 2008-2009 – *Ventura County Pension, "An Uncontrollable Cost"*
 - Local agency budgets
 - "Sanity in the offing?" *The Economist Magazine*, p.35, June 26, 2010

DISCUSSION

DEFINED BENEFIT vs. DEFINED CONTRIBUTION

The CalPERS plan is a defined benefit plan. It provides a defined monthly benefit amount to each retiree. The amount payable is determined by multiplying (1) the years of service rendered by the employee by (2) the highest salary earned by the employee (averaged over either a 36-month or 12-month period, depending on the CalPERS contract), further multiplied by (3) the applicable rate under the retirement plan contract in force. For example, an employee with 25 years of service whose highest salary was \$50,000 and who retired at age 55 in a 2% @ 55 plan would receive a retirement pay of \$25,000 per year.

In contrast, a defined contribution plan is one in which the employer contributes a fixed amount and the returns are based on contribution and investment earnings. These plans put the risk largely on the employee to amass and manage assets to ensure an adequate pension after retirement. Defined contribution plans, such those established under

Internal Revenue Code Sections 457 and 401(k), have not performed well in recent years due to turmoil in the markets. Most private business pension plans, if they exist at all, are defined contribution plans.

The defined benefit form of plan should be retained for several reasons. First, such plans have proven to be more efficient than defined contribution plans for delivering fixed pension benefits. Defined benefit plans may offer lower fees and cover disability retirements and death benefits that are not included in defined contribution plans. Further, according to the League of California Cities, defined benefit plans offer a hedge against inflation and manage longevity risk better than defined contribution plans by pooling larger numbers of people.

Moreover, the League states that moving from a defined benefit plan to a defined contribution plan may entail substantial startup costs and may force a change in asset allocations which would likely produce lower investment results in the defined benefit plan which remains for existing employees. Hence, it may likely cost the taxpayers more for many years to place future government employees into a defined contribution system.

In addition, there is a compelling financial reason for not buying one's way out of CalPERS at this time. State law requires that all new employees in a CalPERS agency be enrolled in CalPERS. An agency can buy its way out of CalPERS only after a twelve-month waiting period and after the completion of a CalPERS actuarial study showing how much is needed to fund the pensions of the retirees and employees already in the system. The City of Pacific Grove commissioned such a study in May 2010. It showed that 30 to 34 million dollars were needed to buy the city's way out of CalPERS. This covered 276 Miscellaneous active and retired members, 159 Safety active and retired members, and was in addition to the 19 million dollars applied to the deficit funded by a bond issue previously authorized by voters of Pacific Grove. For a city experiencing difficult financial times, the prospect of amassing some 50 million dollars to exit the CalPERS system is not a practical one. The Civil Grand Jury is not aware of any CalPERS actuarial studies prepared for other local agencies but does not expect that results would be substantially different.

BINDING ARBITRATION

When a local agency and employee union cannot agree, the matter is submitted to binding arbitration if required by contract or law. It is then decided by an arbitrator whose decision is final. In such situations the authority of the governing board of the agency has been delegated to a third party. It was an adverse decision in binding arbitration on a wage issue concerning Safety employees that prompted the City of Vallejo to file for Chapter 9 bankruptcy protection. Vallejo voters subsequently repealed binding arbitration and placed the ultimate authority in labor matters back in the hands of its elected officials.

VOTER APPROVAL OF INCREASE IN RETIREMENT BENEFITS

Because the burden of paying for the benefits accorded to public employees ultimately rests on the shoulders of the local citizenry, it may be fitting to have all proposed increases in public employee retirement benefits subject to ratification by the voters. If such a requirement had been in place in the 1990s, the rush to spend the surplus CalPERS balance may have been avoided, thereby obviating the present need to reform CalPERS.

FORMER EMPLOYEES

Former employees are sometimes re-employed on a part-time basis (not to exceed 960 hours per year, the CalPERS maximum) and continue to receive retirement benefits. This type of “double dipping,” drawing a salary and a pension concurrently from the same agency, is subject to abuse.

SPIKING

Some employees may be allowed to convert accumulated sick leave and/or vacation leave or other benefits to cash during their last year of employment in order to inflate or “spike” their salaries, thereby increasing their retirement payments. Currently, there is a bill before the legislature, SB 1425, to prevent “spiking.”

GOLDEN HANDSHAKE

Government Code Section 20903 allows an agency to add up to two years of unearned retirement credit (a “Golden Handshake”) to induce an employee to retire early. This is a hidden cost.

SHARED CALPERS CONTRIBUTION

In the CalPERS system, a Safety employee’s contribution rate (i.e., the share of the employee’s salary that goes to fund the employee’s retirement benefit) is normally 9%. The employing agency normally pays another 9%. The contribution rates for a Miscellaneous employee are typically 7% and 7% respectively. Due to poor CalPERS investment performance, the normal combined contribution of 18% of salary for Safety has gone as high as 26% for police and 36% for firefighters. Miscellaneous employee rates have gone as high as 29.8% of salary in one local agency and almost 17% in another. Despite these rate increases, some employers have, as a recruitment inducement, agreed to pay the employer’s and employee’s share. Local municipalities and the county can ill afford that kind of expense in today’s environment.

OPTIONAL BENEFITS

The Civil Grand Jury notes that CalPERS has issued a 41-page booklet [PERS – CON – 40 (REV1/09)] entitled “Optional Benefits Listing.” Among these benefits are increased disability and Cost of Living Adjustment (COLA) options, survivor allowance,

supplemental income 457 plan, and others. Payment for these optional benefits is subject to collective bargaining.

SICK LEAVE AND VACATION LEAVE

Unlimited accumulation of sick leave and vacation leave can result in an employee actually retiring while still on the job if he or she judiciously accumulated them and uses them in the last year of employment. Accordingly, a cap on both can prevent the “retirement while on the job” problem.

CALPERS FOR NEW EMPLOYEES

A survey done by the Monterey Bay Area Managers’ Group in October 2009 showed that most cities within Monterey County are at 3% @ 50 for Safety employees, 2% @ 55 for Miscellaneous employees, use the highest 12 months of salary rather than highest 36 months as a base, and pay all or a portion of employee costs for both classifications. Three of the cities ask their employees to cover all costs. The study also showed that 81% of the agencies statewide were at 3% @ 50 for Safety while the most popular formula for Miscellaneous employees statewide was 2% @ 55.

If all new employees were hired at the pre-existing 2% @ 55 for Safety employees with a 90% of salary retirement cap and 2% @ 60 for Miscellaneous employees with a 36-month highest salary as a base, a rollback to pre-1999 standards would occur. The retirement ages of 55 and 60 for Safety and Miscellaneous employees, respectively, are feasible because of the longer life expectancy existing today. Eventually, as a greater portion of the workforce is comprised of employees with second-tier retirement benefits, the savings should become substantial. The proposed retirement rollback would be limited to new employees because the courts have stated that when persons enter public employment they have a vested right in the retirement plan in existence at the time of hire.

The 3% @ 50 formula would allow a Safety employee who makes \$100,000 per year, is 50 years old, and has 25 years of service to retire with an annual retirement benefit of \$75,000. If the second-tier retirement benefit discussed in the previous paragraph is implemented, a new Safety employee who makes \$100,000 per year, is 55 years old at the time of his or her retirement, and has put in 25 years of service can retire with a yearly retirement benefit of \$50,000. The public saves an additional \$25,000 per employee per year, receives an additional five years of public service per employee, and the employee still receives a substantial pension.

MOU RESERVATION OF RIGHTS

By reserving in its MOU with labor union or employee groups the right to reopen negotiations concerning salary and benefits during the term of the agreement (providing that no earned benefit shall be lost), an agency can preserve its ability to deal with its fiscal concerns in the event of unforeseen dire economic circumstances.

FINDINGS OF THE INVESTIGATION

- F1.1.** The CalPERS retirement system is worth retaining.
- F1.2.** Those local agencies that have binding arbitration have ceded their collective bargaining authority and responsibility to an individual arbitrator.
- F1.3.** A vote of the electorate before granting increased retirement benefits has not been implemented as a check on overspending.
- F1.4.** Some agencies may allow retired employees to come back to work part time at the same agency and receive retirement and a salary, provided they don't work more than 960 hours per year, the maximum allowed by CalPERS.
- F1.5.** Some agencies may have practices that allow employees to increase or "spike" their base year salaries by converting unused sick leave or vacation leave to salary during their last year of employment.
- F1.6.** The practice of offering an employee up to two years unearned credit for retirement in exchange for taking an early retirement ("a Golden Handshake"), as authorized by Section 20903 of the Government Code, may be subject to abuse.
- F1.7.** Some employees do not pay an appropriate CalPERS retirement share.
- F1.8.** Some employees may pay for all optional CalPERS benefits. Some employees may pay for some or a portion of some of these benefits, and some may pay nothing for optional benefits received.
- F1.9.** Some agencies have no caps on the maximum amount of time one can accumulate in sick leave or vacation leave.
- F1.10.** The California Legislature could enact changes that would limit new employees to 2% @ 55 for Safety with a 90% of salary retirement cap and 2% @ 60 for Miscellaneous in the CalPERS system with a 36-month salary base for each.
- F1.11.** CalPERS could be made more affordable to the agencies if new employees were provided, in lieu of benefits accorded to existing employees, a second-tier of benefits of 2% @ 55 for Safety employees with a 90% of salary retirement cap and 2% @ 60 for Miscellaneous employees, each with a 36-month salary base.

F1.12. Some MOUs may not allow the reopening of negotiations to make prospective changes to salary and benefits in the event of unforeseen dire economic circumstances.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

R1.1. Continue to participate in the CalPERS retirement system. [Related Finding: F1.1]

R1.2. Abolish binding arbitration in labor matters. [Related Finding: F1.2]

R1.3. Require a vote of the electorate as a prerequisite to increase retirement benefits and thereby limit spending. [Related Finding: F1.3]

R1.4. Do not allow those who have retired from the agency to be re-employed by the same agency on a part-time basis. [Related Finding: F1.4]

R1.5. Prevent “spiking” the base salary. [Related Finding: F1.5]

R1.6. Do not offer a “Golden Handshake.” [Related Finding: F1.6]

R1.7. Require employees to pay the CalPERS employee contribution rate. [Related Finding: F1.7]

R1.8. Require employees to pay for all optional CalPERS benefits. [Related Finding: F1.8]

R1.9. Place a cap on the maximum amount of sick leave and vacation leave an employee can accumulate. [Related Finding: F1.9]

R1.10. Urge passage of legislation that new hires are limited to 2% @ 60 for Miscellaneous employees, 2% @ 55 for Safety employees with a 90% of salary retirement cap, and a 36-month salary base for each. [Related Finding: F1.10]

R1.11. Contract for a CalPERS retirement benefit for newly hired employees of 2% @ 55 for Safety employees with a 90% of salary cap and 2% @ 60 for Miscellaneous employees with a 36-month salary base for each. [Related Finding: F1.11]

R1.12. In all future MOUs, reserve the right to reopen negotiations in the event of unforeseen dire economic circumstances to make changes to salary and benefits with no reduction to salary and/or benefits already earned. [Related Finding: F1.12]

REQUIRED RESPONSES

City Council of Carmel-by-the-Sea:

All Findings and Recommendations

City Council of Del Rey Oaks:

All Findings and Recommendation

City Council of Gonzales:

All Findings and Recommendations

City Council of Greenfield:

All Findings and Recommendations

City Council of King City:

All Findings and Recommendations

City Council of Marina:

All Findings and Recommendations

City Council of Monterey:

All Findings and Recommendations

City Council of Pacific Grove:

All Findings and Recommendations

City Council of Salinas:

All Findings and Recommendations

City Council of Sand City:

All Findings and Recommendations

City Council of Seaside:

All Findings and Recommendations

City Council of Soledad:

All Findings and Recommendations

Monterey County Board of Supervisors:

All Findings and Recommendations

Responses must comply with the following:

CALIFORNIA PENAL CODE SECTION 933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

TRAUMA CARE AND EMERGENCY MEDICAL EVACUATION IN MONTEREY COUNTY



SUMMARY

PURPOSE OF THE INVESTIGATION

The 2010 Monterey County Civil Grand Jury conducted an investigation of the Monterey County Trauma Care System Plan and the use of Helicopter Emergency Medical Evacuation Services (HEMES) based on concerns regarding both the frequency of unnecessary helicopter transport and the high cost of helicopter transport to out-of-county trauma centers. The operation of the California Shock Trauma Air Rescue (CALSTAR) service based at the Salinas Municipal Airport was reviewed, as were the services for management of trauma which are presently available in Monterey County.

SUMMARY OF FINDINGS

Currently, there is no designated trauma center in Monterey County, and therefore all patients who qualify as Major Trauma Victims (MTVs) are transported to an out-of-county trauma center by HEMES. Nationally there has been a high over-triage rate (25-50%).¹ In determining whether a patient qualifies as an MTV, medical personnel follow published guidelines (called MAP guidelines) which delineate how to quickly identify an MTV and determine if he or she needs transport to a trauma center. Current data indicates that the over-triage rate for Monterey County MTVs is much lower than the national average. The Civil Grand Jury found, however, that Monterey County has not regularly collected, collated, and analyzed other essential data. Patient information such as

¹ "Validation of a Prehospital Trauma Triage Tool: a 10-year Perspective." J Trauma. Dec. 2008; 65(6): 1253-7. Purtill MA, Benedict K, Hernandez-Boussard T, Brundage SI, Kritayakirana K, Sherck JP, Garland A, Spain DA. Department of Surgery, Stanford University, Stanford, California 94305, USA.

admitting diagnoses, patient outcomes, transport times, etc., is needed to determine if the current trauma plan is effective, and collecting that information is an essential first step in implementing a trauma center in Monterey County. It is widely accepted that trauma centers and the use of HEMES are “life-savers” for victims of severe, multi-system traumas. Relying on HEMES transport is an effective method to get MTVs to appropriate care as quickly as possible, but both HEMES and trauma center care can be extremely costly, and obtaining reimbursement is difficult. For example, CALSTAR, a nonprofit organization, writes off 60% of its charges due to lack of reimbursement. This meets CALSTAR’s mission to provide charitable care to under-privileged patients but makes it difficult to maintain its operations without passing on costs to patients who have insurance or financial resources. Monterey County does not pay for HEMES, even for those patients who do not have the resources to pay. There is no Monterey County funding available for trauma care to help reimburse revenue loss to any HEMES or out-of-county trauma center. Monterey County and CALSTAR entered into an agreement in the early 1990s which allows CALSTAR to operate in the county. This agreement needs to be updated. The Civil Grand Jury found that it would benefit the community to have one or two designated trauma centers within the county. Preliminary behind-the-scenes discussions and preparations at local hospitals to support such an effort have already commenced.

SUMMARY OF RECOMMENDATIONS

A local trauma center is long overdue. The process for achieving a trauma center designation is well defined, but the first steps must be taken if there is to be any hope of reaching that goal. The Emergency Medical Services Agency (EMSA) and the County Board of Supervisors must step forward to initiate this process. First, the EMSA must establish a firm policy to collect, analyze, and report on all pertinent trauma data. Second, data collection is a vital element in achieving the next step - updating the Monterey County Trauma Care System Plan. Third, the EMSA and the County Board of Supervisors must appoint a Monterey County Trauma Director to lead the way. Fourth, the County Board of Supervisors and the EMSA should evaluate possible funding sources to help reduce the burden of HEMES transport for those who lack insurance or otherwise cannot pay for their own care. Fifth and finally, Monterey County would be better served if the EMSA and County Board of Supervisors developed and entered into an updated Memorandum of Understanding to ensure the ongoing presence of CALSTAR as the primary HEMES provider.

GLOSSARY

CALSTAR	California Shock Trauma Air Rescue
EMS	Emergency Medical Services
EMSA	Emergency Medical Services Agency
HEMES	Helicopter Emergency Medical Evacuation Services
MAP	Mechanism, Anatomy, and Physiology - a tool to determine injury severity
MTV	Major Trauma Victim
Triage	A systematic approach to assessing the severity of a patient’s injuries

BACKGROUND FOR THE INVESTIGATION

People receive better care and have better outcomes from trauma if there is a dedicated trauma center located near where they are injured. In the absence of a local trauma center as a primary receiving facility, we are dependent on the present system which requires transport to an out-of-county trauma center, and we therefore need to have a functioning high quality system of transport. Conditions permitting, MTVs are immediately airlifted from the accident scene to the closest trauma center in either the San Jose or Fresno area. In most circumstances, CALSTAR is the closest HEMES asset and is the primary provider of this service within the county. According to the 2008 EMSA Annual Report, there were 401 occurrences which required HEMES. There were also 216 patients who qualified as MTVs but could not be airlifted due to bad weather, mechanical problems, or lack of adequate staffing. CALSTAR indicates that these statistics improved in 2009. CALSTAR compiles extensive data and conducts a Quality Assurance review for each mission. All pertinent data are made available to the County of Monterey, but there is no collective trauma data/report for Monterey County covering 2009.

CALSTAR is a nonprofit community benefit corporation 501(c)(3) air ambulance company. It has been providing HEMES service in Monterey County for the past 17 years and has had a flight operations center in Salinas since 2002. CALSTAR operates state-of-the-art aircraft with pilots highly qualified to fly day, night, night vision goggles, and poor weather operations (IFR²). Each air rescue crew consists of one pilot and two trauma nurses. In 2009, CALSTAR completed 293 transports from Monterey County to trauma centers in San Jose or Fresno.

INVESTIGATIVE METHODOLOGY

- Interviewed CALSTAR administration and personnel and toured site at Salinas Airport
- Interviewed Monterey County Interim EMSA Director
- Interviewed Monterey County EMSA Medical Director
- Interviewed Monterey County Director of Health
- Interviewed Monterey County Auditor-Controller and deputies
- Interviewed member of Monterey County Board of Supervisors
- Toured Salinas Valley Memorial Hospital and interviewed administration and staff
- Toured Natividad Medical Center and interviewed administration and staff
- Toured Monterey County Emergency Dispatch Center and interviewed Director
- Reviewed Monterey County EMSA Trauma Care Plan (February 2007)
- Reviewed Monterey County EMSA MAP Triage Criteria
- Reviewed Monterey County EMSA 2008 Annual Report
- Reviewed Macias Consulting Group, *Operational Review of the County of Monterey EMS Agency*, May, 18, 2010

² Instrument Flight Rules: That portion of the Federal Aviation (14 CFR 91) specifying the procedures to be used by aircraft during flight in Instrument Meteorological Conditions.

- Reviewed Executive Summary of Santa Cruz EMS CQI Meeting, Annual Trauma Review, August, 2006, *Trauma in Santa Cruz County – 2005*
- Brown, M. (October 2009). “Helicopter ambulances-are they way too expensive.” *The Pine Cone*.
- (September 2009). “Bid possible for California. Helicopter ambulance.” *Monterey County Herald*.

DISCUSSION

The Civil Grand Jury was concerned both with the cost of HEMES and with a perception that patients were unnecessarily being air transported to an out-of-county trauma center. That Monterey County has no trauma center is an ongoing concern which has not yet been sufficiently addressed.

OVER-TRIAGE

Over-triage occurs when a patient is triaged in the field as an MTV but once evaluated at the hospital is subsequently found to have experienced only minor trauma. An “acceptable” over-triage rate is between 25% and 50%. This rate may seem high, but not all potentially life-threatening traumatic injuries can be adequately assessed at the scene. These hidden injuries require more sophisticated testing (CT³, MRI⁴) to rule out serious damage. The EMSA has recently acquired data from Santa Clara County indicating that patients received from Monterey County are over-triaged at only about 18%. The data received was limited to Santa Clara County and does not reflect unavailable data from other out-of-county trauma centers. Data such as this is essential in evaluating the effectiveness of the County Trauma Care System Plan and the accuracy of the Emergency Medical Service (EMS) providers in executing the MAP triage algorithm (see Appendix A.) The MAP triage algorithm is designed to guide the EMS provider in identifying the MTV. Even with perfect execution of MAP, there will be a percentage of patients over-triaged and transported to a trauma center. A relatively high over-triage rate is widely accepted in most communities and is a trade-off in providing the best care possible when trying to save a patient’s life. Under-triage could have dire consequences for patients by failing to properly identify potentially life-threatening injuries. Monterey County’s over-triage rate is low in comparison to the national average and indicates that the EMS providers at the scene are closely following the MAP triage algorithm. The perception that patients are being transferred to out-of-county trauma center needlessly is not valid.

NEED FOR A MONTEREY COUNTY TRAUMA CENTER

Currently, Monterey County has no designated trauma center. The closest trauma centers are located in San Jose to the north, Fresno to the east, and Ventura to the south.

³CT: Computed Tomography

⁴MRI: Magnetic Resonance Imaging

Monterey County contains 3,325 square miles. The largest population center is in the northwestern part of the county. Salinas is the largest city and is located inland, approximately ten miles east of the Monterey Bay. The Monterey Peninsula is another large urban population area, situated along the coast. Monterey County also encompasses large amounts of agricultural land and rural territory.⁵ One of the greatest challenges to providing trauma care here is that the two large urban populations are geographically split, without convenient freeway access between them. Another logistical issue is the significant amount of rural land on which farming and recreational trauma accidents often occur and where access is limited. According to the US Census Bureau, in 2009 Monterey County's population was 410,370. The California Emergency Medical Services Authority recommends one Level I or Level II trauma center per 350,000 people in the service area. Of course, there are other factors in determining whether a trauma center is warranted. However, Monterey County's population size and the county's geographical configuration certainly makes it a candidate for such consideration.

According to the 2008 Monterey County EMSA Annual Report, the most common type of major trauma was motor vehicle crashes (39.2%). Assaults, including gunshot wounds and stabbings, comprised 17.7% of trauma victims. Salinas, the largest city, correspondingly had the largest number of trauma occurrences in the county, followed by the cities of the Monterey Peninsula. The majority of major trauma cases occurred in the county's largest urban areas, where access to a local trauma center could provide the most expedient care.

Currently, the Monterey County Trauma Care System Plan states, *Major trauma victims within 45 minutes by air of the Level One or Level Two trauma centers will be transported directly to that facility.* Even if Monterey County designates a local trauma center, HEMES will continue to be needed to transport MTVs within the county, as well as be needed for inter-facility transfers for MTVs requiring a higher level of care at a Level I or Level II out-of-county trauma center.

DESIGNATING A LOCAL TRAUMA CENTER

The community would be best served by a Level II trauma center to care for its MTVs. A Level II trauma center provides the highest level of trauma care by requiring the continuous availability of a trauma team and trauma surgeons/specialists. A Level II trauma center meets the same criteria as a Level I trauma center except that a Level I center is part of a teaching, research institution. A Level III trauma center provides initial assessment and stabilization of traumatic injuries, provides surgical intervention, and works in conjunction with the closest Level I or II trauma center in case the MTV must be transported to receive a higher level of care.⁶ Although less desirable, a Level III trauma center could serve the county as a launching pad in moving toward an eventual Level II designation. Whatever trauma center level is implemented in the county, it must

⁵ Monterey County Emergency Medical Services Agency, Trauma Care System Plan, 2007

⁶ Nor-Cal EMS Policy & Procedure Manual TRAUMA CARE SYSTEM MODULE, 102A – Level II Trauma Center Requirements, 102B – Level III Requirements

provide the same high quality of care that would be obtained in an out-of-county trauma center, such as Santa Clara Valley Medical Center or Regional Medical Center in San Jose. An analysis of selected local hospitals revealed that relatively few upgrades would be needed to meet the requirements for a local trauma center designation. The challenges may be in obtaining a full complement of required surgeons to staff the trauma center on a continuous basis. The first step in meeting this challenge is for the EMSA and County Board of Supervisors to appoint a County Trauma Director. There is much hard work ahead to determine which level of trauma center would be best for Monterey County at this time. The initial steps in designating any trauma center are to collect all pertinent trauma data for the county. Once the hard facts are established, an assessment can be made to determine the level of the proposed trauma center and which facility, or facilities, best meet the qualifications. The Civil Grand Jury found that the EMSA does not consistently perform trauma data collection, analysis, and reporting. In part, this may be due to inadequate staffing to effectively conduct this function. Comprehensive data collection is essential to updating the Monterey County Trauma Care System Plan, which is another key to initiating the trauma center process.

HIGH COST OF HEMES

Highly trained and experienced crews, state-of-the-art equipment such as aircraft that can perform in marginal weather, night vision goggles, fuel, insurance, and maintaining continuous capability on immediate standby is expensive. Just like a hospital emergency room, a HEMES provider cannot refuse emergency transport to a trauma patient who cannot pay. Currently, HEMES providers in the county collect only about 40% to 50% of what is actually billed, resulting in a 50% to 60% write-off. Last year, 20% of all HEMES transports were for patients suffering from penetrating (gunshot or stab wound) type trauma. These are resource-intensive incidents that often result in little or no reimbursement. Other significant groups of patients are involved in agricultural and industrial accidents and are covered by Workers Compensation insurance policies which reimburse the HEMES providers only a small fraction of the actual cost of transport. Motor vehicle crashes account for nearly 40% of trauma transport and generate the greatest levels of reimbursement. According to CALSTAR, medical insurance plans generally pay about 80% of the bill, while Medicare pays only 33 cents on the dollar, and MediCal pays even less than that. In all aspects of healthcare today, some of the unpaid costs are shifted to those who can pay. Monterey County does not subsidize or reimburse any funds to HEMES providers in the County. Therefore, by default, those patients with insurance or financial resources to pay carry the brunt of the costs. One HEMES provider said that, with these hard economic times, there is noticeable deterioration in the payer mix in its area of operation. With increasing costs and decreasing reimbursements, Monterey County residents cannot be sure that they will continue to receive the same high-quality level of service as they currently receive today.

CALSTAR

A review of the Salinas CALSTAR operation, including facilities, equipment, personnel, and records of last year's operation, revealed a well-managed, well-trained, and well-

equipped organization. Based on the information provided, the Civil Grand Jury concluded that CALSTAR has maintained a 97% availability rate over the last year. In 2009, CALSTAR completed 293 missions, and 131 missions were cancelled by emergency responders after takeoff. In that year, CALSTAR was unable to accept a mission only 15 times due to maintenance or crew issues and 33 times due to bad weather. CALSTAR has flown over 50,000 accident-free flight hours and transported over 40,000 critically injured or ill patients to California hospitals since it began operation in 1984. In addition to its primary mission, CALSTAR has participated in, at no cost to the County, search and rescue operations to locate lost or missing persons. At no cost, CALSTAR has provided an airborne alert status for SWAT/tactical operations at the request of local enforcement commanders. The company maintains an outreach program and provides EMS training for no, or very little, cost to local EMS professionals. CALSTAR flight nurses participate in Ceasefire and other local programs to encourage gang members to leave gang life and integrate into society. CALSTAR provides a low-cost membership program for those who feel they may be at high-risk for HEMES. The revenue from membership fees helps defray CALSTAR's high non-reimbursement rate. Sensitive to the very high cost of HEMES transport, CALSTAR has a financial hardship policy for patients who are not insured or do not have the financial means to pay.

As noted above, Monterey County does not subsidize any HEMES. The companies operating within the county rely primarily on revenue from patient billing to cover their expenses. While it is prudent for the EMSA to ensure that the cost of HEMES flights remains fair and reasonable, great care must be taken in evaluating any operator's standards or cost-cutting measures in the operation of emergency air transportation which could result in unacceptable risks to the patients, crews, and personnel on the ground. CALSTAR currently operates under an outdated agreement made with Monterey County in the early 1990s that is long overdue for review. The EMSA and County Board of Supervisors should update that agreement by creating a Memorandum of Understanding which designates CALSTAR as the county's primary HEMES provider and the first to be called for HEMES transport. CALSTAR would continue to provide outstanding HEMES to the county while meeting Monterey County's standards and requirements for safety and a high level of patient care.

FINDINGS OF THE INVESTIGATION

- F2.1.** Monterey County does not have a trauma center, and all MTVs are transported out-of-county for trauma care.
- F2.2.** Monterey County emergency responders are doing an excellent job of following the MAP triage algorithm, and the county's over-triage rate is low when compared to the national average.
- F2.3.** In the past, the EMSA has not adequately collected, analyzed, or reported trauma data on a regular basis. This is due, in part, to insufficient staff assigned to this task.

- F2.4.** HEMES is an appropriate method to transport MTVs to out-of-county trauma centers in the absence of a local trauma center. Monterey County will still have a need for HEMES even with designation of a local trauma center, due to the county's unique geography and population distribution.
- F2.5.** Due to a high non-reimbursement rate and the fact that Monterey County does not subsidize HEMES, an unfair burden is placed on those MTVs with the financial ability to pay.
- F2.6.** CALSTAR is doing a high-quality job of trauma transport. The agreement between CALSTAR and Monterey County is out of date.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

- R2.1.** The EMSA and the County Board of Supervisors need to initiate steps toward designation of a Level II or Level III county-based trauma center by appointing a County Trauma Director and updating the Trauma Care System Plan. [Related Finding: F2.1]
- R2.2.** The EMSA must continue to monitor and assess data pertinent to the execution of the MAP guidelines at the scene to assure that guidelines are appropriately followed. [Related Finding: F2.2]
- R2.3.** The EMSA must fund additional staff and develop an ongoing process to collect, analyze, and report all pertinent trauma data to assess the effectiveness of the County Trauma Care System Plan. [Related Finding: F2.3]
- R2.4.** The EMSA must continue to incorporate HEMES into the County Trauma Care System Plan, even after the development of a local trauma center. [Related Finding: F2.4]
- R2.5.** The EMSA and the County Board of Supervisors should consider alternative forms of funding/reimbursement to help cover the cost of transporting MTVs who cannot pay for HEMES. [Related Finding: F2.5]
- R2.6.** The EMSA and the County Board of Supervisors should develop an updated Memorandum of Understanding to secure CALSTAR's services as the primary HEMES provider in the county. [Related Finding: F2.6]

REQUIRED RESPONSES

Monterey County Board of Supervisors:

All Findings and Recommendations

REQUESTED RESPONSES

California Shock Trauma Air Rescue:

Findings: F2.4, F2.5, F2.6

Recommendations: R2.4, R2.5, R2.6

Responses must comply with the following:

CALIFORNIA PENAL CODE SECTION 933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

APPENDIX A
Monterey County EMS Agency
MAP Triage Criteria
Monterey County EMS Policies and Protocols (February 2009)

Policy: Field Care – Patient Management

I. PURPOSE

The MAP Triage algorithm is designed to guide the EMS provider in identifying the Major Trauma Patient. The algorithm will assist in determining the hospital destination for the trauma patient. It uses three criteria, in combination, to help determine the potential for severity of injury and whether it is likely that the patient would benefit from trauma center level of service.

II. DEFINITIONS

- A. Major Trauma Patient. This is a patient who meets two or more of the three MAP criteria as described below.
- B. Mechanism (M). This component evaluates the mechanism of injury.
- C. Anatomic (A). This component evaluates the area of the body injured.
- D. Physiologic (P). This component evaluates the patient's physiologic response to the trauma event.
- E. In-extremis. Patients with the great potential to die even with aggressive treatment and rapid transport.

III. POLICY

- A. All patients who have sustained trauma will be evaluated by using the MAP triage criteria. This evaluation with the MAP triage criteria does not replace an appropriate physical exam.
- B. Any patient that meets the definition of a Major Trauma Patient shall be transported directly to the nearest Trauma Center.
- C. In situations where air transport is not available (weather, fog, helicopter not available, etc.) the patient will be transported by ground ambulance to the nearest Emergency Department with early base contact.
- D. Trauma patients that meet only one MAP criterion are not defined as a Major Trauma Patient. These patients shall be transported to the closest Emergency Department.
- E. Consideration should be given to making Base Station contact to obtain Base Station Physician guidance when the paramedic on scene believes that a trauma patient that meets only one MAP criterion would benefit from transport to a trauma center.
- F. Patients determined to be "in-extremis" shall be transported to the closest Emergency Department.

G. Mechanism

1. High Impact

- a. Ejection of the patient from a motor vehicle or similar event.
- b. Roll-over without confirmed seat belt use.
- c. Fatality in the same vehicle.
- d. Intrusion of the vehicle into the passenger space.
- e. Extrication time greater than 20 minutes from arrival at scene.
- f. Pedestrian hit by vehicle traveling 20 mph or more.
- g. Motorcycle crash at 20 mph or more.
- h. Other significant blunt force trauma.

2. Penetrating Trauma

- a. Gunshot wound.
- b. Stab wound.
- c. Other penetrating trauma.

3. Fall Greater Than 15 Feet

4. Traumatic Amputation Above the Wrist or Ankle

5. Significant Burn

H. Anatomic

1. Penetrating Trauma to the Head and Trunk

2. Blunt Trauma With Any of The Following:

- a. Exquisite chest wall tenderness.
- b. Paradoxical chest movement.
- c. Decreased or absent breath sounds.
- d. Abdominal tenderness, distention, or rigidity.
- e. Evidence of deformed or unstable pelvis.
- f. Blood at urethral meatus.
- g. Extensive head or facial trauma.

3. Paralysis, Decreased Movement, or Sensory Loss

4. Second or Third Degree Burns with any of the following:

- a. 20% or greater body surface area burn in the adult.
- b. 10% or greater body surface area burn in the child or infant.
- c. Burns to face, head or neck.
- d. Burn injury to the airway.
- e. Burns to hands, feet or perineum.

5. Multiple Long Bone Fractures

I. Physiologic

1. Glasgow Coma Scale Score of 13 or Less
2. Signs of Inadequate Perfusion
 - a. Poor skin signs.
 - b. Decreased mental status.
 - c. Rapid, weak, or absent radial pulse

J. Respiratory Distress

MEETING THE EDUCATIONAL NEEDS OF STUDENTS IN MONTEREY PENINSULA UNIFIED SCHOOL DISTRICT

SUMMARY

The 2010 Monterey County Civil Grand Jury investigated how loss of funding due to budget cuts and government mandated programs has affected the classroom, teachers, and particularly those in need of additional help in learning.

GLOSSARY

EHCA	Education for all Handicapped Children Act
IDEA	Individuals with Disabilities Education Act
IEP	Individual Educational Plan
ILP	Individual Learning Plan
MCOE	Monterey County Office of Education
MPUSD	Monterey Peninsula Unified School District
SELPA	Special Education Local Plan Area
SPED	Special Education
SST	Student Success Team or Student Study Team

BACKGROUND FOR THE INVESTIGATION

In the 1950s and 1960s, many children with disabilities were denied their right to a free public education. This led to a groundswell of parent-advocacy groups for children with disabilities, resulting in the federal government creating a Bureau of Education for the Handicapped in 1965, a precursor to more comprehensive legislation.

On November 29, 1975, Congress passed Public Law 94-142, titled The Education for All Handicapped Children Act (EHCA). After approval of the regulations, this Act became effective in 1977. It became the legislative foundation for all federal funding of special education.

Over the years, EHCA has been revised and expanded. A comprehensive review of EHCA took place in 1990, and it was renamed Individuals with Disabilities Education Act (IDEA). In 1992, the American for Disabilities Act (ADA) broadened the scope of special education, as did the No Child Left Behind Act in 2001. Today IDEA results in special education opportunities for more than 6.5 million children annually.

IDEA is a federal law and, in exchange for federal funding, states must adopt laws to implement IDEA. These state laws can provide children with more, but not fewer, protections than IDEA does. In California, the State Office of Education ensures that all school districts comply with federal and state laws regarding special education. Special Education Local Plan Areas (SELPA) were created by state legislation to assist in ensuring that districts and county offices of education provide a full continuum of

programs and services to students with disabilities. Every school district and county office of education belongs to a SELPA. Monterey County SELPA is a single-county, multiple-district SELPA and is housed at the Monterey County Office of Education (MCOE) as a separate organization.

Monterey Peninsula Unified School District (MPUSD) employs about 380 persons to provide services for special education. This is the largest department at MPUSD, and it provides services to approximately 9% of the 12,000 children enrolled. Despite the tremendous amount of resources directed toward this small population, there is some concern that these programs are not being administered effectively. The Civil Grand Jury focused on how MPUSD is integrating the broad range of individual learning needs in the classrooms.

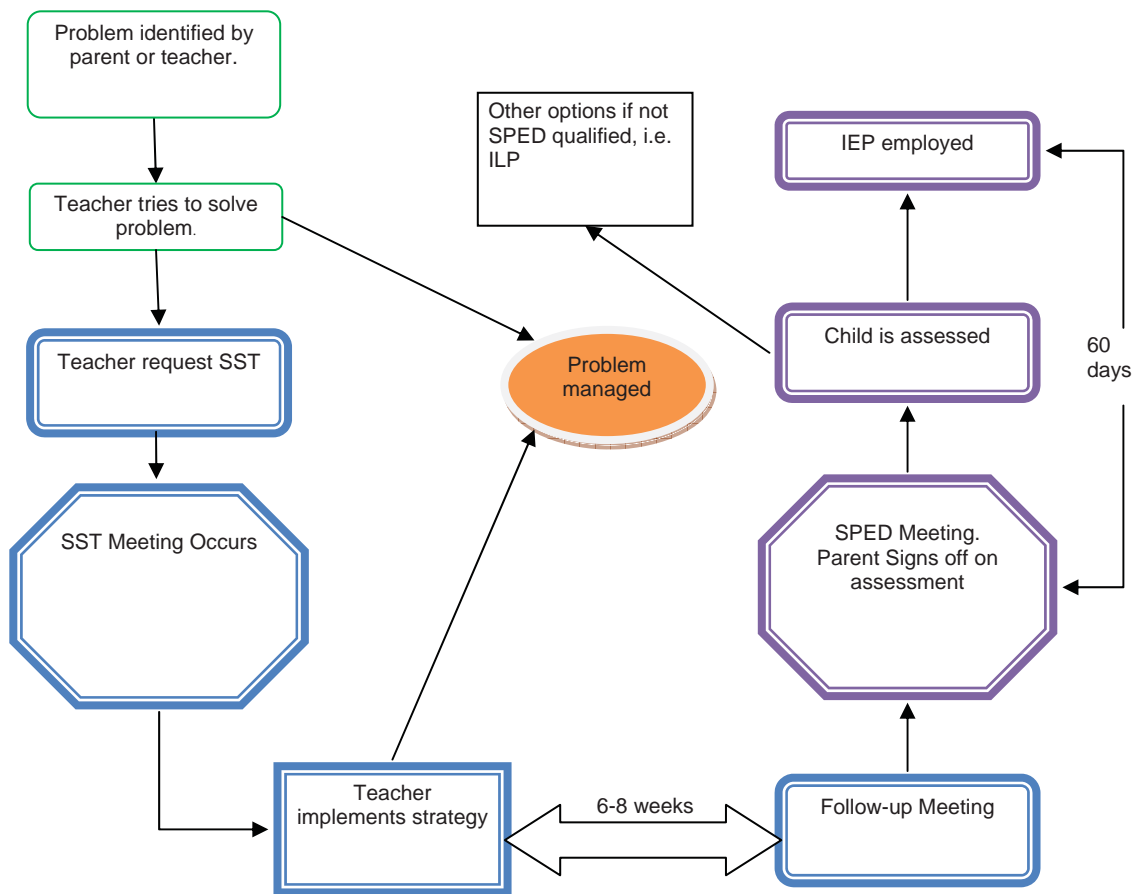
INVESTIGATIVE METHODOLOGY

- Interviewed Superintendent of MCOE
- Interviewed Assistant Superintendents of MCOE
- Interviewed Superintendent of MPUSD
- Interviewed Assistant Superintendent of MPUSD
- Interviewed Executive Director of Monterey County SELPA
- Interviewed teachers in various schools and districts
- Interviewed parents
- Internet research

DISCUSSION

Teaching has become more difficult over the years, partly as a result of budget cuts and increased class sizes. Not all children have the ability to learn easily in a classroom setting. Federal law (IDEA) requires that each child with special educational needs be educated to the maximum extent possible with children who are non-handicapped. Children should be educated in more restrictive (different) settings only when less restrictive alternatives are not appropriate. This makes the classroom a challenge for teachers each school year as they need to assess the individual needs of their students.

The Civil Grand Jury looked at the process of how all children who need additional help are identified. This was not limited to children with special needs. It included children who have trouble pronouncing a certain letter, are slow to learn to read, or have trouble focusing on the lesson being taught. The time that it takes to progress through the following steps is a major problem.



Step 1. The specific need is identified by a teacher or parent.

Step 2. The teacher tries to resolve the problem. This is done by using the teacher’s abilities obtained from ongoing training, both voluntarily and required, from federal, state, county, and district sources.

Step 3. If the issue still exists, the teacher can ask for additional help through an SST (Student Success Team or Student Study Team) meeting. This team is made up of school administrator (e.g., principal), the referring teacher, an additional teacher, parent(s), and possibly a resource teacher (special education specialist).

Step 4. At the SST meeting, the teacher presents the positive aspects of the student as well as the areas of need. The teacher discusses what steps have been taken to help manage the problem. The team then comes up with a strategy to help the teacher.

Step 5. The teacher implements the strategy over a period of six to eight weeks.

Step 6. A follow up SST meeting occurs. The teacher reports back on the effect of the strategy, the positive results, the need to continue it, or the need for another strategy, or additional help.

Step 5 and 6 can occur as many times as needed until the problem is resolved or it is determined that there is a need to move on to Step 7. The previous steps are all part of the general education process. Step 7 starts the SPED process.

Step 7 Another meeting occurs with the goal of having the student assessed to determine if he or she qualifies as a special needs student. At the meeting are the referring teacher, administrator, resource teacher, parent(s). Depending on the circumstance, there may be additional staff present (e.g., school psychologist, speech therapist).

Step 8. Once the parent consents, the student is assessed to see if he or she qualifies for services available for special education students.

Step 9. An Individualized Education Plan (IEP) is prepared for each child based on individual educational needs. That plan is then employed.

Step.10 If the student does not qualify for Special Education (SPED), other options are available such as an Individualized Learning Plan (ILP), which is similar to an IEP but not federally mandated.

In this process, there was only one time limit specified by law. That is the time frame between when the parent consents to the assessment and when the IEP is employed, 60 days. The Civil Grand Jury had concerns, based on comments from teacher about the elapsed time between a teacher requesting an SST meeting (Step 3) and when it occurs (Step 4). This slow process takes away valuable time in which students could be receiving specific services tailored to meet their learning needs.

The Monterey County SELPA office provided the Civil Grand Jury with the available data regarding the school districts' compliance with the 60-day time limit.

The Civil Grand Jury then asked MPUSD for data including statistics from each school on each child that has gone through parts of this process. The Civil Grand Jury asked specifically for information regarding how long it took between when teachers requested an SST meeting (Step 3) and when it occurred (Step 4). In addition, The Civil Grand Jury asked for information on how much time passed between when parents consented to the assessment (Step 8) and when the IEP was employed (Step 9).

MPUSD provided information, however it was not complete. Only one school (out of 21) provided the data regarding the time between Step 3 and 4. The average number of days between when a teacher asked for help (Step 3) and received the help (Step 4) was 139 days. No decipherable information was provided regarding Steps 8 and 9.

MPUSD informed The Civil Grand Jury of new proactive programs to help students beginning at Step 2. This includes the pilot program being used in the three Marina elementary schools called “Response to Intervention.” MPUSD is also in the process of expanding its special education capabilities, for example by creating new classes for autistic students and extending this service to other districts. The Civil Grand Jury commends MPUSD for taking these proactive steps.

FINDINGS OF THE INVESTIGATION

F3.1. There is no required time limit between teachers requesting a SST meeting and when it occurs.

F3.2. Tracking of students through this process is deficient or lacking.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

R3.1. MCOE should establish a reasonable time limit between when teachers request a SST meeting and when it occurs. [Related Finding: F3.1]

R3.2. MCOE should create a method for tracking the students through this process to be used by all schools in Monterey County. Administrators at the schools should be responsible for tracking the students’ progress and supplying the information to their districts, which should then provide the information to MCOE. [Related Finding: F3.2]

REQUIRED RESPONSES

Monterey County Office of Education:
All Findings and Recommendations

Monterey Peninsula Unified School District:
All Findings and Recommendations

Responses must comply with the following:

CALIFORNIA PENAL CODE SECTION 933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

As of the October 2010 writing of this report, Monterey County was in negotiations with a prospective vendor for the purchase and installation of the NGEN Radio Project that is the subject of this report, but no contract had yet been finalized or approved.

MONTEREY COUNTY'S NEXT GENERATION (NGEN) RADIO PROJECT

SUMMARY

PURPOSE OF THE INVESTIGATION

The 2010 Monterey County Civil Grand Jury reviewed the next generation or “NGEN” Radio Project being developed for public safety and local government users in Monterey County, focusing primarily on questions relating to the costs to be borne by system users and how the system was marketed to smaller agencies. Although the Civil Grand Jury heard many questions and concerns about matters such as the comparative effectiveness of digital versus analog radio systems in range and coverage over the varied topography of Monterey County, how well digital signals penetrate buildings or other obstructions, comparing the intelligibility of voice transmissions made from high-noise environments, and the like, these subjects were each beyond the scope of this investigation. In sum, the Civil Grand Jury did not attempt to evaluate the technical merits of the NGEN Radio Project but rather looked into how agencies making use of the new system will be able to afford it.

SUMMARY OF FINDINGS

A major component of the NGEN Radio Project is a state-of-the-art digital trunked radio network. Digital trunked systems for use by public safety agencies do not represent a fully mature technology and, for good or bad, early adoption of such a system places Monterey County in the role of a pioneer. The need for swift action to secure radio channels with which to meet future essential communications requirements within our county must be balanced against a need to accommodate cash-strapped public agencies that are fearful about their ability to pay for an unproven deluxe radio network in the current economic climate. It is not in the public's interest to deny emergency dispatching service to agencies which can't afford or otherwise don't obtain digital trunked radios, nor would it be acceptable for such agencies to be coerced into joining the NGEN Radio Project by any intimation that they otherwise face the loss of their radio frequencies or licenses. Especially with regard to agencies that are less well-positioned to bear the expenses attendant to a new system such as the NGEN Radio Project, further evaluation of alternatives (including contracting with other agencies or pooling efforts to establish other dispatching arrangements, if necessary) would be beneficial.

SUMMARY OF RECOMMENDATIONS

Emergency dispatch services should continue to be made available to public safety agencies even if they don't obtain digital trunked radios, using the analog overlay that will be part of the NGEN Radio Project, if necessary. Ongoing evaluation of other possible dispatching arrangements (such as joint efforts by the Monterey Peninsula police agencies, the South Monterey County police agencies, and local fire agencies to contract for or establish their own dispatch centers) should take place. Care must be taken to secure all the frequencies that will be necessary for the new radio system and to assure that existing radio licenses are not allowed to lapse through inattention, but agencies wishing to obtain or maintain (in their own names) licenses for the frequencies that they use should be allowed to do so.

GLOSSARY

For the purposes of this report, the following words or phrases have the following meanings:

“Agency” refers to any city, special district, joint powers authority, or other public entity that provides law enforcement, firefighting, or other public safety services within the county of Monterey.

“Backbone” refers to those items of stationary equipment such as transmitters, receivers, repeaters, buildings, generators, towers, antennae, and other items that make up the shared infrastructure of the NGEN Radio Project.

“CAL FIRE” refers to the California Department of Forestry and Fire Protection.

“Client agency” means an agency that is contracting with the County of Monterey for dispatch or other radio communication services.

“ECUAC” refers to the Monterey County Emergency Communications Users Advisory Council, a body that establishes policies and practices relating to emergency communications in Monterey County.

“FCC” means the Federal Communications Commission.

“kHz” (kilohertz) is the increment in which the bandwidths of radio frequencies commonly used by public safety agencies are typically measured and means thousands of cycles per second.

“Mobile,” when used in describing a radio, refers to a vehicle-mounted piece of equipment. Contrast with the definition of “Portable” below.

“Narrow-banding” means the process by which the maximum width of existing radio channels will be reduced by half, so as to double the total number of potentially available channels in the future.

The “NGEN Radio Project” refers to the next generation radio system that is currently under design refinement for development as the replacement for the existing public safety and local government radio and data communications systems serving agencies in Monterey County.

“Portable,” when used in describing a radio, refers to a piece of equipment that is intended to be carried. Contrast with the definition of “Mobile” above.

“Trunked,” when used in describing a digital radio communications network refers to a protocol or capacity that is built into the system to allow more than one conversation to simultaneously occur on a channel (or more conversations to occur on a group of channels than there are channels). In a trunked network, radio frequencies are pooled in a way similar to how telephone circuits are made available to long distance callers.⁷

“VHF” means very high frequency and refers to a band within the radio spectrum in which public safety radio frequencies are often found.

BACKGROUND FOR THE INVESTIGATION

The NGEN Radio Project has been designed as a replacement for Monterey County’s aging public safety and local government voice and data radio networks, which need to be updated by the year 2013 in order to meet standards newly being imposed by the Federal Communications Commission (FCC). The estimated cost of the NGEN Radio Project is \$24 million, which is divided into two major parts: the project infrastructure or “backbone” (\$12 million) and subscriber radio equipment, consisting primarily of mobile and portable radios to be bought by users of the new system (\$12 million). Not included within the \$24 million estimated expense of the NGEN Radio Project is the significant cost of operating, maintaining, and upgrading it once it is in place. A key feature of the NGEN Radio Project is the introduction of a new technology in order to make it possible for the limited number of radio channels presently available to serve a greater number of users through the greater efficiency of channel utilization that digital trunked radio systems can bring. Although the NGEN Radio Project will address the new FCC narrow-banding requirements, compliance could also be accomplished in other ways, such as by replacing or upgrading existing equipment without simultaneously transitioning to a digital trunked radio network (albeit without enhancing current system capacity or features).

⁷“Trunking technology has been used in the telephone industry since almost the inception of long distance telephone service. Telephone callers do not own or control individual long distance telephone circuits. Instead, when a caller places a call, switching equipment selects an available circuit from a pool of circuits and assigns it to the caller for the duration of the call. As soon as the call is complete, the circuit goes back into the pool where it is immediately available for use by another caller.” Monterey County Operational Area Emergency Communications System Strategic Plan, January 2006, page 9.

INVESTIGATIVE METHODOLOGY

- Reviewed documents pertaining to the NGEN Radio Project
- Interviewed chiefs and administrators from police, fire, and public safety agencies
- Interviewed Monterey County department heads
- Interviewed other persons familiar with the NGEN Radio Project
- Researched the FCC's database of radio licenses
- Researched the FCC's narrow-banding requirement
- Researched analog, digital, and digital trunked radio communications systems
- Toured the Monterey County 9-1-1 dispatch center

DISCUSSION

The field of possible improvements to the radio communications network for Monterey County provided fertile ground for disagreement among the various public safety users of the current system. It was apparent that the approach preferred by law enforcement departments often differed radically from that which fire departments might more typically choose. The perspective of large departments was frequently at variance from that of smaller ones, and rural agencies many times saw things in a different light than did their more urban counterparts. In some instances, there were differences of opinion between individuals working for the same department. The pattern of disagreement over the NGEN Radio Project partially paralleled older disagreements over the fairness of the cost allocation methodology employed by the County of Monterey in assessing charges for dispatch services and whether there has been an improvement or a deterioration in the quality of service experienced by client agencies following the consolidation of the Monterey and Salinas dispatch centers in April 2004. To some degree, consensus is reached by the agencies working through the Monterey County Emergency Communications Users Advisory Council (ECUAC). In spite of the ECUAC's efforts, there are many issues for which solutions that are fully satisfactory to all participants simply haven't been and perhaps can't be found. Despite this reality, the local agencies and Monterey County have developed practices and procedures that allow them to work together well in using the existing radio communications system.

NARROW-BANDING AND THE NEED FOR PROMPT ACTION

One topic on which there is fairly clear agreement is recognition of the FCC mandate that public safety communications equipment operating in the parts of the radio spectrum used by Monterey County agencies be narrow-banded by the year 2013. The reasons that it is considered by most local agencies to be imprudent to wait for the eve of the deadline to act are twofold. First, it is well known that in our region the competition for frequencies, particularly in the VHF band used by most of Monterey County's agencies, is both intense and ruthless. Neighboring counties, cities, and other jurisdictions are ready to pounce on the chance to be the first to acquire any channel that might become available. Second, the first user to implement narrow-banding on any particular frequency enjoys a form of priority under FCC rules and practices. Later claims of interference are ordinarily resolved against the later entrants. For both of these reasons,

there is widespread agreement among local agencies that now is the time to implement narrow-banding.

Narrow-banding could be implemented in several different ways. In order to comply with the FCC requirement, the bandwidth of transmitted signals needs to be reduced from the 25 kHz currently being used to a bandwidth of only 12.5 kHz. There is no FCC requirement that the narrow-banded signal be digital. Almost all of the radio equipment in use by local agencies which was manufactured after 1997 is capable of narrow-band operation with simple reprogramming or minor, inexpensive modification. Although there is variation from agency to agency, it is generally the case that the vehicle-mounted (mobile) and hand-carried (portable) radios in the active inventory of local agencies are new enough that they could be made to meet the minimum requirements of the FCC mandate at a very low cost. Stationary equipment, such as transmitters and repeaters that may be located on hilltops around the county, tends to be older. Much of it would need to be replaced, or more extensively modified in order to meet the narrow-banding requirement, even if an analog mode of operation was retained.

It is likely that if the only objective was to achieve timely compliance with the narrow-banding requirement, it could be accomplished for a lesser overall expense than will be associated with the NGEN Radio Project. Even though the cost of dealing with much of the stationary equipment can't be avoided, obtaining analog or even digital replacements wouldn't be as costly as developing a digital trunked radio system from scratch. Moreover, if the existing system was upgraded but retained its current basic form, the client agencies wouldn't be faced with the need to replace their current mobile and portable radios. Moreover, the ongoing maintenance and operation costs would be lower because of the less advanced technology involved. There is some efficiency in channel utilization that would come from the implementation of a digital trunked system (which could reduce the total number of transmitters and repeaters needed), but that potential savings alone does not appear to be large enough to fully offset the increased cost of taking the digital trunked system approach that the NGEN Radio Project employs. The efficiency in channel utilization does, however, provide an opportunity for future growth that is lacking in the present system.

INTEROPERABILITY AND NEW FEATURES

Where the NGEN Radio Project shines is in the realm of new features and capacities. Although police and fire departments generally reported that the present methods by which they now interface with other agencies are adequate to good, interoperability during widespread emergencies could be enhanced by the NGEN Radio Project. There is optimism that the NGEN Radio Project will improve the coverage and range of Monterey County's radio communications system, although there is also recognition that in some marginal regions digital signals may not be as easily received tomorrow as analog transmissions are received today. Particularly for those users who can afford to buy new mobile and portable radios at the high end of the price range, the NGEN Radio Project will have the capacity to enable use of new features, such as encrypted radio communications and the ability to immediately disable radios that are lost or stolen,

thereby helping to preserve the confidentiality of police communications from criminals who might wish to monitor them.

With regard to police agencies, converting from communicating primarily over an analog system (which may use one channel transmitted from a site within one city) to using a countywide digital trunked system may make it easier to talk with other law enforcement agencies in situations such as hot pursuits. At present, as a police car gets farther away from its home city, the driver may need to change frequencies to that of the jurisdiction through which he or she is traveling. If the car is too far away or the driver has changed channels, the driver can't communicate with his or her supervisors on the driver's native frequency. The NGEN Radio Project, through its use of a digital trunked network, promises a solution to that problem.

As among the fire agencies, interoperability is in one sense already at a maximum under the current system. Through the use of a federal grant obtained several years ago, essentially all local fire agencies throughout Monterey County became equipped with the same brand and model of mobile and portable radios. This greatly enhanced interoperability between departments, because as firefighters learned how to use the features of their new radios, they automatically became familiar with how every other fire department's equipment worked. In the field, batteries, cases, microphones, etc. could be swapped between departments working the same fire if radios became dead or broken. These radios, which are still in use today, can not only be put into narrow-band operation through programming, they can also be programmed to operate in both digital and analog modes. The radios are also capable of being upgraded to work in a trunked environment, but the addition of this capacity is expected to cost approximately \$600 per radio, and that upgrade would enable only a basic set of new features.

The NGEN Radio Project could actually result in reducing interoperability between fire departments in the following way. Those departments that are able to afford to buy new mobile and portable radios at the high end of the price range may do so in order to avail themselves of the full range of new possible features that would be enabled by the NGEN Radio Project. Other departments may be constrained to continuing the use of their existing equipment. Thus, as some departments buy new radios from different manufacturers, the intimate familiarity that firefighters have with everyone else's equipment and the ease of exchanging batteries and parts in the field could be lost.

The NGEN Radio Project holds the potential to enhance interoperability between law enforcement agencies and fire agencies and the ability of either or both to communicate with other users on the system, such as public works or parks departments. The need for this sort of interoperability seems to occur less often than the need for communications between like-kind agencies. Some concern was also expressed that in region-wide emergencies such as floods, all users may try to communicate on the pooled channels at the same time, resulting in the system becoming overwhelmed. In the present conventional mode of communications, users are assigned to discrete channels and would not face competition from unrelated agencies. To address situations in which more users want to simultaneously communicate than there are available channels in the pool, the

software which runs the digital trunked network can be set to prioritize calls (and put out the functional equivalent of a busy signal to users who are waiting).

Even with the roll-out of the digital trunked system that is the heart of the NGEN Radio Project, Monterey County agencies will need to retain some analog capability in order to be able to communicate with agencies in neighboring counties and with state and federal entities within Monterey County, the majority of which are not switching from their existing analog communications systems. As an example, the territory of some of the fire districts in Monterey County abuts Santa Cruz or San Benito counties (which are not going digital). Engines and firefighters from these departments frequently need to talk to their out-of-county counterparts when fighting fires that overlap jurisdictional boundaries or in mutual aid incidents. Much of the land within Monterey County is in a national forest or is administered by the Bureau of Land Management. There are also military enclaves. By and large, the federal agencies that handle the law enforcement, fire suppression, and other public safety needs on federal lands are still using analog radio systems. The California Highway Patrol and the California Department of Forestry and Fire Protection (CAL FIRE) provide examples of state operations with which law enforcement and fire agencies in Monterey County will need to maintain an analog avenue of communications. The NGEN Radio Project does accommodate these needs by retaining an analog capacity.

It was apparent that there are many agencies within Monterey County that are looking forward to the NGEN Radio Project, value the rich set of new features that it can make available, and are well positioned to cover the costs of the backbone and subscriber radio equipment that will need to be purchased. However, as is discussed in the following section, there are also some agencies which will have great difficulty paying for the system. In addition, there are some agencies that would prefer not to change to digital or digital trunked communications, even if cost were not a factor.

AFFORDABILITY AND THE NEED FOR FURTHER EVALUATION

The NGEN Radio Project was conceived in the early 2000s at a time when the economy and financial position of many public agencies were considerably stronger than they are today. The project garnered widespread support throughout the public safety agencies in Monterey County. However, even in those rosier times, there were a few agencies that were concerned enough about the cost of the NGEN Radio Project that they declined to become participants. Particularly for agencies that depend primarily or exclusively on property tax revenues to fund their operations, declining property values and limitations on property tax increases have made their fiscal situations ever tighter each year. Although the impacted agencies signed a memorandum expressing their agreement to participate in the NGEN Radio Project, some of them now regret having made that choice. Other entities that may have access to sales tax revenue, transient occupancy taxes, or other funding sources may not be so heavily impacted.

For a few small agencies, the cost of participating in the NGEN Radio Project may consume more than half of their respective budgets for the initial year. For some agencies, the cost of buying into the NGEN Radio Project will mean layoffs of personnel

and delays in the purchasing of other needed equipment. It makes very little sense to put a great radio into a fire truck if the consequence is that the engineer who would drive the truck has to be let go. The public interest would be far better served by utilizing an adequate radio, so that there can be someone available to put out the fire.

Beyond the initial year, the ongoing costs of replacing mobile and portable radios will exact a toll. For example, instead of being able to continue to use existing equipment which could meet the narrow-banding requirement at little or no cost, buying new analog radios costing under \$1,000 each, or purchasing simple digital radios costing a little more than \$1,000 each, agencies might now be called upon to buy digital trunked radios that may cost in excess of \$5,000 each. While one would hope that the \$12 million backbone of the system will last for decades, on average mobile radios need to be replaced as frequently as every seven years and portable radios even more often than that. Thus, the call upon cash-strapped small agencies to spend five or more times as much as they would otherwise spend on radio equipment will occur not just once, but over and over again during the life of the NGEN Radio Project.

An additional area of cost relates to the anticipated need to maintain, operate, and periodically upgrade the system backbone. Although the participants recognize that such costs will necessarily be incurred, those costs have yet to be quantified. Despite pointed inquiry, the Civil Grand Jury was unable to get a firm sense of the magnitude of this component of overall costs. Entering into an arena of unknown costs may be especially hazardous for a small agency that can barely cover the known cost components.

Part of the NGEN Radio Project proposal deals with arrangements for long term financing. That approach may make sense with regard to the costs of the backbone, but it would be foolhardy to finance over a term of 15 years the purchase of portable radios that may be fully consumed in five. Even if a lender could be found, it would make even less sense to try to finance the ongoing operating, maintenance, and upgrade costs, whatever those may turn out to be.

There is a great deal of fear that the implementation of the NGEN Radio Project will not be a smooth one, due to the state-of-the-art nature of the technology. Much anecdotal evidence was received concerning problems with similar digital trunked radio systems in other counties. Correcting any initial 'bugs' in the new system may not directly impact the cost to the end users, if Monterey County successfully negotiates strong warranties. However, even if the work is covered under warranty, 'bugs' that leave the system unreliable can create significant operational problems, generate liabilities, and result in significant indirect costs. In addition, in other jurisdictions, experience has shown that problems in digital trunked radio systems can persist for many years.

Due to the expense that would be involved in bringing the digital trunked radio service to remote areas of Monterey County, it has been proposed that these regions be served by a less expensive analog overlay to the system. As part of this analog overlay, there will be channels available for use in paging, for interoperability, for fire, and to serve the Sheriff's Department. Deputies patrolling in the South Coast area or in the far southern end of the Salinas Valley, for example, will be communicating over analog repeaters in

much the same fashion as they do today. However, it has not been proposed that this analog overlay be used to serve the needs of agencies that can't afford or otherwise don't wish to convert to operating in a digital trunked communications environment.

Rather than adapt the analog capabilities of the NGEN Radio Project to meet the needs of the smaller, cash-poor agencies, pressure has been applied to get them to go along with the digital trunked network plan. The pressure has taken the forms described in the following section.

DISPATCH POLICY, FCC LICENSES, AND PRESSURE

The policy recommended by the ECUAC, and which the Monterey County 9-1-1 dispatch center intends to follow upon implementation of the NGEN Radio Project will cause the discontinuation of existing emergency dispatching services for agencies which don't obtain digital trunked radios. Although there will be an analog overlay as part of the system, the policy provides that the overlay will not be made available for use by such agencies. There appears to be no insurmountable technical reason why analog service *couldn't* be accorded to agencies unable to afford or not wanting to make the move to digital trunked radio communications – the policy appears to have been imposed purely as a matter of choice.

Few public safety agencies can afford to handle their own round the clock dispatching.⁸ Faced with the loss of essential emergency dispatching by the 9-1-1 center if they don't cooperate by joining in the NGEN Radio Project, many small and financially-strained agencies have been forced to knuckle under. Compelling the agencies to buy into a deluxe radio system in this present economic environment may result in the agencies having to consider cost-saving measures such as layoffs, reductions in training, deferral of purchases of other needed equipment, etc.

Agencies not prepared or not wanting to bear the full cost of the NGEN Radio Project may investigate other dispatching options. For example, police departments on the Monterey Peninsula could consider working with the City of Carmel-by-the-Sea or forming their own joint police dispatching service. Similarly, the four south Monterey County cities of Gonzales, Greenfield, King City and Soledad are already accustomed to joint operations on one police channel and could explore establishing their own regional police dispatching service. It would be logical for fire agencies to investigate obtaining dispatching service from CAL FIRE. Private enterprise solutions are also a possibility.

Before the 1990s, it was commonplace for many agencies to hold the FCC licenses for the frequencies on which they operated in their own names and under their own addresses as a point of contact. Beginning in the 1990s, the County of Monterey began offering to relieve the agencies of the burden of processing license renewals. Licenses for agencies that availed themselves of Monterey County's service were changed to list Monterey

⁸ Some of the fire agencies contract with CAL FIRE for fire protection services. As a consequence of those arrangements, CAL FIRE handles the dispatching needs of those fire agencies. In addition, the City of Carmel-by-the-Sea handles its own police dispatching. Nevertheless, the Carmel Police Department will be a participant in the NGEN Radio Project.

County as the licensee, and future correspondence from the FCC regarding the licenses was directed to a County of Monterey address.

Recently, with regard to the few reluctant agencies that were not persuaded to join in the NGEN Radio Project by the prospect of the loss of the emergency dispatching services for which they have historically contracted with the County of Monterey, the pressure was at one stage stepped up by the intimation that FCC licenses (now held in the county's name) would not be available for the agencies' continued use and that the agencies would therefore no longer be able to operate on the frequencies that they had used in the past. As was discussed in a previous section of this report, the prospects of obtaining a new frequency in this region are slim at best.

This position has more recently been reversed. In addition, those County of Monterey representatives that handle licensing issues have now indicated that the county will cooperate with any agency that is seeking to obtain its own license for its operating frequencies. Nevertheless, it is regrettable that these events occurred. As a precaution against recurrences, any agency that is concerned about its ability to continue using its frequencies independent of operating through the County of Monterey's system should take steps to obtain an FCC license in its own name, using its own point of contact.

Whether based on the potential loss of essential 9-1-1 dispatching services or FCC licenses, agencies that were reluctant to join as participants in the NGEN Radio Project felt threatened. It was very clear from the Civil Grand Jury's investigation that the NGEN Radio Project was marketed to the smaller agencies, if not with a strong arm then at least with a heavy hand.

CONCLUSION

The NGEN Radio Project appears to hold a lot of promise for improvement to the radio communications network for Monterey County. Many agencies, especially those that are large and well funded, are anxiously awaiting its implementation in order to be able to take advantage of new features and capacities. However, the downturn in the economy which has occurred since the project was first conceived has profoundly worsened the position of many of the smaller agencies. In light of that circumstance, it is appropriate to re-think whether by use of the analog overlay or other means the system can be made more affordable to those who will be financially stressed to pay or who don't want to make the move into digital trunked communications.

BIBLIOGRAPHY

A basic overview of how two-way radio systems work, including an explanation of digital and trunked radio communications, can be found in Appendix A.

A succinct description of the NGEN Radio Project can be found in Appendix B.

A projected breakdown of the \$12 million in backbone-related expenses, including an allowance for some soft costs, can be found in Appendix C.

A form of agreement for the participants in the NGEN Radio Project to share the backbone costs and outlining financing plans can be found in Appendix D.

FINDINGS OF THE INVESTIGATION

- F4.1.** The policy of discontinuing emergency dispatch services for agencies which don't obtain digital trunked radios upon implementation of the NGEN Radio Project is not in the best interest of the public.
- F4.2.** If they are denied access to Monterey County 9-1-1 dispatching services, agencies facing tough financial circumstances might be able to reduce their overall communications costs by foregoing participation in the NGEN Radio Project and finding or establishing a dispatching service alternative to the Monterey County 9-1-1 dispatch center.
- F4.3.** The scarcity of and demand for uncongested public safety radio frequencies in our region make clear the importance of protecting existing FCC licenses against unintended expiration and securing needed new licenses as rapidly as possible.
- F4.4.** It is appropriate for client agencies wishing to do so to obtain and maintain FCC licenses in their own names for the frequencies that they use.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

- R4.1.** Allow agencies not wishing to participate in the NGEN Radio Project or which don't obtain digital trunked radios to continue to receive dispatch services (operating on the analog overlay, if necessary). [Related Finding: F4.1]
- R4.2.** After fulfilling any existing contractual commitment but before making any further substantial purchases of radio equipment, evaluate the feasibility of cash-strapped fire agencies contracting with CAL FIRE or with others for fire dispatch services. [Related Finding: F4.2]
- R4.3.** After fulfilling any existing contractual commitment but before making any further substantial purchases of radio equipment, evaluate the feasibility of Monterey Peninsula police agencies contracting with the City of Carmel-by-the-Sea or with others for police dispatch services. [Related Finding: F4.2]
- R4.4.** After fulfilling any existing contractual commitment but before making any further substantial purchases of radio equipment, evaluate the feasibility of South Monterey County police agencies contracting with others or cooperating to establish their own joint police dispatch services. [Related Finding: F4.2]
- R4.5.** Immediately obtain and secure the use of FCC licenses for all frequencies anticipated to be used in or in connection with the NGEN Radio Project and

continue to maintain all licenses for frequencies already in use by client agencies, to the extent that such licenses are not already being maintained by the agencies. [Related Finding: F4.3]

- R4.6.** If requested by a client agency, transfer existing licenses or obtain new licenses from the FCC for the frequencies used by that agency, naming the agency as licensee and bearing as the contact information such person and address as the agency may designate. [Related Finding: F4.4]

REQUIRED RESPONSES

Monterey County Board of Supervisors:

All Findings and Recommendations

Monterey County Sheriff:

All Findings and Recommendations

REQUESTED RESPONSES

Monterey County Emergency Communications Users Advisory Council:

All Findings and Recommendations

Responses must comply with the following:

CALIFORNIA PENAL CODE SECTION 933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public

agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.

(4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

Appendix A

Two-way radio

From Wikipedia, the free encyclopedia

The examples and perspective in this article **deal primarily with the United States and do not represent a worldwide view of the subject**. Please improve this article and discuss the issue on the talk page. (*December 2010*)

A **two-way radio** is a radio that can both transmit and receive (a transceiver), unlike a broadcast receiver which only receives content.

Two-way radios are available in mobile, stationary base and hand-held portable configurations. Hand-held radios are often called walkie-talkies or handie-talkies. A push-to-talk or Press To Transmit button is often present to activate the transmitter.

A mobile phone or cellular telephone is an example of a two-way radio that both transmits and receives at the same time (or full-duplex). It uses two different radio frequencies to carry the two directions of the conversation simultaneously.

History

Installation of receivers and transmitters at the same fixed location allowed exchange of messages wirelessly. As early as 1907, two-way telegraphy traffic across the Atlantic Ocean was commercially available. By 1912 commercial and military ships carried both transmitters and receivers, allowing two-way communication in close to real-time with a ship that was out of sight of land.

The first truly mobile two-way radio was developed in Australia in 1923 by Senior Constable Frederick William Downie of the Victoria Police. The Victoria Police were the first in the world to use wireless communication in cars, putting an end to the inefficient status reports via public telephone boxes which had been used until that time. The first sets took up the entire back seat of the Lancia patrol cars.^[1]

As radio equipment became more powerful, compact, and easier to use, smaller vehicles had two-way radio communication equipment installed. Installation of radio equipment in aircraft allowed scouts to report back observations in real-time, not requiring the pilot to drop messages to troops on the ground below or to land and make a personal report.

In 1933, the Bayonne, New Jersey police department successfully operated a two-way system between a central fixed station and radio transceivers installed in police cars; this allowed rapidly directing police response in emergencies.^[2] During World War II hand-held radio transceivers were extensively used by air and ground troops.

Early two-way schemes allowed only one station to transmit at a time while others listened, since all signals were on the same radio frequency - this was called "simplex" mode. Code and voice operations required a simple communication protocol to allow all stations to cooperate in using the single radio channel, so that one station's transmissions were not obscured by another's. By using receivers and transmitters tuned to different frequencies, and solving the problems introduced by operation of a receiver immediately next to a transmitter, simultaneous transmission and reception was possible at each end of a radio link, in so-called "full duplex" mode.

Early two-way schemes required training operators to learn and use Morse code; in ship-board installations the radio operating officer typically had no other duties than handling radio messages. When voice transmission became possible, dedicated operators were no longer required and two-way use became more common. Today's two-way mobile radio equipment is nearly as simple to use as a household telephone, from the point of view of operating personnel, thereby making two-way communications a useful tool in a wide range of personal, commercial and military roles.

Types

There is an array of two-way radio technologies, systems, and types. There are families of radio types and each family has differing sub-groups and specific radio models. Some of these types are listed below.

Conventional versus trunked

Conventional

Conventional radios operate on fixed RF channels. In the case of radios with multiple channels, they operate on one channel at a time. The proper channel is selected by a user. The user operates a channel selector or buttons on the radio control panel to pick the channel.

In multi-channel systems, channels are used for separate purposes.^[3] A channel may be reserved for a specific function or for a geographic area. In a functional channel system, one channel may allow City of Springfield road repair crews to talk to the City of Springfield's road maintenance office. A second channel may allow road repair crews to communicate with state highway department crews. In a geographic system, a taxi company may use one channel to communicate in the Boston, Massachusetts area and a second channel when taxis are in Providence, Rhode Island. In marine radio operations, one channel is used as an emergency and calling channel, so that stations may make contact then move to a separate working channel for continued communication.

Motorola uses the term *mode* to refer to channels on some conventional two-way radio models. In this use, a mode consists of a radio frequency channel and all channel-dependent options such as selective calling.

Scanning in conventional radios

Some conventional radios scan more than one channel. That is, the receiver searches more than one channel for a valid transmission. A valid transmission may be a radio channel with any signal or a combination of a radio channel with a specific CTCSS (or Selective calling) code.

There are a wide variety of scan configurations which vary from one system to another. Some radios have scan features that receive the primary selected channel at full volume and other channels in a scan list at reduced volume. This helps the user distinguish between the primary channel and others without looking at the radio control panel. An overview:

- A scanning feature can be defined and preset: when in scanning mode, a predetermined set of channels is scanned. Channels are not changeable by the radio user.
- Some radios allow an option for user-selected scan: this allows either lockout of pre-selected channels or adding channels to a scan list by the operator. The radio may revert to a default scan list each time it is powered off or may permanently store the most recent changes.

In professional radios, scan features are programmable and have many options. Scan features can affect system latency. If the radio has a twenty channel scan list and some channels have CTCSS, it can take several seconds to search the entire list. The radio must stop on each channel with a signal and check for a valid CTCSS before resuming scanning. This can cause missed messages.

For this reason, scan features are either not used or scan lists are intentionally kept short in emergency applications. Part of APCO Project 16 set standards for channel access times and delays caused by system overhead. Scan features can further increase these delays. One study said delays of longer than 0.4 seconds (400 milliseconds) in emergency services are not recommended.^[4] No delay from user push-to-talk until the user's voice is heard in your radio's speaker is an unattainable ideal.

Talk-back on scan

Some conventional radios use, or have an option for, a talk-back-on-scan function. If the user transmits when the radio is in a scan mode, it may transmit on the last channel received instead of the selected channel. This may allow users of multi-channel radios to reply to the last message without looking at the radio to see which channel it was on. Without this feature, the user would have to use the channel selector to switch to the channel where the last message occurred. (This option can cause confusion and users must be trained to understand this feature.)

This is an incomplete list of some conventional radio types:

- Marine VHF radio
- Family Radio Service
- UNICOM
- Amateur Radio

Trunked

Main article: Trunked radio system

In a trunked radio system, the system logic automatically picks the *physical* radio frequency channel. There is a protocol that defines a relationship between the radios and the radio backbone which supports them. The protocol allows channel assignments to happen automatically.

Digital trunked systems may carry simultaneous conversations on one physical channel. In the case of a digital trunked radio system, the system also manages time slots on a single physical channel. The function of carrying simultaneous conversations over a single channel is called multiplexing.

Instead of channels, radios are related by groups which may be called, groups, talk groups, or divided into a hierarchy such as fleet and subfleet, or agency-fleet-subfleet. These can be thought of as virtual channels which appear and disappear as conversations occur.

Systems make arrangements for handshaking and connections between radios by one of these two methods:

- A computer assigns channels over a dedicated *control channel*. The control channel sends a continual data stream. All radios in the system monitor the data stream until commanded by the computer to join a conversation on an assigned channel.
- Electronics embedded in each radio communicate using a protocol of tones or data in order to establish a conversation, (scan-based).

If all physical channels are busy, some systems include a protocol to queue or stack pending requests until a channel becomes available.

Some trunked radios scan more than one talk group or agency-fleet-subfleet.

Visual clues a radio may be trunked include the 1) lack of a squelch knob or adjustment, 2) no *monitor* button or switch, and 3) a chirp (made infamous by Nextel) showing the channel is available and ready at the moment the push-to-talk is pressed.

This is an incomplete list of some trunked radio types:

- Motorola Dimetra
- Logic Trunked Radio
- EDACS

Simplex versus duplex channels

Simplex

Simplex channel systems use a single channel for transmit and receive. This is typical of aircraft VHF AM and marine radios. Simplex systems are often legacy systems that have existed for years or decades. The architecture allows old radios to work with new ones in a single network. In the case of all ships worldwide or all aircraft worldwide, the large number of radios installed, (the *installed base*,) can take decades to upgrade. Simplex systems often use *open architectures* that allow any radio meeting basic standards to be compatible with the entire system.

- Advantage: as the simplest system configuration, there is reliability from the fact that only two radios are needed to establish communication between them.
- Disadvantages: The simplex configuration offers communication over the shortest range or distance because mobile units must be in effective range of each other. The available channel bandwidth limits the number of simultaneous conversations, since "dead" air time cannot be easily used for additional communication.

Duplex

Duplex channel systems transmit and receive on different discrete channels. This defines systems where equipment cannot communicate without some infrastructure such as a repeater, base station or Talk-Through Base. Most common in the US is a repeater configuration where a base station is configured to re-transmit the audio received from mobile units. This makes the mobiles, or hand-helds, able to communicate amongst one another anywhere within reception range of the base station or repeater. Typically the base or repeater station has a high antenna, which allows greater range, compared with a ground vehicle or hand-held transceiver.

Duplex systems can be divided into two types. The term *half-duplex* refers to systems where use of a push-to-talk switch is required to communicate. *Full duplex* refers to systems like mobile telephones with a capability to simultaneously receive and transmit.

- Advantage: duplex channels usually allow repeater operation which extends range (in most cases due to increased transmit power and improved aerial location / height) - especially where hand-held radios are in use.
- Disadvantage: If a radio cannot reach the repeater, it cannot communicate.

Hybrid simplex/duplex

Some systems use a mix of the two where radios use duplex as a default but can communicate simplex on the base station channel if out-of-range.^[5] In the US, the capability to talk simplex on a duplex channel with a repeater is sometimes called talk-around, direct, or car-to-car.

Push-to-talk

In one Motorola system, a Special Products microphone was created with a rocker-style push-to-talk button. The microphone looked like a normal mobile microphone except that the button rocked either up or down instead of pressing in. Rocking the switch in one direction transmitted duplex on a repeater; the other transmitted simplex on car-to-car.

In two-way radios with headsets, a push-to-talk button may be included on a cord or wireless electronics box clipped to the user's clothing. In an ambulance or aircraft, a button may be present where the corded headset plugs in to the radio wiring. Dispatch consoles often have a hand-operated push-to-talk buttons along with a foot switch or pedal. If the dispatcher's hands are on a computer keyboard, the user can step on the foot pedal to transmit. Some systems have muting so the dispatcher can be on a telephone call and the caller cannot hear what is said over the radio. Their headset microphone will mute if they transmit. This relieves the dispatcher of explaining every radio message to a caller.

In some circumstances, voice-operated transmit (VOX) is used in place of a push-to-talk button. Possible uses are handicapped users who cannot push a button, Amateur radio operators, firefighters, crane operators, or others performing critical tasks where hands must be free but communication is still necessary.

Analog versus digital

One example of analog radios are AM aircraft radios used to communicate with control towers and air traffic controllers. Another is a Family Radio Service walkie talkie. Equipment is less complex than digital.

- Advantage: In high-quality equipment, better ability to communicate in cases where a received signal is weak or noisy.
- Disadvantage: Only one conversation at a time can occur on each channel.

Examples of digital communication are APCO Project 25, a standard for digital public safety radios, Nextel's iDEN, Motorola's MOTOTRBO, and NXDN implemented by Icom as IDAS and by Kenwood as NEXEDGE.

- Advantage: More simultaneous talking paths are possible and information such as unit ID, status buttons, or text messages can be embedded into a single digital radio channel.

- Disadvantage: Radios must be designed to the same, compatible standard, radios can become obsolete quickly, cost more to purchase, and are more complicated.

Data over two-way radio

In some cases, two-way radio is used to communicate analog or digital data. Systems can be simplex or duplex and may employ selective calling features such as CTCSS. In full-duplex systems, data can be sent real-time between two points. In simplex or half-duplex, data can be sent with a time lag between many points.

Some two-way digital systems carry both audio and data over a single data stream. Systems of this type include NXDN and APCO Project 25. The method of encoding and decoding the audio stream is called a codec, such as the AMBE family of codecs.

After market GPS tracking and mobile messaging devices can be interfaced with popular two-way radio models providing a range of features.

Analog

Analog systems may communicate a single condition, such as water level in a livestock tank. A transmitter at the tank site continually sends a signal with a constant tone. The tone would change in pitch to indicate the tank's water level. A meter at the remote end would vary, corresponding to the pitch, to indicate the amount of water present in the livestock tank. Similar methods can be used to telemeter any analog condition. This type of radio system serves a purpose equivalent to a four-to-twenty milliampere loop.^[6] In the US, mid-band 72-76 MHz or UHF 450-470 MHz interstitial channels are often used for these systems. Some systems multiplex telemetry of several analog conditions by limiting each to a separate range of tone pitches, for example.^[7]

Digital

Digital systems may communicate text from computer-aided dispatch (CAD). For example, a display in a tow truck may give a textual location for a call and any related details. The tow truck driver may press an *acknowledge* button, sending data in the opposite direction and flagging the call as received by the driver. They can be used for analog telemetry systems, such as livestock tank levels, as described above. Analog conditions are translated into data words. Some systems send radio paging messages which can either 1) beep a paging receiver, 2) send a numeric message, or 3) send a text message.

Digital systems typically use data rates in the 1,200-19,200 kilobit-per-second rates and may employ modulation schemes such as frequency shift keying, audio frequency shift keying, or quadrature phase shift keying to encode characters. Modern equipment have the same capabilities to carry data as are found in Internet Protocol. Working within the system's protocol constraints, virtually anything can be sent or received.

Engineered versus not engineered

Engineered systems are designed to perform close to a specification or standard. They are designed as systems with all equipment matched to perform together. For example, a modern, local government two-way radio system in the US may be designed to provide 95% area coverage in an urban area. System designers use radio frequency models, terrain models, and signal propagation modeling software in an attempt to accurately estimate where radios will work within a defined geographic area. The models help designers choose equipment, equipment locations, antennas, and estimate how well signals will penetrate buildings. These models will be backed-up by drive testing and actual field signal level measurements. Designers adjust antenna patterns, add or move equipment sites, and design antenna networks in a way that will accomplish the intended level of performance.^[8]

Some systems are not engineered. *Legacy* systems are existing systems which were never designed to meet a system performance objective. They may have started with a base station and a group of mobile radios. Over a period of years, they have equipment added on in a building block style. Legacy systems may perform adequately even though they were not professionally designed as a coherent system. A user may purchase and locate a base station with an expectation that similar systems used in the past worked acceptably. A City Road Department may have a system that works acceptably, so the Parks Department may build a new similar system and find it equally usable. General Mobile Radio Service systems are not usually engineered.

Options, duty cycle, and configuration

1940s tube-type land mobile two way radios often had one channel and were carrier squelch. Because radios were costly and there were fewer radio users, it might be the case that no one else nearby used the same channel. A transmit and receive crystal had to be ordered for the desired channel frequency, then the radio had to be tuned or aligned to work on the channel. 12-volt mobile, tube-type radios drew several amperes on standby and tens-of-amperes on transmit. Equipment worked ideally when new. The performance of vacuum tubes gradually degraded over time. US regulations required an indicator lamp showing the transmitter had power applied and was ready to transmit and a second indicator, (usually red,) that showed the transmitter was on. In radios with options, wire jumpers and discrete components were used to select options. To change a setting, the technician soldered an option jumper wire then made any corresponding adjustments.

The trend is toward increasing complexity. Modern radios can have capacities over 100 channels and are synthesized: the internal electronics in modern radios operate over a range of frequencies with no tuning adjustments. High-end models may have several hundred optional settings and require a computer and software to configure. Sometimes, controls on the radio are referred to as programmable. By changing configuration settings, a system designer could choose to set up a button on the radio's control panel to either:

- turn scan on or off,
- alert another mobile radio, (selective calling),
- turn on an outside speaker, or
- select repeater locations.

Microprocessor-based radios can draw less than 0.2 amperes on standby and up to tens-of-amperes on high-powered, 100 watt transmitters.

Base stations, repeaters, and high-quality mobile radios often have specifications that include a duty cycle. A repeater should always be *continuous duty*. This means the radio is designed to transmit in a continuous broadcast without transmitter overheating and failure. Mobile radios used in emergency equipment are rated for continuous duty use. This is necessary because any one of an entire fleet of ambulances, for example, could be pressed into service as command post at a major incident.

Time delay is always associated with radio systems, but it is apparent in spacecraft communications. For Apollo program and Space Shuttle, Quindar tones were applied for operator assistance.

Life of equipment

Though the general life term for the two way radio is 5 to 7 years and 1 to 2 years for its accessories but still the usage, atmosphere and environment plays a major role to decide its life term. There are so many speculations on the life term of two way radios and their accessories i.e. batteries, chargers, head set etc.

In government systems, equipment may be replaced based on budgeting rather than any plan or expected service life. Funding in government agencies may be cyclical or sporadic. Managers may replace computing systems, vehicles, or budget computer and vehicle support costs while ignoring two-way radio equipment. Equipment may remain in use even though maintenance costs are unreasonable when viewed from an efficiency standpoint.^[9]

Different system elements will have differing service lifetimes. These may be affected by who uses the equipment. An individual contacted at one county government agency claimed equipment used by 24-hour services wears out much faster than equipment used by those who work in positions staffed eight hours a day.

One document says "seven years" is beyond the expected lifetime of walkie-talkies in police service. Batteries are cited as needing replacement more often. Twelve-year-old dispatch consoles mentioned in the same document were identified as usable. These were compared to problematic 21-year-old consoles used elsewhere in the same system.^[10]

Another source says system backbone equipment like consoles and base stations are expected to have a fifteen year life. Mobile radios are expected to last ten years. Walkie talkies typically last eight.^[11] In a State of California document, the Department of

General Services reports expected service life for a communications console used in the Department of Forestry and Fire Protection is 10 years.^[12]

Two-way radio frequencies

Two-way radios can operate on many different frequencies, and these frequencies are assigned differently in different countries. Typically channelized operations are used, so that operators need not tune equipment to a particular frequency but instead can use one or more pre-selected frequencies, easily chosen by a pushbutton or other means. For example, in the United States, there is a block of 22 channels (pre-selected radio frequencies) assigned, collectively, to the General Mobile Radio Service and Family Radio Service.

In an analog, conventional system, (the simplest type of system,) a frequency or channel serves as a physical medium or link carrying communicated information. The performance of a radio system is partly dependent on the characteristics of frequency band used. The selection of a frequency for a two-way radio system is affected, in part, by:^[13]

- government licensing and regulations.
- local congestion or availability of frequencies.
- terrain, since radio signals travel differently in forests and urban viewsheds.
- the presence of noise, interference, or intermodulation.
- sky wave interference below 50-60 MHz and tropospheric bending at VHF.
- in the US, some frequencies require approval of a frequency coordination committee.

A channel number is just a shorthand notation for a frequency. It is, for instance, easier to remember "Channel 1" than to remember "26.965 MHz" (CB Channel 1) or "462.5625 MHz" (FRS/GMRS channel 1), or "156.05 MHz" (Marine channel 1). It is necessary to identify which radio service is under discussion when specifying a frequency by its channel number. Organizations, such as electric power utilities or police departments, may have several assigned frequencies in use with arbitrarily assigned channel numbers. For example, one police department's "Channel 1" might be known to another department as "Channel 3" or may not even be available. Public service agencies have an interest in maintaining some common frequencies for inter-area coordination in emergencies.

Each country allocates radio frequencies to different two-way services, in accordance with international agreements. In the United States some examples of two-way services are: Citizen's Band, FRS, GMRS, MURS, and BRS.

Amateur radio operators nearly always use frequencies rather than channel numbers, since there is no regulatory or operating requirement for fixed channels in this context. Even amateur radio equipment will have "memory" features to allow rapidly setting the transmitter and receiver to favorite frequencies.

UHF versus VHF

The most common two-way radio systems operate in the VHF and UHF parts of the radio spectrum. Because this part of the spectrum is heavily used for broadcasting and multiple competing uses, spectrum management has become an important activity of governments to regulate radio users in the interests of efficient and non-interfering use of radio. Both bands are widely applied for different users.

UHF has a shorter wavelength which makes it easier for the signal to find its way through rugged terrain or the inside of a building. The longer wavelength of VHF means it can transmit further under ideal conditions.^[14] For most applications, lower radio frequencies are better for longer range. A broadcasting TV station illustrates this. A typical VHF station operates at about 100,000 watts and has a coverage radius range of about 60 miles. A UHF station with a 60-mile coverage radius requires transmitting at 3,000,000 watts.

If an application requires working mostly outdoors, a VHF radio is probably the best choice, especially if a base station radio indoors is used and an external antenna is added. The higher the antenna is placed, the further the radio can transmit and receive. One exception to using a VHF radio outdoors is if it is used in a heavily wooded or rugged area. Under these conditions a UHF radio may be able to transmit better though the terrain (unless the VHF antenna is raised above the terrain).

If the radios are used mainly inside buildings, then UHF is likely the best solution since its shorter wavelength travels through the building better. There are also repeaters that can be installed that relay a UHF signal to increase the communication distance.

There are more available channels with UHF, so in more populated areas UHF may be less likely to have interference from other systems. Since the range of UHF is also not as far as VHF under most conditions, there is less chance of distant radios interfering with the signal.

Other two-way radio devices

Not all two way radios are hand-held devices. The same technology that is used in two way radios can be placed in other radio

forms. An example of this is a wireless callbox. A wireless callbox is a device that can be used for voice communication at security gates and doors. Not only can they be used to talk to people at these entry points, personnel can remotely unlock the door so the visitor can enter. There are also customer service callboxes that can be placed around a business that a customer can use to summon help from a two way radio equipped store employee.

Another use of two-way radio technology is for a wireless PA system. A wireless PA is essentially a one-way two way radio that enables broadcasting messages from handheld two-way radios or base station intercoms.^[15]

See also

- [Astro \(Motorola\)](#)
- [Digital Mobile Radio](#)
- [GE Marc V](#)
- [Project 25](#)
- [Quik Call I](#)
- [Specialized Mobile Radio](#)

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- 11. [^] "2.4 Equipment Inventory," *San Rafael Police Radio Committee: Report to Mayor and City Council*, (San Rafael, California: City of San Rafael, 1995,) pp. 8.
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- 13. [^] See, "Appendix B - FCC Regulations," *California EMS Communications Plan: Final Draft*, (Sacramento, California: State of California EMS Authority, September 2000) pp.38. and *Arizona Phase II Final Report: Statewide Radio Interoperability Needs Assessment*, Macro Corporation and The State of Arizona, 2004.
- 14. [^] ["Two-Way Radio Success: How to Choose Two-Way Radios, Commercial Intercoms, and Other Wireless Communication Devices for Your Business"](#) page of [\[1\]](#).
- 15. [^] ["Two-Way Radio Success: How to Choose Two-Way Radios, Commercial Intercoms, and Other Wireless Communication Devices for Your Business"](#) page of [\[2\]](#).

APPENDIX B
MONTEREY COUNTY BOARD OF SUPERVISORS
ATTACHMENT 1 TO NGEN PROJECT REPORT 3/2/2010

**Monterey County Operational Area Emergency Communications System
Project Background and Information**

Background:

The NGEN Radio Project replaces the existing public safety and local government voice and data radio networks; which includes: radios, portables, base station equipment, repeaters, and radio control systems with inter-operable narrowband and digital trunking technologies. The Federal Communications Commission (FCC) has mandated the current technology to be taken out of service 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.

Most current public safety and local government radio systems use 25 kHz (wide-band) channels. The Federal Communications Commission has mandated that all non-Federal public safety licensees using 25 kHz radio systems migrate to narrowband 12.5 kHz channels by January 1, 2013.

This mandate requires a major re-design of our current VHF and UHF radio communications systems. In addition, these systems are very old and in need of upgrade to ensure reliability and enable interoperability between public safety agencies and, during widespread emergencies, between safety and local government agencies.

Agencies that do not meet the deadline face the loss of communications capabilities. Systems that are not listed as compliant following the January 1, 2013 deadline will be illegal and subject to fines that may be \$1,000 per day per radio frequency license if operated. The estimate of time needed to design, build and implement such a regional system is three to four years, so it is necessary to begin this next phase of the project now in order to meet the federal deadline.

In addition, a number of technological and value engineering options will be considered when vendor proposals are reviewed.

Timeline:

Because of the narrow-band mandate imposed by the FCC, Monterey County radio users, including fire, police, emergency medical, public works and local government have been working together on a strategy to meet the narrow-band requirement.

In April 2006, A "Monterey County Operational Area Emergency Communications System Strategic Plan" was developed and accepted by your Board. The next phase of the County's Strategic Plan was to prepare a functional design and study of requirements for the new system. The Monterey County Information Technology Department (ITD), closely working with the members of the Monterey County Emergency Communications Users Advisory Council (ECUAC) and the NGEN Task Force, prepared a collaborative

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Agreement to share the cost of this design and study effort, which was signed by all participating agencies.

On April 22, 2009, the Board of Supervisors approved the Memorandum of Agreement Re Next Generation Radio System Joint Governance and Financing. 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 Agreement. 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 41.08%. As the first year's project soft cost expense is set at \$500,000, the County is expected to contribute \$205,422 to the project fund. The Board of Supervisors has set aside funds for the purpose of the Next Generation Radio project as a part of its Capital Improvement Program. It is recommended that these Capital Project funds be transferred to the project fund to cover the County's initial project expense.

On 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 is composed of law enforcement, fire, technical, and city administrative officials. The selection panel is reviewing the proposals with the goal of making a recommendation of award for a specific vendor to design and build the NGEN infrastructure. When the Board of Supervisors makes an award, the project will be entering the most significant phase of its program of work.

Stakeholders:

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, Salinas Rural Fire Protection District, Spreckels Volunteer Fire Company. The Monterey County Department of Information Technology has taken a lead coordinating role in this group that consists of all of the incorporated cities in the County, CSUMB, and fire districts.

By working together, the group hopes to achieve:

- Cost savings resulting from maximizing use of existing frequencies and sites and sharing of infrastructure estimated to be on the order of 30% savings over acting individually.
- Improved funding and grant opportunities available for regional solutions
- Broad based support for the project throughout the County

The collaboration is being led by the Emergency Communications Users Advisory Council (ECUAC), the consortium that partners for 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. The County is represented on the Users

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Project Status and Costs:

Early in the effort, the group divided the project into four phases:

Phase	Description	Estimated Total Cost	Monterey County Cost	Status
I	Assessment and Development of a Strategic Plan	\$117,000.00	\$117,000.00	Completed and reported to Board of Supervisors on April 11, 2006
II	Create Organizational Agreements and Secure Funding for Functional Specification	\$0.00	\$0.00	Agreements completed April 2009. Committee working to pursue funding
III	Detailed System Functional Design Specification	\$350,000.00 - \$500,000.00	\$136,137.93 - \$213,931.03	Functional Design Completed and RFP Released in June 2009
IV	Construct and Implement Digital Radio Network the NGEN System	\$16,000,000 - \$21,400,000*	Approximately \$9.4 Million	Will be initiated after completion of award of RFP beginning Calendar Year 2010. Planned Completion of Construction in 2012.

* Estimated Total Cost of Phase IV includes cost of subscriber radios that will be borne by each individual agency and will occur over the duration of the project.

APPENDIX C
MONTEREY COUNTY BOARD OF SUPERVISORS
ATTACHMENT 2 TO NGEN PROJECT REPORT 3/2/2010

User Agency Cost Share of Year 1 Cost for NGEN Project

In 2009, the agencies listed on the attached chart approved the MEMORANDUM OF AGREEMENT RE NEXT GENERATION RADIO SYSTEM (“the NGEN Financing Agreement”) to provide joint oversight of the procurement and operation of the NGEN system and proportionately share in the costs.

The costs on the attached table were updated on September 2, 2009 to reflect the two agencies that have elected not to participate in the NGEN project and to remove radios assigned to volunteers from the allocation. Note that these costs are based on the following assumptions:

- The number of radios will be the basis for any cost sharing formula
- The number of radios for each agency listed below is accurate
- All agencies will participate
- Pay as you go for the first two years of costs
- Maximum finance rate of 6% interest and \$11 Million financed.

The cost allocations may change if any of the above assumptions are changed such as inventories are updated and different agencies decide to or not to participate.

The RFP for the Next Generation Public Safety Voice and Data Radio System has been issued and a selection panel comprised of representatives from city administration, law, fire, information technology, and communications will evaluate the responses.

The attached invoice reflects your agency’s share of costs for the anticipated first year costs. These costs are defined in Section 2D of the NGEN Financing Agreement and may include but are not limited to: Project Management Costs, Grantwriter Costs, and Selection Team Expenses.

MONTEREY COUNTY BOARD OF SUPERVISOR'S
ATTACHMENT 2 TO NGEN PROJECT REPORT 3/2/2010

Estimated NGEN Infrastructure Costs by Agency per Fiscal Year					
			FY 09 / 10	FY 10 / 11	FY 11 / 12 thru 2027
Agency	# Radios	Percentage	Soft Cost Expenses	Soft Cost Expenses	15 Year Vendor Infrastructure Financing Only
Infrastructure Total (Does Not include Subscriber Radios):			\$500,000.00	\$500,000.00	\$11,000,000.00
County of Monterey	1364	41.08%	\$205,421.69	\$205,421.69	\$461,140.34
City of Carmel by the Sea	71	2.14%	\$10,692.77	\$10,692.77	\$24,003.64
City of Del Rey Oaks	31	0.93%	\$4,668.67	\$4,668.67	\$10,480.46
City of Gonzales	63	1.90%	\$9,487.95	\$9,487.95	\$21,299.00
City of Greenfield	63	1.90%	\$9,487.95	\$9,487.95	\$21,299.00
City of King City	67	2.02%	\$10,090.36	\$10,090.36	\$22,651.32
City of Marina	123	3.70%	\$18,524.10	\$18,524.10	\$41,583.77
City of Monterey	341	10.27%	\$51,355.42	\$51,355.42	\$115,285.08
City of Pacific Grove	141	4.25%	\$21,234.94	\$21,234.94	\$47,669.20
City of Salinas	531	15.99%	\$79,969.88	\$79,969.88	\$179,520.18
City of Sand City	27	0.81%	\$4,066.27	\$4,066.27	\$9,128.14
City of Seaside	202	6.08%	\$30,421.69	\$30,421.69	\$68,292.04
City of Soledad	68	2.05%	\$10,240.96	\$10,240.96	\$22,989.40
CSU Monterey Bay	24	0.72%	\$3,614.46	\$3,614.46	\$8,113.91
Big Sur Volunteer Fire	11	0.33%	\$1,656.63	\$1,656.63	\$3,718.87
Greenfield Fire Protection District	24	0.72%	\$3,614.46	\$3,614.46	\$8,113.91
North County Fire District	80	2.41%	\$12,048.19	\$12,048.19	\$27,046.35
Salinas Rural Fire	58	1.75%	\$8,734.94	\$8,734.94	\$19,608.61
Spreckels Volunteer Fire	2	0.06%	\$301.20	\$301.20	\$676.16
EMS	29	0.87%	\$4,367.47	\$4,367.47	\$9,804.30
	3320	100.00%	\$500,000.00	\$500,000.00	\$1,122,423.70

APPENDIX D

MEMORANDUM OF AGREEMENT RE NEXT GENERATION RADIO SYSTEM JOINT GOVERNANCE AND FINANCING

This Memorandum of Agreement re Next Generation Radio System ("NGEN") Joint Governance and Financing (the "NGEN Financing Agreement") is entered into this _____ day of _____, 2009 by and between the County of Monterey ("County"), City of Carmel-by-the-Sea, 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, and the City of Soledad (collectively referred to as "the Cities"), and the California State University Monterey Bay, Monterey Peninsula Airport District, Big Sur Volunteer Fire Brigade, Carmel Valley Fire Protection District, Greenfield Fire Protection District, North County Fire Protection District, Salinas Rural Fire Protection District and Spreckels Volunteer Fire Company, and (the "non-County entities".) The County, Cities, and the non-County agencies are hereinafter referred to collectively as the "Parties."

RECITALS

Whereas, the parties to this Agreement are local government entities in Monterey County, State or District entities in Monterey County and the County of Monterey; and

Whereas, the parties, by separate agreements, currently participate in, or are represented on, the Emergency Communications Users Advisory Council ("ECUAC"), as governed by the "Agreement for 911 Emergency Communications Dispatch Services, attached hereto as Exhibit B; and

Whereas, the Federal Communications Commission ("FCC") has promulgated regulations and a decision (47 CFR section 90.201; 47 CFR section 90.203 and *In Re Implementation of sections 309(j) and 337 of the Communications Act of 1934, as amended* (2004) *WT* Docket No. 99-87 (Decision of the FCC) which require equipment changes to the systems used by the Parties; and

Whereas, the purpose of this Financing Agreement is to provide joint oversight regarding the procurement and operation of the "Next Generation Radio System" or "NGEN"; and

Whereas, the Parties are mandated to comply with these regulatory changes and also desire to improve interoperability and otherwise enhance the system via the procurement and use of new equipment under the terms of this Agreement; and

Whereas, the parties wish to work cooperatively to specify and procure the best and most appropriate NGEN system which meets the public safety needs of the Parties and the residents of the County of Monterey; and

Whereas, the participating agencies intend to design and implement this NGEN system under the terms outlined in this Agreement; and

Whereas, the estimated cost of the shared equipment for the NGEN project ranges from \$7.8 million dollars to \$12 million dollars, which costs are to be financed and paid in accordance with this Agreement; and

Whereas, individual parties will absorb the cost of the field equipment to be used exclusively by their individual agency; and

Whereas, the parties find that it is to their mutual benefit and advantage to work together and share in the acquisition of NGEN shared infrastructure and equipment, bearing those cost on a proportionate basis.

NOW, THEREFORE, in mutual consideration of the terms and conditions provided below, the Parties agree as follows:

TERMS

1. Governance The parties agree the Emergency Communications Users Advisory Council ("ECUAC") shall provide oversight regarding the operations under this Agreement and the existing Agreement(s) for 9-1-1 Emergency Dispatch Services, which are incorporated by this reference and attached as Exhibit B. Said governance shall continue unless or until a new entity is created by separate Agreement among the parties and specifies a new or different governance.
2. Shared Infrastructure, Engineering and Project Management
 - A. Monterey County will acquire the shared infrastructure, equipment, engineering, and project management for the NGEN system which will be procured per the terms of this Agreement. The shared infrastructure will be maintained by Monterey County in accordance with approved policies and maintenance agreements implemented between the ECUAC and Monterey County. Upon system acceptance, the shared infrastructure will be stewarded by Monterey County until such time as a Joint Powers Authority is created to operate the Emergency Communications function.
 - B. The City of Salinas contribution toward shared infrastructure costs shall be governed by the MOU attached as Exhibit C. Ownership of shared infrastructure purchased through the 2007 COPS Technology Grant shall also be governed by Exhibit C.
 - C. By executing this Agreement, each Party agrees that a committee (the "NGEN RFP Review and Selection Committee") selected by the ECUAC or appointed by its represented Agency Groups (such as Chief Law Enforcement Officers and Fire Chiefs Associations) to represent all Parties, shall recommend approval for procurement of a Design-Build vendor. Such recommendation

shall be based upon an extensive review of proposals submitted in response to a formal Request For Proposal (RFP) issued by the County, as well as investigations into the various aspects of the proposals, answers to questions posed by the Selection Committee and vendor references. The NGEN RFP Review and Selection Committee will make a final contract award recommendation to the ECUAC, who shall notify the Emergency Communications Policy Advisory Council ("ECPAC") members (as identified in Exhibit B, Section 7.A.), of the recommended vendor and forward its recommendation to the Board of Supervisors on behalf of all Parties. In the event that the Selection Committee cannot reach consensus on a recommendation, but forwards the top two equally qualified vendor proposals to the ECUAC to make the final choice, the ECUAC shall require a two-thirds majority vote to break the tie, notify ECPAC and forward its recommendation to the Board of Supervisors.

- D. It is the intention of the parties that the combined total of costs for shared infrastructure, soft costs (such as project management and Selection Team expenses), and mobile data infrastructure, not exceed the upper limit of \$12 million estimated for this project.
- E. Should the cost of the shared infrastructure exceed that estimated in the Recitals above, the parties shall meet and confer regarding whether or how to proceed with this Agreement. The ECUAC shall develop policies regarding its oversight responsibilities under this Agreement, including circumstances under which a "super majority" of two-thirds (213) of the voting members present at a scheduled meeting would be required to authorize, or recommend for approval to the Board of Supervisors, new or enhanced financial agreements. Said policies shall be approved by the Emergency Communications Policy Advisory Council ("ECPAC").
- F. In addition to the voice and data infrastructure, NGEN member agencies intend to procure radio subscriber equipment (portable and mobile radios and accessories) and leverage optional volume pricing.

3. Agency Voice Equipment

- A. Each party to this Agreement shall utilize at its own expense subscriber equipment such as mobile and portable radios, which is compatible to and will interface into the NGEN voice communication system and be used by its own personnel.

Mobile Data Communications System (MDCS) and Agency Equipment

- A. The RFP process will assume that agencies currently participating in the existing MDCS will continue to do so. Agencies wishing to opt out of participating in the Mobile Data Communications System of the shared

infrastructure of the NGEN project must do so in writing to the ECUAC prior to the award of a contract by the Board of Supervisors. ECUAC will provide direction regarding opt out timing and process. Actual terms of financing will be calculated by Monterey County when vendor selection is final and system costs are known.

- B. Each party to this agreement electing to use the MDCS shall pay its proportionate share, as defined in Exhibit A, as updated, if applicable, for the MDCS shared infrastructure.
- C. Each party to this Agreement may acquire at its own expense field equipment such as computers, mobile and portable radios, which is compatible to and will interface into the NGEN system and be used by its own personnel for receipt of data files.
- D. An Addendum or Amendment to this Agreement shall be signed by all Parties sharing in the cost of MDCS shared infrastructure, prior to contract approval by the Board of Supervisors.

Financing

A. Debt Financing

- (1) On behalf of all participating agencies, Monterey County will secure lease financing from the best available source, based on the County's stand-alone credit rating, in an amount sufficient to cover the construction of the NGEN infrastructure (see paragraph B below), less the pro-rata share of those participants opting out of the shared financing. Participants in the shared financing may elect to pre-pay lease obligations, but may incur penalties prescribed by the terms of the financing source. Participants shall have an opportunity to review the lease terms prior to their being finalized.
- (2) Project soft costs, such as for employment of a Project Manager, expenses of the RFP Review and Selection Team, and related administration and oversight costs will most likely not be financed but will be billed in the first two years of the project (FY 2009-10 and 10-11), with debt service on shared infrastructure (pursuant to the design build contract) beginning in FY 2011-12 for a period of fifteen years as described in EXHIBIT A.

B. Participant Financing Options

- (1). **SELF-FUNDING.** Agencies choosing to not participate in the joint financing must make that election at the time of signing this Agreement. Once the financing is structured, self-funding agencies will no longer be able to elect

to join the financing and must provide funding through alternative sources. Those self-funding agencies will be required to deposit, on or before the bond financing date, their pro-rata share of the anticipated infrastructure costs, as specified in Exhibit A, to be expended during the next twelve months, and at the beginning of each subsequent twelve month period and continuing through completion of infrastructure construction. These funds will be held in trust with the County Treasurer. Accumulation of interest in the deposit account and the Financing Proceeds Fund established pursuant to the financing will accrue to the benefit of the project as a whole.

Example: For all examples, the joining agency (City A) will use 10% of the radios and of the \$12,000,000 of total infrastructure costs, \$5,000,000 will be spent in year one, \$4,000,000 in year two, and \$3,000,000 in the final year of construction. City A must contribute \$1,200,000 toward the project. City A must deposit \$500,000 with the County Treasurer on or before the closing date of the bond offering ("bond date"). Assuming estimated construction costs total \$4,000,000 in year two, City A would be required to deposit \$400,000 before the first anniversary of the bond date, with the final \$300,000 being deposited at the beginning of year three of construction.

(2). **PRE-PAYMENT BY AGENCY.** By depositing funds equivalent to that agency's next fiscal year's debt, with the County 30 days or more prior to the Bond Date, an Agency may elect to pre-fund debt service annually, in order to avoid the deduction from property taxes on deposit with the County Treasurer. Should any pre-paying agency fail to pay its requisite debt service 30 calendar days or more before the bond date, the County will withhold that Agency's annual debt service requirement from the next property taxes collected. Interest earned on those deposits will accrue to the benefit of the project, not the individual agency.

(3). **STANDARD TAX DEDUCTION PAYMENT.** Execution of this agreement authorizes the County to collect semi-annual debt service payments from property taxes. If an agency does not pre-pay its annual self-funding or debt service requirement as provided in paragraph 2 above, the County shall withhold the semi-annual debt service payments from property taxes collected through execution of this NGEN Financing Agreement or a subsequent JPA. In December and April, after property taxes are collected, but before distribution to the various agencies, the County will deduct the agency's next debt service payment before distribution. Agencies will be given debt amortization schedules outlining the exact principal and interest amounts throughout the term of the bond. No fees will be charged by the County for administrative services relating thereto.

(4). **PAYMENT BY NON-PROPERTY TAX COUNTY AGENCIES**

The following agencies do not receive property taxes from which its funding obligations can be withheld: CSUMB, Spreckles Volunteer Fire Company, Big Sur Volunteer Fire Brigade, and Monterey Peninsula Airport District.

These Agencies may elect to participate in the pooled financing or self-fund their share of core infrastructure cost. In either case, each Agency shall pre-fund its debt service annually, on or before the bond date.

Delinquency: If a non-property tax Agency does not pay its annual funding payment as set forth above, on or before the due date, the amount unpaid shall be deemed delinquent. A delinquency fee in the amount of five percent (5%) of the delinquent amount shall be added to the amount owed and charged to the Agency. The delinquency fee shall be applied to the amount owed (including any previously added delinquency fee) every (30) days until such time as the bill is paid in full.

6. New participants

- A. Agencies not party to this Agreement on the date of its first execution may join the NGEN project and system, subject to the approval of the ECUAC and on such terms as set by the ECUAC.
- B. Agencies joining this Agreement subsequent to its initial formation may not participate in the joint financing (paragraph 4 A) unless initial participation in the financing was 100% of all signatory agencies at the time of first execution of this agreement. Where applicable, new amortization schedules will be calculated for all financing participants based on the addition of a new agency which will participate in financing.
- C. Provided there is 100% participation in the financing structure, an agency joining this NGEN Financing Agreement will be required to pay its pro-rata share of capital and core infrastructure costs, as determined by the ECUAC and currently set forth in Exhibit A, as may be updated periodically. Those agencies will be required to reimburse the parties participating in the NGEN Financing Agreement for its pro-rata share of already expended costs, its⁷ attributable principal costs from date of joining to the next payment date, and the following twelve months estimated expenditures, with those funds being used to rebate costs to original participants. It is the intent of the Parties that a new participant's buy-in fees during the initial construction period will be used to proportionally lower existing Parties next annual debt payment. After completion of system build, buy-in fees shall be used to pay down existing Parties⁷ annual maintenance fees. In addition, subsequent participants will be required to pay all costs assessed by the ECUAC.
- E. If all original Parties to this Agreement choose to participate in the financing, making the Project 100% financed a new Agency may choose to join the financing pool. Upon the addition of a new participant who so chooses, the County Debt manager shall, using the original formula, re-allocate the Core infrastructure costs to include the new participant in existing financing. Upon

such re-allocation, the debt of all other participants shall be proportionately adjusted, consistent with Exhibit A.

7. Ownership of Equipment

- A. Except as provided below in Section 7.B, at the end of the debt service period, the County will, on behalf of all participating agencies, own the Core equipment and infrastructure. If a successor governing body is created by a new agreement among the Parties, Monterey County shall pass title to same at no cost to the Parties except necessary and actual out of pocket costs related to the transfer, subject to review by ECUAC.
- B. Ownership of shared infrastructure equipment purchased with Salinas 2007 COPS Technology Grant is subject to the conditions set forth in the City of Salinas MOU, attached hereto as Exhibit C.

8. Duties to be Performed by the County of Monterey As Administrator

The County shall exercise all powers and conduct all other duties and obligations permitted or required to be performed by local agencies under this Agreement for the operation, administration and maintenance of the NGEN System.

Annually, Monterey County shall cause to be performed a special district audit and a State Controller's report. The fees and costs associated with these documents shall be shared by the parties in the proportion represented in Exhibit A.

9. Dispute Resolution

If a dispute arises out of or relating to this Agreement, or the breach thereof, and if said dispute cannot be settled through negotiation, the parties agree first to try in good faith to settle the dispute by non-binding mediation before resorting to litigation or some other dispute resolution procedure, unless the parties mutually agree otherwise. The mediator shall be mutually selected by the parties by the following procedure. Each party to this agreement shall nominate one proposed mediator by name. If a majority of parties nominate the same mediator, that mediator shall be used. If no majority is determined by the nominations, the mediator shall be selected by lot from among nominations provided by each party.

All costs and fees required by the mediator shall be split equally by the parties; otherwise each party shall bear its own costs of mediation. ECUAC shall develop policies regarding the procedures to be used for mediation.

10. Amendments/Withdrawals

This Agreement may be amended at any time by signatures of three-fourths of the parties. Should a signatory agency wish to withdraw from this agreement, said agency shall give not fewer than 24 months' written notice to all parties hereto. Said

withdrawing agency shall be required to pay in full any residuals amounts due from it under this agreement.

11. Indemnification

Each party hereto shall indemnify, defend, and hold harmless the others, its officers, agents and employees from any claim, liability, loss, injury or damage arising out of, or in connection with, performance of this Agreement by said indemnifying party, excepting only loss, injury or damage caused by the negligence or willful misconduct of personnel employed by the indemnifying agency. Each shall reimburse the other for all costs, attorneys' fees, expenses and liabilities incurred with respect to any litigation in which the indemnifier is obligated to indemnify, defend and hold the other harmless under this Agreement.

12. Interpretation of Agreement

Nothing in this Agreement shall be construed to hold any Party liable to any other Party, or any person not a party hereto, for the design, construction, installation, inspection, operation, maintenance and/or repair of any of the NGEN system or equipment. This Agreement is designed to implement the financing of shared equipment and is not an agreement as defined in Government Code Section 895.

13. Severability

If any section, subsection, sentence, clause or phrase of this Agreement is for any reason held to be unconstitutional or otherwise invalid, such decision shall not affect the validity of the portions of this Chapter not held to be unconstitutional or invalid.

14. Participation

Participation of all Agencies noted is expected but, in the event that an agency elects not to participate, the agreement will remain valid for those agencies which execute the agreement.

15. Signatures

This Agreement may be signed in counterparts with the signature pages attached to form a complete document.

County Signature Page:

IN WITNESS WHEREOF, the COUNTY and each of the Agencies have caused this Agreement to be executed by their duly-authorized representative as of the day and year written above.

COUNTY OF MONTEREY: By: _____ CHAIR OF THE BOARD OF SUPERVISORS	
Date: _____	
APPROVED AS TO CONTENT: By: _____ VIRGIL SCHWAB, Director of Information Technology	
Date: _____	
APPROVED AS TO FORM: _____ Ellen M. Jahn, Deputy County Counsel	
Date: _____	
APPROVED AS TO FISCAL PROVISIONS: By: _____ Auditor-Controller	
Date: _____	
APPROVED AS TO LIABILITY PROVISIONS: By: _____ Risk Management	
Date: _____	
Notices shall be sent to: Name Address City, State, Zip Phone Fax E-mail	With a Copy that shall not constitute notice: Name Address City, State, Zip Phone Fax E-mail

EXHIBITS

- Exhibit A – Table of Proportionate Share of Estimated Infrastructure Costs
- Exhibit B – Agreement for 9-1-1 Emergency Communications Dispatch Services dated July 1,2001
- Exhibit C – Agreement Re 2007 COPS Technology Grant between Monterey County and City of Salinas
- Exhibit D – US Department of Justice Publication, "Understanding FCC Narrowbanding Requirements"

SUPPRESSION, INTERVENTION, PREVENTION: THREE PILLARS OF FIGHTING GANG ACTIVITY IN MONTEREY COUNTY

SUMMARY

PURPOSE OF THE INVESTIGATION

When the 2010 Monterey County Civil Grand Jury started its term last January, local media were reporting that, in the City of Salinas alone, there were 29 homicides in 2009 – all gang related. Based on this information, the Civil Grand Jury chose to investigate what is being done about gang violence in Monterey County.

SUMMARY OF FINDINGS

The suppression of gang violence requires a multifaceted approach. A community leader commented during an interview, *You can't arrest your way out of this*. Dealing with the problem of organized criminal gangs is not just a police matter. Three “pillars” are essential to the fight against gang violence. They are Prevention, Intervention, and Suppression. Success cannot be achieved without strong community involvement and support for each of these three pillars.

Several programs have been implemented in Monterey County which are attempting to organize and focus the required community involvement. These programs include the implementation of the Ceasefire strategy, Four Cities for Peace, Community Alliance for Safety and Peace (CASP), Rancho Cielo, and programs administered by the Monterey County Office of Education (MCOE).

The Civil Grand Jury is confident in the programs which are in place, is encouraged by the dedicated people involved, and looks forward to the future for a safer county.

SUMMARY OF RECOMMENDATIONS

The community needs to be a part of the solution. It can be as simple as shopping at businesses that are offering gang members a second chance, or hiring a Rancho Cielo crew to paint a building. People can personally be involved by becoming a mentor or otherwise volunteering. Statistics show these programs work. Ultimately these programs need funding. Without the funding, the programs will end. Without the programs, the gang violence will likely continue and may increase.

GLOSSARY

At-risk youth	A minor or young adult who is having trouble coping with the stresses of life and is likely to succumb to a delinquent lifestyle by engaging in criminal activities
CalGRIP	California Gang Reduction Intervention and Prevention (from state grant funding)
Call-in	A meeting involving Ceasefire personnel and targeting gang members and their families who are told that if they fail to show up, chances of arrest are increased
CASP	Community Alliance for Safety and Peace (Salinas-oriented)
Ceasefire	A strategy used to address the gang problem in the community and also used to refer to the law enforcement personnel implementing the strategy
Four Cities for Peace	The four cities in South Salinas Valley that have joined forces to combat criminal gangs (Gonzales, Soledad, Greenfield, and King City)
MCOE	Monterey County Office of Education

BACKGROUND FOR THE INVESTIGATION

There are many programs and agencies involved in the Suppression, Intervention, and Prevention of gang violence. The Civil Grand Jury chose to focus on the Ceasefire strategy, Four Cities for Peace, CASP, Rancho Cielo, and MCOE.

Ceasefire is a strategy addressing the suppression aspect of gang violence. Gang members are given an ultimatum at the call-in: *Stop the violence or go to jail*. If the gang member chooses to stop, he or she is offered the tools needed to become a responsible community member, such as job training, employment, tattoo removal, and more. As part of the program, gang members are strongly encouraged to attend a call-in. At the first of these call-ins, gang members are offered the opportunity to get out of the gang life. At the conclusion of the call-ins, gang members know they are responsible for stopping gang violence. If this warning is ignored, then suppression such as “Operation Knockout” comes into action. In this operation, federal, state, and local enforcement agencies came together for a raid on those identified as leaders in violent behavior. Thirty-six were arrested in Operation Knockout in mid 2010.

Rancho Cielo offers multiple intervention and prevention programs for at-risk youth in Monterey County. They include:

- Silver Star Youth Program
- Rancho Cielo Youth Corps
- Rancho Cielo Drummond Culinary Academy
- Wildfire Suppression Program

CASP brings together strategic members of the community (i.e., city and county level departments, private and public agencies) to address the root problems with a focus on gang violence. CASP is a voluntary group of key players. As a result of CASP's comprehensive makeup, the results are widespread and touch the lives of those in gangs and others in our community who need support and assistance, as is reflected by the more than 1,000 summer jobs provided to the youth in the summer of 2010.

CASP and other relevant agencies recognize and employ the three elements: suppression, prevention, and intervention in reducing gang violence.

INVESTIGATIVE METHODOLOGY

- Toured Rancho Cielo in northeast Salinas
- Toured Monterey County Probation Department
- Interviewed Monterey County Probation Department administration
- Interviewed Salinas Police Department official involved with Ceasefire
- Interviewed Monterey County Superintendent of Schools and staff
- Interviewed CASP leadership
- Interviewed the leadership of "Peacemakers"
- Interviewed South County cities' anti-gang plan leadership
- Interviewed a mayor, police chiefs, and a police investigator
- Reviewed "Monterey County's Comprehensive Violence Prevention, Suppression, Intervention, and Reentry Framework" report
- Reviewed local news sources
- Reviewed related information on the internet
- Reviewed 2007 Monterey County Civil Grand Jury report on gang violence
- Attended presentation at Rancho Cielo
- Attended a CASP community dialogue, "We Talked, We Listened"
- Attended a CASP forum providing feedback to the community, "We Listened, We Took Action"
- Attended a Soledad High School assembly introducing the Four Cities for Peace anti-gang program

DISCUSSION

PILLAR 1: SUPPRESSION

Ceasefire Strategy

Ceasefire is a strategy created by a former Harvard professor, David Kennedy, to solve Boston's gang problem in the early 2000s. It was funded by a grant through the National Institute of Justice. This strategy is different from others used across the country for several reasons. First, the suppression effort is not focused on all gang members and all their activity; it is focused on the small percentage of gang members responsible for the violent crimes. Ceasefire relies on both data and analysis in order to pinpoint those people responsible for the gang violence.

Second, a moral aspect is brought in when the gang members are told they are personally responsible for tearing the city apart. This is done at Ceasefire meetings, known as call-ins, which provide an atmosphere similar to an intervention. Identified gang members on probation or parole are invited into a meeting with faith leaders, police officers, a US Attorney, community leaders, service providers, medical personnel, ex-gang members, and victims of violence. The meetings are held in community centers and are well orchestrated. Law enforcement officials make it clear to the gang members that if they do not stop the violence, they will be incarcerated for the rest of their lives. They are told they will be prosecuted federally and sent to prison out of state where no one will visit them. Medical personnel explain in detail what it is like to be shot and the lifelong consequences that go along with gunshot injuries. A mother explains the grief she lives with because a gang member killed her son – a presentation that can bring the most macho of men to tears. Gang members are presented with an ultimatum: *Stop the violence or go to jail.*

If it appears the warning is being ignored, suppression efforts such as “Operation Knockout” begin. In this type of operation, federal, state, and local enforcement agencies come together for raids on those identified as leaders in violent behavior.

If the gang members choose to stop the violence, they are offered the tools needed to be integrated into society. These services include drug and alcohol counseling, transitional housing, assistance with resumes, job training, job searching, rides to interviews, assistance with rent, and more.

There is evidence that Ceasefire is working. According to Ceasefire personnel, there has been a significant reduction in shootings and homicides where the program has been implemented.

The expiration of federal grants is forthcoming, and the acquisition of new grants is being researched. In the early spring, a congressman and others from the federal government met in Salinas to discuss steps being taken to reduce gang violence. Based on Salinas' early successes, in early October 2010 key players from Monterey County participated in

the National Forum on Youth Violence Prevention in Washington, D.C. Salinas was one of six cities throughout the United States invited to attend this conference because it has a progressive plan in place that is achieving reductions in gang violence. It is hoped that this type of involvement and similar activities will lead to the acquisition of new grants.

South County Efforts

With the use of CalGRIP funding, the four South County cities of Gonzales, Soledad, Greenfield, and King City have joined together in a collaborative effort to reduce gang violence and related crimes. This collaboration is known as the Four Cities for Peace. The police departments in those cities are working together and sharing information about gang activity. They work together doing parole and probation searches.

Working within Four Cities for Peace is a faith-based group called Peacemakers, led by a pastor. Peacemakers' strategy is to use direct engagement with the community. This is primarily accomplished by trained volunteers who go door to door and talk with the community. The goal is to reduce the trauma after a shooting and reduce retaliatory shootings. The group is teaching the community to understand its role in reducing gang violence in the four South County cities. For example, in a single day, there were two dozen volunteers from Peacemakers and Sun Street Center on the streets of Gonzales. They passed out 343 flyers, visited 16 businesses and 198 homes, and talked to 204 individuals. In Greenfield, the same groups passed out 460 flyers, visited 245 homes and 48 businesses, and talked to 398 individuals. In addition, Four Cities for Peace has held high school assemblies to introduce its message about how the group can assist local youth to find alternatives to participating in gang activities.

PILLAR 2: INTERVENTION

Community Alliance for Safety and Peace (CASP)

CASP is an organization that involves the community and a number of agencies within the city of Salinas. CASP is a coalition of government, nonprofit, and private agency leaders who have teamed up to reduce gang violence and other crimes. Participants include representatives from the schools, libraries, health and social services agencies, nonprofit groups, businesses, and many more. CASP also includes people from the community, giving them a key role and opportunities for input and participation. All CASP members volunteer their time and talents. CASP's focus is on intervention and prevention. CASP networks with other cities to share and learn about programs that are effective. CASP sums up its organization in this way: *An overriding goal of CASP is to mobilize a multidisciplinary leadership team to assess, plan, and implement effective strategies, and share resources to build, support, and sustain a peaceful community.*

The work in which CASP has been involved includes:

- Holding community meetings, giving residents a chance to voice their concerns as well as offer solutions to the problems;

- Getting 500 youth summer jobs in 2009 (this number doubled in 2010);
- Enrolling thousands of children in the public library's Summer Reading Program;
- Setting up a program for county residents to voluntarily turn in weapons.

Rancho Cielo: 100 Acres of Opportunity



Rancho Cielo is the vision of a man who, because of his occupation, saw firsthand the cycle of incarcerated youth getting back into trouble once released from jail. He wanted to create a place where youth could break that cycle. With the help of many volunteers and donations from the community, Rancho Cielo was created. Rancho Cielo is located east of Salinas on a 100-acre site that was once the Natividad Boys' Ranch and is home to many different programs that benefit the youth of Monterey County. Rancho Cielo houses the Rancho Cielo Community School, Rancho Cielo Youth Corps, the Drummond Culinary Academy, and the Wildfire Suppression Program. Many of the youth in these programs are on active probation or parole; 40-50% are felons. The programs offer youth who could not achieve their academic goals in a traditional school setting alternative educational opportunities. Support services, vocational training, and job placement services are also provided. The various facilities at Rancho Cielo provide opportunities for recreation and outdoor activities. During non-high school hours, the campus is used for a broad range of prevention programs for younger children. The vision of Rancho Cielo is *To transform the lives of at-risk youth and empower them to become accountable, competent, productive and responsible citizens.*

Silver Star Youth Program at Rancho Cielo Community School

Rancho Cielo's flagship program, offers intensive educational instruction to students between the ages of 15-1/2 and 19. Most students are on probation when referred to Rancho Cielo and want to change their lives. The school operates in partnership with the Monterey County Probation Department and MCOE. Students have between 3rd and 12th grade level proficiencies. The school teaches the California State Standard Curriculum, as well as elective classes such as wood shop and music. Graduates receive a high school diploma or GED.



(photo courtesy of Rancho Cielo)

In addition to the education, the students have access to a number of support services, including drug and alcohol counseling, family planning, gang intervention, conflict resolution, anger management, grief counseling, health education, family counseling, and career planning. Students also take employment preparation classes, learn resume writing, and are taught interview skills.

Because of limited facilities and funding, capacity is limited to 54 students.

Rancho Cielo Youth Corps

Rancho Cielo Youth Corps is an on-the-job training program serving young adults ages 18–24, preparing them for regular full-time employment. Many are parents and most are on probation or have been incarcerated. Youth Corps uses vocational training in the construction and landscaping trades to prepare the youth for the “real world.” They maintain the 100 acres at Ranch Cielo, in addition to being hired for jobs in the community. Youth Corps members must sign a contract, agreeing to a strict code of ethics and conduct, including being drug-free. During the probation period of five weeks, they work at least 20 hours per week and receive a modest stipend. During this time, members participate in resume writing and interviewing skills workshops in partnership with local agencies. If they pass probation, they can continue to work additional hours at minimum wage. Youth Corps members learn the construction and landscaping trades as well as work ethics. At the conclusion of this training period, members are eligible for referrals for regular full-time employment. The Rancho Cielo Youth Corps gives at-risk youth, who otherwise might have been difficult to employ, a chance to learn a trade and become responsible community members.

Rancho Cielo Youth Corps is the single largest employer of Ceasefire participants. More than 120 at-risk youth have participated in this vocational training program since its inception in 2008. Within 12 months of completing the program, over 77% of them did not re-offend.

The Drummond Culinary Academy



The Drummond Culinary Academy is a new 12-month program at Rancho Cielo, offering students the opportunity to complete their high school diploma while learning culinary skills. The students spend 20 hours per week on academic instruction and 20 hours on culinary instruction. They perfect their culinary education in the dining room at Rancho Cielo which is open to the public and available for private events. The ultimate objective is to prepare at-risk youth to qualify for work in local commercial restaurants. Monterey County, through tourism, has one of the largest food service industries in the state. The Drummond Culinary Academy is operated like other commercial food service training facilities. Qualified chefs administer the “Pro-Start” curriculum. In addition to culinary instruction, students complete a 200-hour externship in local commercial restaurants. The program also offers job placement and referral services to graduates. The first class started in August 2010. The academy has a capacity of 32 students.

Wildfire Suppression Program

Rancho Cielo has a Wildfire Suppression Program in partnership with North County Fire Protection District, CAL FIRE, Salinas Fire Department, and Monterey Regional Fire District. It prepares youth between the ages of 18 and 24 to achieve “Fire Fighter I” status and become eligible for a career with the Rancho Cielo Wildland Fire Crew. Students are trained in all aspects of firefighting. They get on-the-job training working with local fire crews.

This program is funded by grants and donated equipment. The North Monterey County Fire District, Monterey Regional Fire District, and CAL FIRE provide training in partnership with the Monterey County Office of Employment Training

New Programs

Vocational training is the heart of what is being done at Rancho Cielo. Without funding and grants, these programs are at risk of being eliminated and new programs will not be feasible. The Monterey County Planning Commission has approved Rancho Cielo’s

master plan. This includes the new vocational training center that will offer four areas of occupational training, each in its own wing of the building:

- Automotive and tractor repair
- Metal fabrication and welding
- Agricultural industry
- Carpentry and woodworking

Rancho Cielo also has plans to build additional classrooms to expand the capacity of the school. There is, at present, a capital campaign to raise funds for these expansions.



(Ted Taylor Vocational Center)

PILLAR 3: PREVENTION

Monterey County Office of Education

MCOE personnel, under the leadership of an administrative team, provide valuable resources for gang intervention strategies while assisting all students. One positive result of these many services and programs is that the Monterey County dropout rate has been reduced to 6.9%, the eighth lowest in the state. MCOE maintains a strong collaborative effort with CASP, the Monterey County Probation Department, the District Attorney's Office, and Rancho Cielo.

MCOE's literature and the 2009 Monterey County Probation Department Report have provided a comprehensive idea of the variety of programs designed to draw youth away from gang activities. The MCOE has limited financial resources, but those programs showing promise in serving students and schools are being maintained.

FINDINGS OF THE INVESTIGATION

F5.1. CASP has made tremendous progress in working with Ceasefire to reduce gang violence in the city of Salinas.

- F5.2.** CASP continues to modify its programs and goals to maximize its effectiveness by engaging the community.
- F5.3.** Ceasefire's primary strategy is suppression. As a result of its outreach, it is also involved in intervention of gang violence.
- F5.4.** Through a CalGRIP grant, the Four Cities for Peace have joined in a cooperative effort to reduce gang crime in that area of the Salinas Valley.
- F5.5.** Salinas is one of six cities in the United States which is receiving special advice and financial aid from state and federal agencies. This is a result of successful gang violence intervention programs such as CASP and Ceasefire.
- F5.6.** MCOE administers a wide range of programs to assist the students and young adults within the county. MCOE works as a team in strategic ways to meet the needs of this community in spite of tight budget constraints.
- F5.7.** Rancho Cielo is the result of creative leadership and collaboration and provides opportunities both vocationally and academically to at-risk youth by providing a positive and nurturing environment.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

- R5.1.** CASP should continue to work with and combine strategies with Ceasefire and all agencies that can enhance the CASP goals. [Related Finding: F5.1]
- R5.2.** Because the success of CASP depends on the expanding and continual support of the Salinas community, CASP should continue to find more methods and strategies of drawing in public support. [Related Finding: F5.2]
- R5.3.** Since an important part of the Ceasefire strategy is the ongoing support of the gang members who elect to leave the lifestyle, Ceasefire strategy must continue to include Rancho Cielo and the programs offered by that organization. [Related Finding: F5.3]
- R5.4.** Every effort must be made by the leaders in the Four Cities for Peace to establish and maintain effective communication and a database of shared information. [Related Finding: F5.4]
- R5.5.** All of the ongoing suppression, intervention, and prevention successes should be documented and presented to state and federal agencies on a regular basis to secure continued support. [Related Finding: F5.5]
- R5.6.** MCOE should continue to work with the many agencies to keep students interested in education and the future it provides. This should include both

traditional schooling and expanded alternative ways of educating. [Related Finding: F5.6]

- R5.7.** Rancho Cielo should continue with its vision and expand the vocational training that it offers, especially those programs that benefit the industries of Monterey County. [Related Finding: F5.7]

COMMENDATIONS

The Civil Grand Jury commends CASP for its collaborative efforts in reducing gang violence and crime. In less than two years, this organization has developed a comprehensive plan which, in the end, gives gang members a way out of gang life. Within CASP there is collaboration between law enforcement agencies, the MCOE and schools, the Monterey County Probation Department, and the community.

The Civil Grand Jury commends the Salinas Police Department which, through its research and wisdom, committed to work with CASP to provide suppression, intervention, and prevention, creating a comprehensive approach to gang violence and crime reduction.

The Civil Grand Jury commends the Monterey County Probation Department for its work in CASP and its strong programs to provide an avenue out of gang life for youth and young adults. The department's creative leadership is continually seeking means to strengthen the department's outreach.

The Civil Grand Jury commends the MCOE for its work with students. The office's staff is small, the needs are great, and their willingness to work within CASP makes them a vital part of gang prevention.

The Civil Grand Jury commends the retired judges who are involved in strengthening CASP and providing leadership to create opportunities found at Rancho Cielo.

The Civil Grand Jury commends the four Chiefs of Police, the Soledad Police investigator, and the Peacemakers for their collaborative work in gaining community confidence in reducing gang violence in South Salinas Valley.

The Civil Grand Jury commends the City of Salinas for allowing an employee to dedicate time to CASP. While it puts some stress on one department, the advantage of having an intelligent, passionate individual at CASP is a benefit to every resident of Salinas.

The Civil Grand Jury commends the employees of Monterey County who have volunteered their energy and time to make a difference in the lives of at-risk youths and their families.

REQUIRED RESPONSES

City of Gonzales:

Findings: F5.4
Recommendations: R5.4, R5.5

City of Greenfield:

Findings: F5.4
Recommendations: R5.4, R5.5

City of King City:

Findings: F5.4
Recommendations: R5.4, R5.5

City of Salinas:

Findings: F5.1, F5.2, F5.3, F5.5
Recommendations: R5.1, R5.2, R5.3, R5.5

City of Soledad:

Findings: F5.4
Recommendations: R5.4, R5.5

Monterey County Board of Supervisors:

All Findings and Recommendations

Monterey County Office of Education:

Finding: F5.6
Recommendation: R5.5, R5.6

Monterey County Sheriff:

All Findings and Recommendations

Soledad City Council

Finding: F5.4
Recommendation: R5.4, R5.5

REQUESTED RESPONSES

Community Alliance for Safety and Peace:

Findings: F5.1, F5.2, F5.5, F5.6
Recommendations: R5.1, R5.2, R5.5, R5.6

Ceasefire:

Finding: F5.1, F5.3, F5.5
Recommendation: R5.1, R5.3, R5.5

Four Cities for Peace:

Finding: F5.4
Recommendation: R5.4, R5.5

Peacemakers:

Finding: F5.4
Recommendation: R5.4, R5.5

Rancho Cielo:

Finding: F5.7
Recommendation: R5.3, R5.6, R5.7

Responses must comply with the following:

CALIFORNIA PENAL CODE SECTION 933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

CIVIL GRAND JURY MANDATED SITE VISITS

SUMMARY

Each year the Monterey County Civil Grand Jury is mandated by California Penal Code Section 919(b) to “...*inquire into the condition and management of the public prisons within the county.*”

To meet these requirements the Civil Grand Jury visited the following facilities:

- Correctional Training Facility, Soledad
- Salinas Valley State Prison, Soledad
- Monterey County Jail, Salinas
- Monterey County Probation Department, Juvenile Hall, Salinas

The 2009 Monterey County Civil Grand Jury performed a very thorough and detailed inspection last year in which they looked at the security of the Correctional Training Facility (CTF) and the Salinas Valley State Prison (SVSP). The 2009 Civil Grand Jury also evaluated the safety of staff and inmates.

The 2010 Civil Grand Jury reviewed the findings and recommendations made by the 2009 Civil Grand Jury and the responses provided by the facilities. Many of the recommendations were implemented.

Although overcrowding concerns still exist in all of the facilities, they are clean and well maintained. The level of security for both staff and inmates remains unchanged and adequate. Budget cuts have reduced the amount of funding that some programs receive. The staff continues to look for ways to continue providing the impacted services. The smuggling of cell phones continues to be a problem, however it is currently being addressed at both state and federal levels.

Overall, the 2010 Civil Grand Jury was pleased with the conditions of all facilities and found the staff at all facilities to be professional and extremely dedicated.

GLOSSARY

Each facility serves a different purpose defined as follows:

PRISON

A facility operated by the State of California under the jurisdiction of the California Department of Corrections and Rehabilitation, which houses offenders who have been sentenced to serve time in prison. Upon arrival, the inmate is assigned a classification based on the committed offense history and other factors. These classifications range from Level I to Level IV. The higher the level, the higher risk the inmate poses. The security levels are defined below:

- **Level I** Open dormitories
- **Level II** Open dormitories with fences and patrolled by armed Correctional Officers
- **Level III** Individual cells, fenced perimeters, and armed Correctional Officers
- **Level IV** Cells, fenced or walled perimeters, electronic security, more staff, and armed Correctional Officers both inside and outside the facility

JAIL

A facility operated by a city or county which holds non-sentenced and sentenced adults. Inside a jail there are different types of confinement areas. Upon arrival, an inmate is classified and housed based upon the level of security necessary and the inmate's special needs, if any. The classification can be changed at any time if circumstances warrant. Only adults are housed in a jail.

JUVENILE HALL

A facility designed to house youth offenders who are detained, waiting to be sentenced, or who have been sentenced. In Monterey County, this facility is under the jurisdiction of the Probation Department.

YOUTH CENTER

A residential facility designed with high security for youth considered delinquent, or with gang affiliations, or substance abuse problems. In Monterey County, this facility also falls under the Probation Department.

INVESTIGATIVE METHODOLOGY

- Toured each facility
- Interviewed employees, staff, medical personnel, and inmates
- Reviewed documentation provided by each facility
- Reviewed local news media sources
- Reviewed citizen complaint forms received in 2010
- Reviewed 2009 Monterey County Civil Grand Jury Report and Responses
- Reviewed websites of each facility

CORRECTIONAL TRAINING FACILITY (CTF)



The Civil Grand Jury toured the Correctional Training Facility (CTF) in Soledad, California. The prison was opened in 1946 and occupies 680 acres on which a three-facility complex sits. Each complex (Central, North, and South) support the others. These facilities house inmates, educational instruction (both academic and vocational), and drug rehabilitation services, as well as other services necessary to support the offenders housed here.

Number of custody staff	1,114
Number of support services staff	495
Total number of staff	1,609

While at CTF, the Civil Grand Jury toured cells, dormitories, the yard, medical services, and other areas. The Civil Grand Jury also viewed the Prison Industry Authority and saw items produced there for State use, such as office chairs and hospital furniture.

The Civil Grand Jury attended an award presentation given to the CTF Fire Department for the fast response and mutual aid to the victims of the April 2009 French tour bus accident.

While this facility certainly has problems with budget cuts, the medical facility, overcrowding, and an aging inmate population, the overall condition of the facility is good. One issue cited in last year's report, the smuggling of cell phones, continues to be a problem and concern.

Despite the difficulties of working inside a prison and the shrinking availability of resources, the staff of this facility remains both positive and professional. They participate in the community and raise funds for local charities.

CTF's motto was evident during our visit. *"Pride in a job well done, Excellence in attaining and preserving the skills necessary to ensure that the institution's mission is met, Training is the means by which we achieve our goals."*

NO RESPONSE REQUIRED

SALINAS VALLEY STATE PRISON (SVSP)



Salinas Valley State Prison (SVSP) opened in May 1996. SVSP sits on 300 acres of land located just east of CTF. The following statistics are current as of fiscal year 2009/2010:

Number of custody staff	946
Number of support services staff	743
Number of Department of Mental Health staff (custody and non-custody)	400

SVSP is classified as a level IV facility, which houses the most violent offenders. Many of the inmates have gang affiliations, disruptive behavior, anger management issues, and do not adapt well to prison life.

The Department of Mental Health operates a separate psychiatric unit within SVSP. The staff primarily cares for inmates who have mental disorders and cannot function in the prison environment.

While at SVSP, the Civil Grand Jury toured housing facilities, the visitation room, the yard, The Department of Mental Health facility, educational facilities, and the kitchen. In fact, the Civil Grand Jury was served the same lunch the inmates were having on that day.

The Civil Grand Jury found the conditions of the facility to meet basic standards. The staff was found to be helpful and professional.

NO RESPONSE REQUIRED

MONTEREY COUNTY JAIL

The Monterey County Jail (Adult Detention Division) is required to receive any person 18 years of age or older who is arrested by any police agency in the county, from the California Department of Corrections and Rehabilitation for parole violations, from the Probation Department for probation violations, or from the Superior Court of California (County of Monterey), upon an individual being sentenced.

The jail opened in 1977, and it is the responsibility of the County Sheriff to oversee the facility. The jail has a rated capacity of 825, but the average daily population exceeds 1,000 inmates.

There are 31 separate housing units ranging from single cells to open dormitories. Sentenced inmates reside in open dormitories and are the labor for work crews at the facility. Work assignments include things such as kitchen help, cleaning, and general maintenance. The crews are also sent outside the facility for basic grounds keeping around the Sheriff's Office and for litter pickup along highways and roads throughout Monterey County. Inmates serving time have access to many programs inside the jail, including educational and vocational classes, religious services, library services, and drug and alcohol programs. Inmates awaiting sentencing are held in a secured housing unit and do not participate in work crews inside or outside the jail.

The Civil Grand Jury received a very comprehensive tour of the facility. Although the facility is overcrowded, nothing out of the ordinary was observed during the tour. The Civil Grand Jury found the staff to be efficient.

NO RESPONSE REQUIRED

MONTEREY COUNTY PROBATION DEPARTMENT

The mission of the Monterey County Probation Department is to provide protection to the citizens of Monterey County by preventing and reducing the frequency, severity, and impact of criminal and delinquent behavior among adults and juveniles who come within the jurisdiction of the Probation Department.

This is accomplished through prevention activities, preparation of appropriate reports, recommendations to the court, enforcement of court orders, providing victim assistance and by seeking and developing new methodologies in probation services.

Under the umbrella of the Probation Department are Juvenile Hall, the Youth Center, the Repeat Offender Prevention Program, the Silver Star Gang Prevention and Intervention Program and Resource Center, and the Silver Star Youth Program at Rancho Cielo. The Civil Grand Jury toured each of these facilities and looked at each of these programs. The Civil Grand Jury was impressed by the dedication of the Probation Department staff and their desire to make a difference in the lives of these youth.

Juvenile Hall provides temporary custody of children between the ages of 8 and 18 in a secure environment.

The Youth Center is a residential “in custody” facility for juvenile offenders. It is designed to house 60 residents. At the center, the children are required to attend school. They are given counseling and classes designed to successfully return them to their families and the community.

The Repeat Offender Prevention Program is a collaborative, “community-based” program. It combines education, family services, individual treatment, health education, and intensive supervision. Additionally, referrals to Planned Parenthood, Sunrise House, or Alcoholics Anonymous are available. The program is designed for at-risk youth who are currently on probation and between the ages of 13 and 16 years old.

The Silver Star Gang Prevention and Intervention Program and Resource Center were made possible by the U.S. Department of Health and Human Services in 2005. Working with a multitude of agencies and law enforcement, the program is designed for early intervention to reduce and prevent gang affiliation among children in Monterey County.

The Silver Star Youth Program at Rancho Cielo is also a prevention and early intervention program for at-risk youth between the ages of 15½ and 18 along with their families. The vision of Rancho Cielo is *“To transform the lives of at-risk youth and empower them to become accountable, competent, productive and responsible citizens. Bringing together public agencies, community based organizations and concerned citizens we aim to design and implement a comprehensive set of services and programs in support of our Vision. These services and programs will provide the support and alternative activities needed to stem the rising rate of juvenile crime in Monterey County and the surrounding area.”*

NO RESPONSE REQUIRED

SALINAS VALLEY WATER PROJECT RUBBER DAM



SUMMARY

PURPOSE OF THE INVESTIGATION

The 2010 Monterey County Civil Grand Jury inquired into the river diversion component of the Salinas Valley Water Project, commonly known as the “rubber dam.” The Civil Grand Jury investigated the cost of the project, impacts on river quality and the quantity of water in the river, whether flood control has been enhanced, and whether steelhead populations are being monitored.

SUMMARY OF FINDINGS

The Monterey County Water Resources Agency (MCWRA) used innovative technologies to:

- Enhance flood control for safety of the community
- Increase dam storage capacity by more than 100,000 acre feet (AF) of water
- Stop pumping overdrafted aquifers
- Improve river water quality

The Monterey Regional Water Pollution Control Agency (MRWPCA) used innovative thinking to:

- Recycle waste water into useful water for the nearby agriculture industry
- Stop pumping overdrafted aquifers

SUMMARY OF RECOMMENDATIONS

- The MCWRA is encouraged to seek out new ways to augment the water supply for Monterey County.
- Continue to monitor and repair Salinas River quality where possible.

- The MRWPCA is encouraged to increase its ability to provide recycled water to other municipal uses.

GLOSSARY

Acre foot (AF)	325,851 gallons, or the amount of water needed to cover one acre with one foot of water
Anadromous fish	A fish that spends portions of its life cycle in both fresh and salt waters, entering fresh water from the sea to spawn
Canalization	The formation of canals or channels
Flow prescription	The flow variation necessary to support native species
MCWRA	Monterey County Water Resources Agency
MRWPCA	Monterey Regional Water Pollution Control Agency
OGS (Rubber Dam)	Obermeyer Gate System, a bottom-hinged spillway gate that can be raised and lowered by means of an air bladder placed behind it (See Figure 1)
Rotary screw traps	A means for capturing live fish to assess abundance
Salmonid species	A group of fish that includes salmon that spawn in fresh water and then migrate to the ocean
SCCC	Federally-designated South-Central California Coast region of Monterey County
Smolts	Juvenile anadromous fish that have undergone physical changes to prepare for life in saltwater

BACKGROUND FOR THE INVESTIGATION

The Salinas Valley is an important agricultural area, growing such a variety of crops as to make it a multibillion-dollar industry. The area is strongly dependent on groundwater, and 90% of that water serves agricultural uses. At present, the water needs of the northern Salinas Valley exceed the natural recharge abilities of the underlying aquifer. This excess consumption of groundwater has overdrafted the aquifer, which as a consequence has begun to fill with seawater.

The purpose of the Salinas Valley Water Project is to promote long-term management and protection of water resources in the Salinas Valley; specifically, to stop seawater intrusion, exert maximum flood control at the Nacimiento Dam for safety of the

population, and recharge the Salinas Basin. The MCWRA, a state-created public agency, is charged with enhancing the quantity and quality of water and specific areas of flood control for Monterey County. This agency has recently accomplished a major portion of this mission by installing two Obermeyer Gate Systems (the rubber dams).

INVESTIGATIVE METHODOLOGY

- Attended the lower Salinas River Obermeyer Gate System (OGS) opening ceremonies in April 2010
- Interviewed MRWPCA administration
- Interviewed MCWRA administration
- Reviewed National Marine Fisheries Service steelhead data on the Salinas River
- Reviewed initial Fishbio data on the Salinas River as supplied to MCWRA
- Reviewed multiple years of Snapshot data for the Salinas River as supplied by the Coastal Watershed Council

DISCUSSION

Two OGS dams have been installed to store water for scheduled release during the summer growing season. These releases are designed to augment the natural water recharge to the aquifer. In lieu of pumping groundwater, agricultural irrigation to nearby lands now uses recycled water and the newly retained water from the rubber dams. This new source of water is designated exclusively for agricultural use.

The first OGS to be installed was at the Nacimiento Dam spillway in April 2009. The spillway had to be enlarged to meet state and federal regulations, which require a spillway to be large enough to release sufficient water in the event of a major flood to protect the dam itself yet hold back enough water to protect the downstream communities. The OGS installed at the top of the dam's spillway has the effect of raising the dam height by an additional 12.5 feet, which increases the existing dam's storage capacity from 206,650 AF to 378,000 AF. Without this system in place, the previous capacity would have to have been lowered by 76,000 AF.

The second OGS was completed in April 2010 and is located 7.5 miles downstream from the city of Salinas near the pollution control facility operated by the MRWPCA. It is intended to help stop seawater intrusion by passively recharging the aquifer, improving flood control, and improving river flow for the migration of steelhead trout, which are federally designated as a threatened species. This dam is used to hold back a portion of the Salinas River's normal flow from April through October. The extra water retained behind the rubber dam is subsequently diverted to MRWPCA to be added to recycled, treated water and used for irrigation of fields in the Castroville area. This dam is intended to eliminate the need for pumping from the aquifer in order to allow the basin to recharge itself.

In total, the two dams cost about \$33 million. This included the expense of enlarging the Nacimiento spillway as well as installing the two rubber dams. These structures were

paid for with a \$5.5 million state grant, assessments against owners of downstream property, and some revenue from the sale of electricity from the hydroelectric plant at the Nacimiento Dam. The higher water level has slightly boosted the hydroelectric output. The OGS conforms to the shape of the existing spillway, thus eliminating the need for costly changes to the original dam profile. The OGS is of a modular design, so if problems arise, a damaged part can be easily and inexpensively replaced.

These OGS dams influence hydrology and the accessibility of anadromous salmonid species to spawning and rearing habitat in the Salinas Basin. According to Casagrande et al (2003), the Salinas Basin historically supported runs of steelhead and possibly chinook salmon, but now there is only a “small, possibly declining run of steelhead.” This population is within the federally designated South-Central California Coast (SCCC) region. Limited life history and abundance information inhibit the ability to properly manage this population. Concerns regarding the decline of steelhead populations include, but are not limited to, flow-related passage barriers, low summer-based flows, water temperatures, toxic contaminants, loss of habitat due to degradation, and canalization. To address some of these issues, the MCWRA developed a “flow prescription” to minimize the OGS impacts on the SCCC steelhead and their habitat. The flow prescription has “triggers” based on a combination of reservoir conditions and stream flow to initiate and facilitate passage for the migration of steelhead smolts. In 2010, Fishbio Environmental, LLC, on behalf of the MCWRA, developed and implemented a program to determine:

- The timing of salmonid migration
- The abundance of downstream migrating smolts
- How the river tributaries contribute to the overall abundance of Salinas River smolts
- River quality relationships and environmental factors
- Rotary screw trap efficiency and an estimate of steelhead abundance by accepted fish study procedures

Fish abundance studies were started during the spring of 2010 but are not complete. According to the Fishbio data of 2010, only two salmonid species, weighing less than five grams each, and one small goldfish were caught in the rotary screw traps that are designed to count them. However, 480 salmonid fish were caught in the Arroyo Seco River, a tributary of the Salinas River. The concern is that the Salinas River has consistently been found to have the lowest water quality in Monterey County, as measured for the past eight years by the Coastal Watershed Council’s annual survey known as “Snapshot Day.” The investment of \$33 million has provided the community with more water, better flood control, and possibly a better environment for fish.

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Casagrande J. et al (2003 published) The Watershed Institute. Fish Species Distribution and Habitat Quality for Selected Streams of the Salinas Watershed. Summer/Fall 2002 (study date).

FINDINGS OF THE INVESTIGATION

- F7.1.** The variable height of the OGS allows for flood control for the safety of the community.
- F7.2.** OGS is an innovative, cost effective means to retrofit existing concrete structures.
- F7.3.** The OGS has reduced aquifer overdraft.
- F7.4.** The OGS has improved water conservation and, in combination with recycled water, provides an alternative to groundwater extraction for agriculture.
- F7.5.** The OGS has improved river water quality by using “flow triggers.”
- F7.6.** Fish passage has been improved.
- F7.7.** Fish abundance studies have only just started and are not complete.
- F7.8.** The Lower Salinas River does not have suitable spawning or rearing habitat.
- F7.9.** That 480 salmonid fish were caught in the Arroyo Seco River, a tributary of the Salinas Basin River, demonstrates that fish can get up river.
- F7.10.** The use of a “flow prescription” improves water flow and condition for fish.
- F7.11.** The Salinas River consistently has the lowest water quality in Monterey County, as reported by the Coastal Watershed Council.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

- R7.1.** The MCWRA should explore other ways as innovative as the rubber dams to increase the storage capacity and safety of existing dams for the community. [Related Findings: F7.1, F7.2]
- R7.2.** The MCWRA needs to continue studies to determine if the OGS are reducing overdraft of the aquifer. [Related Finding: F7.3]
- R7.3.** The MRWPCA should continue to find new ways to use recycled water in the community. [Related Finding: F7.4]
- R7.4.** Continued environmental studies should be done to see if the “flow triggers” are an effective means of improving river water quality. [Related Findings: F7.5, F7.11]

R7.5. The MCWRA should extend the period in which fish are annually counted. [Related Findings: F7.6, F7.7, F7.8, F7.9, F7.10]

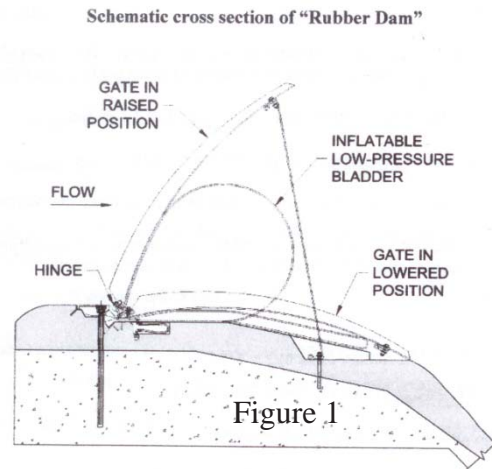
R7.6. The MCWRA should consult with National Marine Fisheries Service to establish a monitoring strategy for evaluating the Salinas Basin adult steelhead as they move through the Salinas River OGS. [Related Findings: F7.6, F7.7, F7.8, F7.9, F7.10]

R7.7. The MCWRA should coordinate its water quality improvement strategies for the Salinas River with agencies such as the Coastal Watershed Council and the Monterey Bay National Marine Sanctuary. [Related Finding: F7.10]

COMMENDATIONS

The 2010 Monterey County Civil Grand Jury wishes to commend the MCWRA for completing a project that improves the community's quality and quantity of water in such an innovative manner.

The Civil Grand Jury also wishes to commend the MRWPCA for its participation in the seawater intrusion abatement plan for the Lower Salinas River.



REQUIRED RESPONSES

Monterey County Water Resources Agency:

Findings: All Findings except F7.4
Recommendations: All Recommendations except R7.3

Monterey Regional Water Pollution Control Agency:

Findings: F7.4
Recommendations: R7.3

REQUESTED RESPONSES

Coastal Watershed Council:

Finding: F7.11
Recommendation: R7.7

Monterey Bay National Marine Sanctuary:

Finding: F7.11
Recommendation: R7.7

Responses must comply with the following:

CALIFORNIA PENAL CODE SECTION 933.05

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

- (1) The respondent agrees with the finding.
- (2) The respondent disagrees wholly or partially with the finding, in which case the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

- (1) The recommendation has been implemented, with a summary regarding the implemented action.
- (2) The recommendation has not yet been implemented, but will be implemented in the future, with a time frame for implementation.
- (3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a time frame for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This time frame shall not exceed six months from the date of publication of the grand jury report.
- (4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

THE MONTEREY COUNTY REGIONAL WATER PROJECT

SUMMARY

The 2010 Monterey County Civil Grand Jury investigated the proposed Monterey County Regional Water Project focusing on the desalination plan. Concerns over the fairness of governance, oversight, and feasibility as expressed by newspapers, editorials, and public testimony before the California Public Utilities Commission (CPUC) and the Administrative Law Judge (ALJ) during public hearings prompted this investigation.

The Civil Grand Jury believes that reasonable people in a position of public trust have the responsibility to work together to find solutions for the public benefit. The proposed project provides a solid foundation on which to build. It is the hope of the Civil Grand Jury that, as the project matures and additional public agencies are added, the parties remain flexible and work together to find the most appropriate means to meet the concerns expressed by critics of the project.

The Civil Grand Jury supports the Regional Water Project, but believes it can be improved.

GLOSSARY

CalAm	California American Water Corporation
CPUC	California Public Utilities Commission
MCWD	Marina Coast Water District
MCWRA	Monterey County Water Resources Agency
MPWMD	Monterey Peninsula Water Management District
MRWPCA	Monterey Regional Water Pollution Control Agency
SWRCB	State Water Resources Control Board
Order 95-10	State Water Resources Control Board Order 95-10

BACKGROUND FOR THE INVESTIGATION

After years of inaction, there is finally a critical sense of urgency to find a solution to the Monterey Peninsula's water needs. Our present crisis began 15 years ago when the State Water Resources Control Board (SWRCB), a division of the California Environmental Protection Agency, issued Order 95-10. This order instructed California American Water (CalAm) to terminate all unlawful diversions from the Carmel River and find a replacement source of water. There were several failed attempts to find a new source of water over those 15 years. The deadline is set for December 31, 2016. If another source of water is not available by then, the quality of life and economic viability of the peninsula will be seriously affected. The current desalination project is a means to comply with the provisions of Order 95-10.

It is a widely held opinion that the desalination plant is the best viable long-term solution to the peninsula's water problems. The desalination project consists of a four-party contract between the Monterey County Water Resources Agency (MCWRA), Marina Coast Water District (MCWD), CalAm, and the Monterey Regional Water Pollution Control Agency (MRWPCA). In its most basic terms, each of these entities will provide the following functions:

- MCWRA will own and operate the wells that supply brackish water to the desalination plant
- MCWD will own and operate the desalination facility
- CalAm will install and own the pipes that deliver potable water to the ratepayers
- MRWPCA will take the salts and impurities which are extracted from the desalinated water, process them, and return them to the ocean

INVESTIGATIVE METHODOLOGY

- Interviewed the management and/or directors of:
 - MCWRA
 - MCWD
 - MPWMD
 - MRWPCA
- Interviewed Monterey Peninsula mayors
- Interviewed members of the Monterey County Board of Supervisors
- Attended public hearings held by the CPUC on the proposed desalination projects
- Attended public meetings on the Regional Water Project held in Carmel Valley and Pacific Grove
- Attended a public meeting on the Regional Desalination Project and Agreement held in Monterey by the Division of Ratepayer Advocates on May 4, 2010
- Toured MRWPCA facility
- Toured a local state-of-the-art desalination facility
- Reviewed local media coverage of water issues in Monterey County
- Reviewed MCWD publications including Water for Monterey County: Project Update, June 2009 and the Monterey Regional Water Supply Project (Phase I)
- Reviewed websites pertaining to Monterey County water issues, including the Regional Water Project, www.waterformontereycounty.org
- Reviewed previous 15 years of Monterey County Civil Grand Jury reports pertaining to water issues
- Researched water conservation in Monterey County
- Reviewed Environmental Impact Reports for California Coastal Water Project
- Reviewed Order 95-10 (July 6, 1995) and Order 2009-0060 (October 20, 2009)
- Reviewed all documents filed in Proceeding A.0409019 currently before the CPUC

DISCUSSION

There have been concerns expressed over parts of the agreement such as transparency, oversight, feasibility, and the restrictions imposed by the Monterey County Water Resources Agency Act.

AGENCY ACT

The Monterey County Water Resources Agency Act prohibits groundwater from being exported out of the Salinas River Groundwater Basin.⁹ This is the underlying requirement that mandates that the fresh water portion of the brine coming from the wells intended for the desalination plant remain within the Salinas Basin. It should be noted that the MRWPCA recycles 11,814 acre feet of waste water that comes from the Carmel River basin and the Seaside aquifer. This reclaimed water is utilized by agriculture in the Salinas Basin. The Carmel River water used by Monterey residents is sent as waste water to MRWPCA and receives tertiary treatment before being distributed out into the Salinas basin as part of the agricultural program near the Salinas River. Currently, there are no plans for reciprocity with the Monterey Peninsula residents for using some of this treated waste water.

TRANSPARENCY

Once the proposed plan is approved by the CPUC and ALJ, the public agencies MCWD, MCWRA, and MRWPCA will conduct their meetings in accordance with California's open meeting law, the Brown Act. This guarantees the public's right to attend and participate in meetings of these legislative bodies. Originally the MPWMD was a party to the agreement and would have provided public representation of the peninsula ratepayers. An agreement couldn't be reached as to the exact role that the MPWMD would play. Consequently, the MPWMD is not one of the governing agencies in this project. The result is a lack of direct representation for some of the ratepayers who are underwriting this project. Some are represented by the Municipal Advisor position, but the unincorporated areas have no direct representation. The Civil Grand Jury was impressed by the depth and scope of the technical expertise that all of these agencies were able to bring to bear in solving the water problem. It is unfortunate that the MPWMD does not have a role, as it could have provided another valuable source of local water expertise. The MPWMD has board members elected by the region receiving the water and water professionals whose experience has been underutilized in this project.

Due to justifiable concern by the public, the city mayors have negotiated for a non-voting seat on the Advisory Committee to fill this perceived void. The Municipal Advisors position provides valuable oversight for the ratepayers. Monterey, the city with the largest population, elected not to participate in this position. This position has no voting rights to ensure that the ratepayers concerns are given appropriate review.

⁹ Monterey County Water Resources Agency Act 4/11/95 Section 52-21

OVERSIGHT

The water plan was developed between the four parties, the MCWRA, MCWD, CalAm, and the MRWPCA, who laid out in the contract the activities that each of these members would perform to perfect the plan.

The Civil Grand Jury also found that the current plan did not provide for strong financial oversight. An independent oversight committee could be formed from local experts to provide financial review of major project costs. Several of the communities that will receive this water already have functioning desalination plants and are familiar with their problems. The current desalination plans are designed to furnish only enough water to offset reductions in extraction from the Carmel River to meet the requirements of Order 95-10. Incorporating new areas and adding more communities to the existing water distribution system will necessitate having an agency with the willingness and capability to assume oversight of all the various stakeholders with a vision for serving the water needs of greater Monterey County.

FEASIBILITY

So far, the plans for the current desalination plant as conceived by water experts seem to be viable. A review of other communities in the United States with large scale desalination facilities, however, has shown a high frequency of technical problems over a protracted period of time.

FINDINGS OF THE INVESTIGATION

- F8.1.** While the Municipal Advisor role provides valuable public oversight, the appointed members lack long-term continuity and may lack expertise to effectively monitor complex water issues without the assistance of water professionals.
- F8.2.** Some cities on the Monterey Peninsula already have constructed small scale desalination plants.
- F8.3.** The Municipal Advisor role could be improved if the City of Monterey were represented by being a member.
- F8.4.** It would be in the public interest for MPWMD to have a role in the project, so as to make available its considerable water expertise.
- F8.5.** There seems to be no independent financial oversight.
- F8.6.** Peninsula recycled waste water is not being used to offset an equal amount of Salinas Basin water for export.

F8.7. There are many areas of concern in the technical aspects of this large-scale desalination project.

F8.8. The current desalination plan is to replace Carmel River water. Vital service upgrades for schools and nursing homes cannot happen without new water.

RECOMMENDATIONS OF THE CIVIL GRAND JURY

R8.1. The mayors are encouraged to formalize an advisory support function established from the cities' staff members with the most expertise on water issues to enhance their Municipal Advisor role. [Related Finding: F8.1]

R8.2. Grant the Municipal Advisor role a voting position, as many members are familiar with desalination operations. [Related Finding: F8.2]

R8.3. The Monterey City Council should re-evaluate its position. It would be far better for the residents of the City of Monterey to have representation on the Advisory Committee through the Municipal Advisor role. [Related Finding: F8.3]

R8.4. MRWPCA, MCWD, MCWRA, and CalAm should continue to work to come to some agreement for participation of MPWMD. Because these agency positions may have become entrenched, the Monterey County Board of Supervisors is encouraged to intervene to facilitate some agreement to include MPWMD. [Related Finding: F8.4]

R8.5. Consider the formation of an independent financial overview committee to review major functions of the project. [Related Finding: F8.5]

R8.6. MPWMD and MCWRA should pursue legal clarification or adjudication to allow Peninsula recycled water to be used to offset an equal amount of Salinas Basin water for export to the Monterey Peninsula. [Related Finding: F8.6]

R8.7. It would be prudent to continue work toward additional solutions for more water because of the technical high risk elements of this plan and to assist communities that need to upgrade their outdated municipal services. MCWRA, MPWMD, MRWPCA, and CalAm should pursue all avenues of finding new water for the community. [Related Findings: F8.7, F8.8]

COMMENDATIONS

The MCWRA, MCWD, CalAm, and the MRWPCA are to be commended for setting in motion and following through with a plan to improve the availability of water in Monterey County and on the Peninsula.

REQUIRED RESPONSES

Marina Coast Water District Board of Directors:

Findings: F8.4, F8.5, F8.7
Recommendations: R8.2, R8.4, R8.5, R8.7

Monterey Regional Water Pollution Control Agency Board of Directors:

Findings: F8.5, F8.6
Recommendations: R8.2, R8.4, R8.5, R8.6, R8.7

Monterey Peninsula Water Management District Board of Directors:

Findings: F8.4, F8.5, F8.6, F8.7, F8.8
Recommendations: R8.2, R8.4, R8.5, R8.6, R8.7

Monterey County Board of Supervisors:

Findings: F8.4, F8.8
Recommendation: R8.4

Monterey City Council:

Findings: F8.1, F8.2, F8.3
Recommendations: R8.1, R8.2, R8.3

Pacific Grove City Council:

Findings: F8.1, F8.2
Recommendations: R8.1, R8.2

Carmel-by-the-Sea City Council:

Findings: F8.1, F8.2
Recommendations: R8.1, R8.2

Seaside City Council:

Findings: F8.1, F8.2
Recommendations: R8.1, R8.2

Sand City City Council:

Findings: F8.1, F8.2
Recommendations: R8.1, R8.2

REQUESTED RESPONSES

California American Water:

Findings: F8.7, F8.8
Recommendations: R8.7, R8.8

Monterey County Water Resource Agency Board of Directors:

Findings: F8.4, F8.5, F8.6, F8.7, F8.8
Recommendations: R8.2, R8.4, R8.5, R8.6, R8.7

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