

ABSTRACT

Service Level of Law Enforcement
During a Future Catastrophic Disaster

Lt. R.L. Puckett

Examines the future roles and responsibilities of law enforcement during an earthquake of "macro" proportions, when routine service levels are disrupted.

Trends and events are proposed by a group of disaster specialists that could significantly impact that future. Key policy alternatives are recommended to set a new direction for law enforcement in emergency management. Included are stakeholders who could greatly influence the alternatives.

The author identifies pre-planning policies to support the key alternatives that involves interaction between public safety and community.

1988. 98pp. Bibliography. Appendixes.
Sponsoring Agency: Commission on Peace Officers Standards and Training, California.

WHAT LEVEL OF SERVICE CAN BE
EXPECTED OF LAW ENFORCEMENT
DURING A FUTURE CATASTROPHIC
DISASTER?

U.S. Department of Justice
National Institute of Justice

114095

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COMMAND COLLEGE CLASS VI

PEACE OFFICERS STANDARDS AND TRAINING (POST)

SACRAMENTO, CALIFORNIA

1988

NCJRS

OCT 27 1988

ACQUISITIONS

WHAT LEVEL OF SERVICE CAN BE
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DISASTER?

ROBERT L. PUCKETT

EXECUTIVE SUMMARY

There is an expectation from the public that law enforcement be extremely proficient in all aspects of their position including response to catastrophic disasters. Disaster planning tends to concentrate on localized incidents. The future suggests that law enforcement will be responding to a "macro disaster", an earthquake of catastrophic proportions. Research shows that California will be impacted by an earthquake measuring no less than 8.0 somewhere along the San Andreas fault. That earthquake is expected within the next 10 to 20 years. Law enforcement has not prepared for the additional roles and responsibilities that will come from a "macro disaster". This study identifies the future roles, responsibilities, and strategic alternatives necessary to meet the future challenge.

A Nominal Group Technique (NGT) with a group of specialists in emergency and disaster operations identify five significant future trends:

- . Law enforcement grossly undermanned.
- . Increase reliance upon automation.
- . General lack of earthquake preparedness.
- . Greater use of incident command system.
- . Reanalysis of Government spending.

Additionally, events that could occur and can have a significant impact on the issue are identified and evaluated against the trends in a cross-impact analysis. Futures scenarios have been written as a tool for developing a strategic management plan. The disaster specialists provided assessment of law enforcement organization's strengths and weaknesses to provide service during a catastrophic disaster, should it occur today or in the future. Stakeholders are identified who might have some positive or negative impact on these three key policy alternatives.

- . Mandated Incident Command System to solidify the management of a "macro disaster".
- . Mandated disaster training program for law enforcement.
- . Ballot initiative to fund public safety emergency management training derived from a specified product with a value added tax or even a lottery with funds dedicated to law enforcement/community emergency preparedness.

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PROJECT BACKGROUND

Today's law enforcement agencies have the capability to cope with typical emergency situations. They have developed extensive training, policy, and procedure manuals. They have developed special teams for complicated tactical operations, such as barricaded felons or hostage negotiations. These agencies conduct extensive training exercises to be prepared for the most critical incident. Some training manuals even delineate degrees of emergencies and, if you will, disasters.

Law Enforcement Challenges in a Macro Disaster

Disaster planning tends to concentrate on a single incident within local jurisdictional boundaries, and borders with some definable parameters. The disaster area may be limited to a single structure with a barricaded subject or involved as several neighborhoods, perhaps the result of an airline crash or ravaging fire. A typical emergency and major disaster that law enforcement faces is a catastrophic earthquake. During the past 17 years Southern California had two examples of such a major disaster as evidenced by the 1971, 6.5 earthquake in San Fernando, and the 1987, 5.9 earthquake in Whittier. In these incidents, law enforcement did capably manage the situation. However, the issue is whether law enforcement personnel are adequately trained for the task of managing a major, large-scale disaster beyond their normal

jurisdictional boundaries. Such a "macro disaster" could extend a catastrophe beyond jurisdictional limits, extending into many nearby communities, and encompass an entire region. Thus, in an average city, a "macro disaster" could require extensive emergency services, drawing resources from all of Southern California, or even the Western United States.

The Federal Emergency Management Agency (FEMA) states that "...local government is a setting...the first line of defense against most disasters...and...must assume primary responsibilities in preparation for and response to hazards. Local governments use local resources and exchange or share resources with other governmental units. It is locally that potential hazards are most clearly seen; it is locally that resources must be most fully known; it is locally that first response is made;...that emergency events begin. At this level are those individuals who know the uniqueness of the community, who know where something may go wrong, where special complexities exist, and where resources of aid may be found. (1)

There is a wide range of natural and man-made events that could be defined as "natural disasters;" (fire, flood, tidal wave or atomic attack). This study will concentrate only on earthquakes.

What magnitude of earthquake is so catastrophic as to require a new strategy for law enforcement?

- * An earthquake with a measured 8.3 magnitude occurring along the San Andreas fault.
- * An earthquake that has no limitation on the areas of destruction.
- * An earthquake that has devastating impact on many people and large numbers of property.

When this earthquake occurs, it is expected to create damage to an area 250 miles long and 150 miles wide along the fault line. Seven counties will be involved, affecting over 10 million people. Conservative estimates projected from a State of California Sub-Committee Report indicates that 14,000 people will be killed, many more thousands injured, and over 90,000 left homeless.

The loss of life and property easily equals that lost in warfare....The occurrence of such a quake today would cause damage in the billions. The predictions of earthquakes is obviously of major importance to all humanity. But the events of the last few years give us reason to be doubly concerned. 1976 showed such a dramatic increase in earthquake activity that some earth scientists have publicly stated that the world is entering a period of increased seismic disturbance. (2)

According to Tom Heaton, current Director of the United States Geological Survey Office in Pasadena, California

...by the year 2000, further disastrous earthquakes will have hit the United States. Although probably the 'biggie' will not have occurred yet, we can say that 2 or 3 magnitude 6 or 6-/+ earthquakes will probably have occurred in the Southern California region, and on one or two of those, probably will have occurred in the metropolitan areas of Los Angeles, San Bernardino, or San Diego. I also predict that at least one or two of these earthquakes will come as a complete surprise to the geologists and the geophysicists, that they will have occurred in an unexpected place or an unexpected time, and an unexpected way.... (3)

While this study was being researched, a 5.9 earthquake occurred in the vicinity of Whittier, California on October 1, 1987, causing moderate damage to that community, the city of Pasadena, and surrounding cities in the Los Angeles basin.

The prediction that a significant earthquake will occur is a scientific certainty.

Dr. Robert M. Hamilton, Chief of the U.S.G.S., (United States Geological Survey) Office of Earthquake Studies, recently said, "Californians should not ignore or underestimate the earthquake threat." He told California to prepare for an inevitable "great earthquake" (8.0 - 8.9 on the Richter scale) that will "indeed be a disaster." (4)

The Richter earthquake scale was devised by Dr. Charles F. Richter. It is a logarithmic scale based on ground vibrations registered on seismographs. Each whole number represents a tremor 10 times more severe than the preceding whole number. According to the California Institute of Technology, we are in the last 30 years of a 1,000-year cycle. The probability of a catastrophic earthquake occurring in California during the next three decades has passed

the 50% mark and is increasing 2 to 5% yearly. This earthquake will cause death and severe injury, along with extensive property damage and enormous disruptions of law enforcement services.

Dr. Clarence Allen of the California Institute of Technology, points out that "the pressures of population growth are causing expansion into areas that are more difficult to develop safely than those of past decades...often into mountainous areas, active fault zones, or areas of artificial fields that necessarily have earthquake-related problems associated with them." (5) It is expected that a majority of people in the affected area will be without assistance for up to 72 hours. The extent of road and access damage will hamper any immediate outside assistance. The Office of Emergency Services officials (State of California) predicted:

...that in the stricken area, uninjured residents in regions not burning should expect a minimum of three days without government services, including water services, police and fire protection. They will probably be without electricity or gas, as well;...in Southern California we might lose one to four of the hospital beds, which is a concern in the event of a lot of injuries. (6)

During the 72-hour period following the impact of a "macro" earthquake, emergency services will be extremely limited or virtually nonexistent. The bottom line; people will be cut off; people will be on their own.

Michael S. Reichly, of Southern California Division of Mines and Geology, notes

...following a major damaging earthquake to a California metropolitan area, the ability of major lifelines and other critical structures to perform and not become hazards themselves is of paramount importance to emergency response in recovery process. Lifelines can be defined as those systems which receive and transport people, goods (including energy), services, and information. These would include highways, railroads, airports, power grids, water systems, and telecommunications networks. Critical facilities would include hospitals, schools (as mass-care facilities), and police and fire stations. (7)

"Response strategies that work for local emergencies, such as fires, may not work for major earthquakes. Ambulances and fire trucks may not be available from neighboring communities and, even if they were, blocked streets or lack of water might render them unfunctional." (8)

Earthquakes are the most elusive of natural disasters. Hurricane seasons come, or will come, around every year. Tornados, like that which leveled the tiny Texas town of Caragosa in May (1987), strike with regular force. Rising waters or floods at least give decent warnings. But earthquakes are here and over in seconds. No well understood warnings. Between times...and, for big ones, it can be hundreds of years...they hardly seem like real dangers. (9)

Tom Heaton of the United States Geological Survey Office in Pasadena, California commented, during an interview, that

...about one-half of our earthquakes take us by surprise. The other half are usually foreshocks - small earthquake activity that is followed by some large earthquake. They give us some information that are pretty much a low-probability prediction. So, we are going to be dealing with low-probability situations for awhile in terms of earthquake prediction. (10)

People are more interested in daily hazards, says Tom Tobin, Executive Director of the California Seismic Safety Commission. Why worry about a low probability? People know what wild fires and floods are like. They don't know what a major earthquake is like, so it's hard to get people to believe in it. (11)

According to Richard Andrews, Deputy Director of the Office of Emergency Services and head of the Earthquake Preparedness Program, "I think California is well-prepared for moderate earthquakes, but if we get the big one, greater than 7.0 on the Richter scale, then that's a very different situation. The demands on the State are going to outstrip its' resources." (12)

"In the past 150 years, geologists say 3 earthquakes larger than Richter scale 8.0 have struck in California, the Richter scale measures the force of an earthquake in a rapidly-increasing manner. An earthquake of 7.0 is ten times more powerful than a 6.9, 100 times greater than the magnitude of 6.0." (13)

Changing Role for Law Enforcement During Community Disasters

The following points are some issues that need to be addressed by law enforcement administrators.

- * What role will law enforcement play, given the conditions of a "macro disaster", such as a major earthquake?
- * What type of line and staff support will be needed to the casualty destruction areas?
- * What type of management challenges will be faced by police agencies under such circumstances?
- * How will responsibilities and tasks change with the given environmental conditions?

A "macro disaster" is a very comprehensive term and involves a multitude of problems to law enforcement. This study will look at future considerations by law enforcement management when routine police service levels are disrupted resulting from a "macro disaster" within the context of a severe earthquake.

Today, the responsibility of most law enforcement officers during a disaster operation involves taking necessary control to:

- * Care for and protect the injured by coordinating medical treatment, such as paramedics, ambulance dispatch, and rescue assistance.
- * Establish parameters for protecting the disaster scene and safeguarding property, traffic control of unauthorized people, and maintaining clear emergency routes for medical, utility, and fire personnel.
- * Establish a command post near the disaster for coordination from one central location.

A question is whether law enforcement will be an active participant in a "macro earthquake" response operation, and possibly exercise leadership among public safety organizations. If they meet the challenge, what are the responsibilities? If the advent of a major earthquake is as imminent as research indicates, it seems important that law enforcement take the time to

see how they would fit into a large operational picture of managing "macro disasters." How can law enforcement prepare more effectively for changing roles and responsibilities in the management of "macro disasters?"

As Dr. Charles Richter, the "dean" of the world's seismologists, once told a San Francisco reporter, "there is simply no locality in this state (California) that is exempt from the earthquake risk. The probability of another major one is not a doomsday prophecy ... it is going to happen." (14) In light of such an eventuality, "macro disaster" planning by California law enforcement agencies on a statewide, regional, and local basis would seem to be prudent!

FUTURES STUDY

Statement

Utilizing futures research methodology, the first objective is to factor and study the general issue. That issue is: if a major catastrophic earthquake should occur within the next decade, what effect will it have upon law enforcement personnel and their changing roles and responsibilities should current service levels to the community be disrupted?

Related issues from the past have been identified. Scanning literature on the subject and conferring with a recognized leader in the issue field, suggested the following:

- * Has earthquake preparedness been a concern to law enforcement?
- * Did law enforcement recognize that it had a role in earthquake preparedness and response?
- * Has law enforcement received appropriate and adequate training in preparation for an earthquake?
- * How well did law enforcement perform when an earthquake occurred?
- * Did law enforcement understand the speculated magnitude of an impending earthquake or catastrophic earthquake?
- * Did law enforcement have the resources to respond if an earthquake occurred?

Related issues, emerging in the present, were identified by the same process as past issues were identified. The issues were subjected to a preliminary screening, as an approach to structuring the general issue for research. The criteria was a judgment concerning the degree of relatedness. The result was five issues that, when considered together, essentially define the parameters of the general issue to be studied.

- * Does law enforcement recognize the potential impact of a catastrophic earthquake on community service levels?
- * Should an earthquake occur today, do law enforcement personnel understand their current roles and responsibilities?
- * Are the current disaster operational plans understood by the organization?
- * Is law enforcement being proactive or reactive in their training efforts toward an anticipated catastrophic earthquake?
- * Is the service level expected of law enforcement for the community capable of being met should a catastrophic earthquake occur?

Consideration was also given to related issues that might emerge by the year 2000. Future issues were judged to be relevant on the basis of potential impact upon possible futures scenarios. The initial selection was:

- * How will roles and responsibilities change in the "macro-disaster" environment?
- * Is law enforcement prepared for a long term "macro-disaster" operation?
- * Is the field officer prepared to cope with a "macro-disaster" when routine service levels are disrupted?
- * What level of mutual aid service can be expected to respond when a "macro-disaster" disrupts routine services?
- * What will be the greatest impact upon the law enforcement officer and how can management become more prepared for the changing environment of a "macro-disaster?"

Methods: Identification

A number of methods were utilized to accomplish the objective of a futures study.

- * Literature scanning of past and current materials.
- * Interviews: a one to one meeting process.
- * A nominal group technique [NGT]: a method for problem solving and identification of futures, trends, and events.
- * A forecasting matrix: a cross impact analysis of trends and events.
- * Futures scenarios.

Methods: Implementation

A lengthy literature search was conducted. Collected literature was scanned for relevant information to provide a resource for historical reflection, relevant patterns, and current data as a base for developing related issues and as a means to substantiate a need for this futures study. Additionally, data was gathered to suggest future trends and future technologies that may be beneficial when law enforcement must respond to a catastrophic earthquake. Literature scanning was conducted at the following locations:

- * Cal State University, Fullerton
- * Office of Emergency Services, City of Anaheim
- * Peace Officer's Standards and Training, State of California
- * Department of Conservation, State of California
- * Federal Emergency Management Administration, San Francisco
- * Southern California Emergency Preparedness Program, Los Angeles
- * American Red Cross, Los Angeles
- * Office of Emergency Services, State of California
- * Local newspapers

A nominal group technique [NGT] process was conducted. It is a means to take an issue in question and individually generate ideas for presentation to the entire group convened. It provides an opportunity for discussion of all ideas presented by group members. Ultimately it leads to a process of voting on items considered most important, ranking what the group considers the best of the ideas submitted. Selected to participate were a group of ten interested and knowledgeable managers of Disaster Services Operations. Members of the group included an Assistant City Manager, who is responsible for

emergency services coordination in his city; a Fire Chief, who is noted nationally for his expertise, ingenuity, creativity, and futures oriented in disaster operations; a Deputy Chief with a law enforcement agency, who is recognized for development of disaster operations planning; three law enforcement Lieutenants, who are the emergency/disaster services coordinators for their agency; one Police Lieutenant, who commands the Training and Planning and Research Bureau for an agency; a civilian Emergency Services Coordinator for a Southern California city, who is a recognized leader and lecturer in his field; a civilian Communications Manager, who was invited to participate because of his extensive experience in the law enforcement communication/dispatch operations field; an Emergency Services Coordinator for a County Health Department, was invited because of the experience within the disaster operations field and to provide a perspective from outside the law enforcement field.

The NGT group identified emerging trends that will impact the stated issue by 1998. Their lists of trends were reduced to a selection of key trends to be evaluated with a further identification of events that could have a significant impact upon the general issue. Probability of the events occurring were evaluated along with the inter-relationships of trends and events through a cross impact analysis process.

Finally, three futures scenarios were generated from the research utilizing the nominal, normative, and hypothetical modes.

Emerging Trends

Prior to the group meeting, all participants received a package of data as an orientation to the issue and process. That package included a portion of the independent study proposal that was relevant to their meeting. It

included identification of the issue, the executive summary, the project background, and the futures study objective. Also, included was an overview of the NGT process so they would be familiar with the exercise.

On the meeting date, each member of the group individually prepared a list of emerging trends that they perceived would impact law enforcement personnel during the next decade as those trends relate to a catastrophic earthquake occurring and the impact it could have upon service levels to the community. Next, a "round robin" approach was used to generate a visual listing of the entire group's thoughts that generated the preliminary trends. (Refer to Appendix A).

Time was taken with the group to review each of the identified trends to refine the trend statement and clarify its exact meaning. Then via a voting process, participants each selected what they thought were the five most significant trends that would effect the issue in the future. The group discussed the trends with the highest values and with some critical thinking and analysis came to a concensus of the five most significant trends.

Those trends were:

1. Law enforcement will be grossly undermanned for the required tasks.
2. Increased reliance upon technical and automated systems.
3. General lack of earthquake preparedness by law enforcement and the public to handle a catastrophic incident.
4. Pressure for greater use of the Incident Command System [ICS] from Federal and State levels.
5. Reanalysis of government spending to reflect priorities, limitations, and restrictions.

The committee was given a trend evaluation form to estimate the level which they individually perceive the trend has moved during the past five

years and will move over the next ten years. (Refer to Table One). The evaluation establishes a base value of 100 for the year 1988. The value may increase or decrease for the given years based on the individual perception. Five graphs were prepared to plot the "mean" level of the identified "most significant" trends after consolidating the group's evaluations. (Refer to Graphs 1 through 5).

Trend Discussion

The following five major trends were analyzed by the group.

Law enforcement grossly undermanned. The group perceived that law enforcement routinely is striving to increase its compliment of peace officers to accomplish the goals and objectives of policing the routine and typical functions required by a law enforcement agency. Most agencies consider themselves to be undermanned for the task that they are required to accomplish.

Routinely, emergencies are handled with ease and available personnel. That is the norm; that is expected. If the emergency should become more complicated and require additional manpower, a system of mutual aid response with a specified response format is put into action. Escalated situations can be classified as routinely handled through an accepted mutual aid contract between law enforcement agencies.

What happens when a catastrophic event occurs? Law enforcement agencies are staffed for the norm, the routine; but, if a catastrophic earthquake should occur as described, then routine staffing will be insufficient. Is mutual aid available? Not likely, for a catastrophic earthquake will probably encompass many communities, each handling their own difficult situation. The community will be affected with collapsed buildings, broken freeways, damaged bridges, ruptured water lines, power lines down, mutiple injuries, and multiple deaths.

TREND EVALUATION

	TREND STATEMENT	LEVEL OF THE TREND (RATIO: TODAY = 100)			
		5 YEARS AGO	TODAY	"WILL BE" IN 10 YEARS	"SHOULD BE" IN 10 YEARS
1	LAW ENFORCEMENT GROSSLY UNDERMANNED FOR REQUIRED TASKS	86	100	115	57
2	INCREASED RELIANCE UPON TECHNICAL AND AUTOMATED SYSTEMS	62	100	145	147
3	GENERAL LACK OF EARTHQUAKE PREPARATION BY LAW ENFORCEMENT AND THE PUBLIC TO HANDLE AN INCIDENT	85	100	92	100
4	PRESSURE FOR GREATER USE OF THE INCIDENT COMMAND SYSTEM (I.C.S.) FROM THE FEDERAL AND STATE LEVEL	4	100	142	195
5	RE-ANALYSIS OF GOVERNMENT SPENDING TO REFLECT PRIORITIES, LIMITATIONS AND RESTRICTIONS	83	100	110	116

14

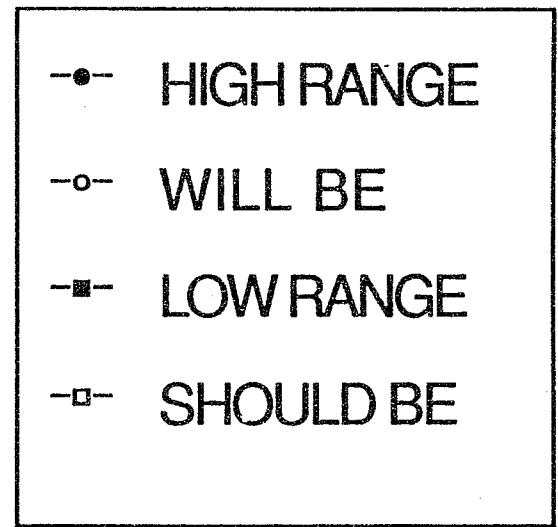
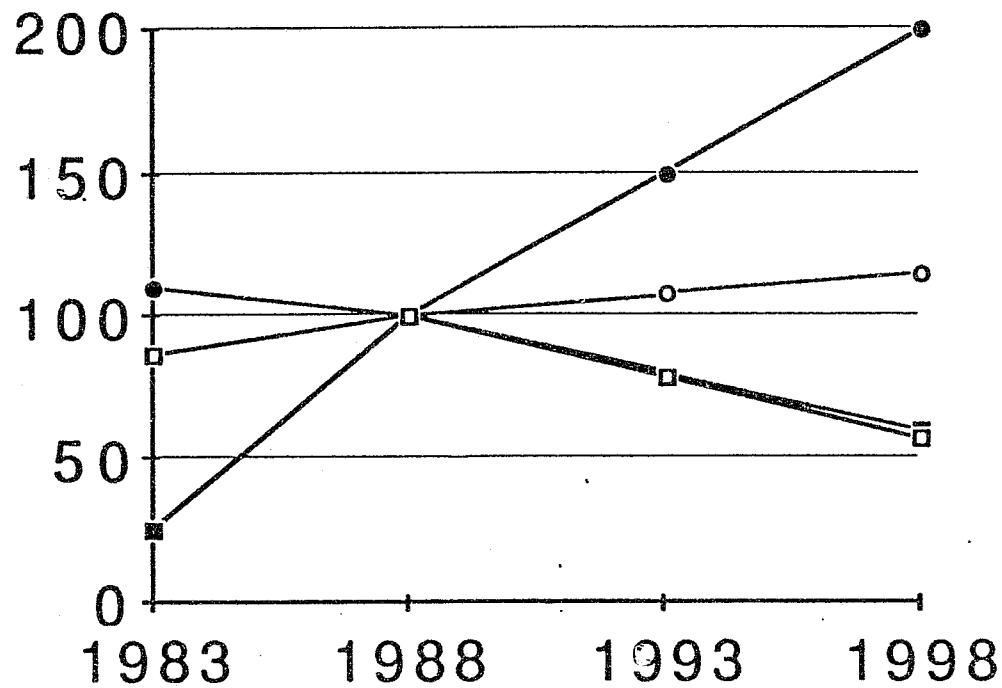
Table #1

LAW ENFORCEMENT GROSSLY UNDERMANNED

TREND #1

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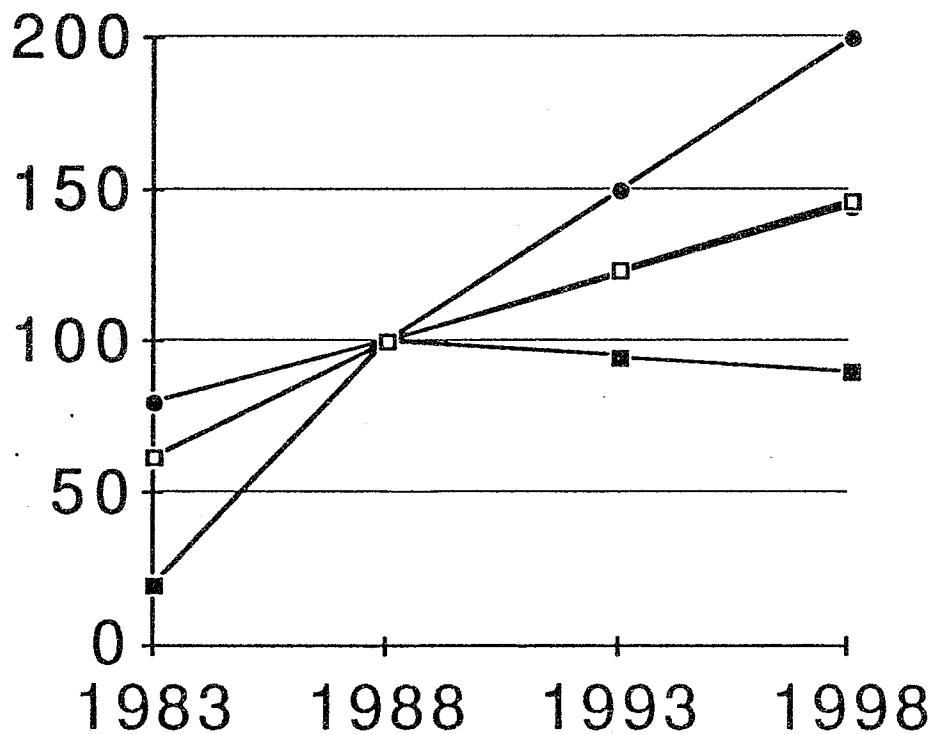
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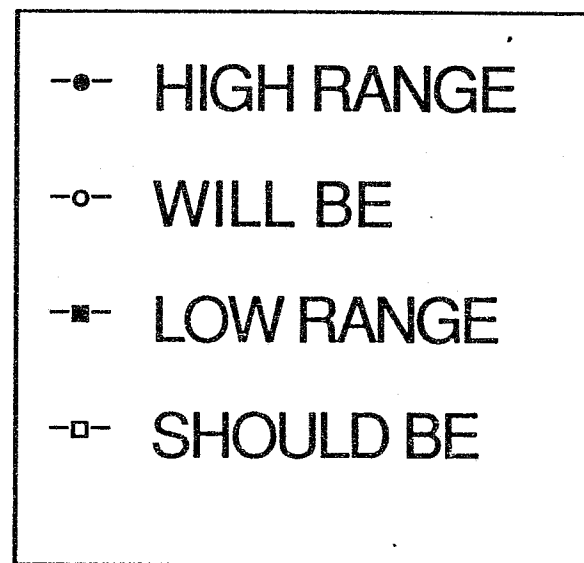
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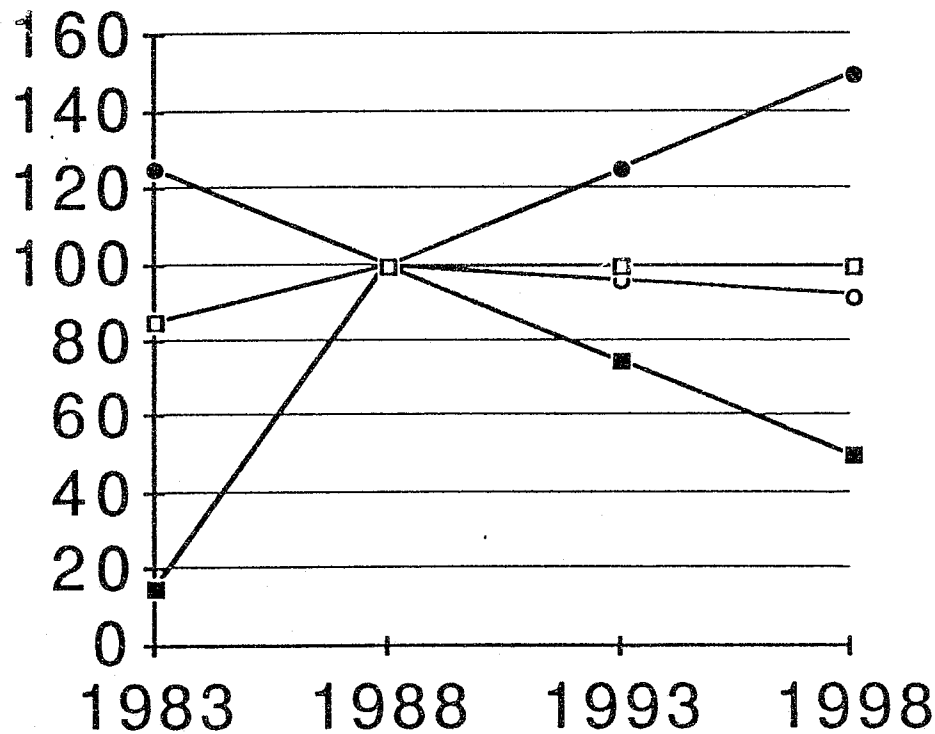


TREND #2



LACK OF EARTHQUAKE PREPARATION

TREND
LEVEL



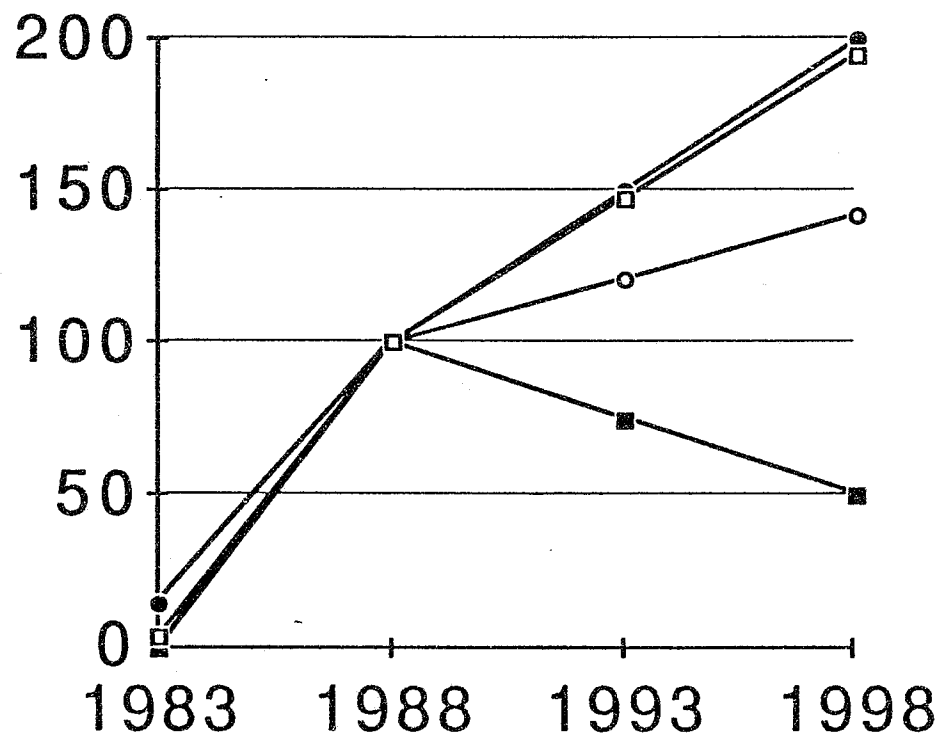
TREND #3

- HIGH RANGE
- WILL BE
- LOW RANGE
- SHOULD BE

USE OF THE INCIDENT COMMAND SYSTEM (I. C. S.)

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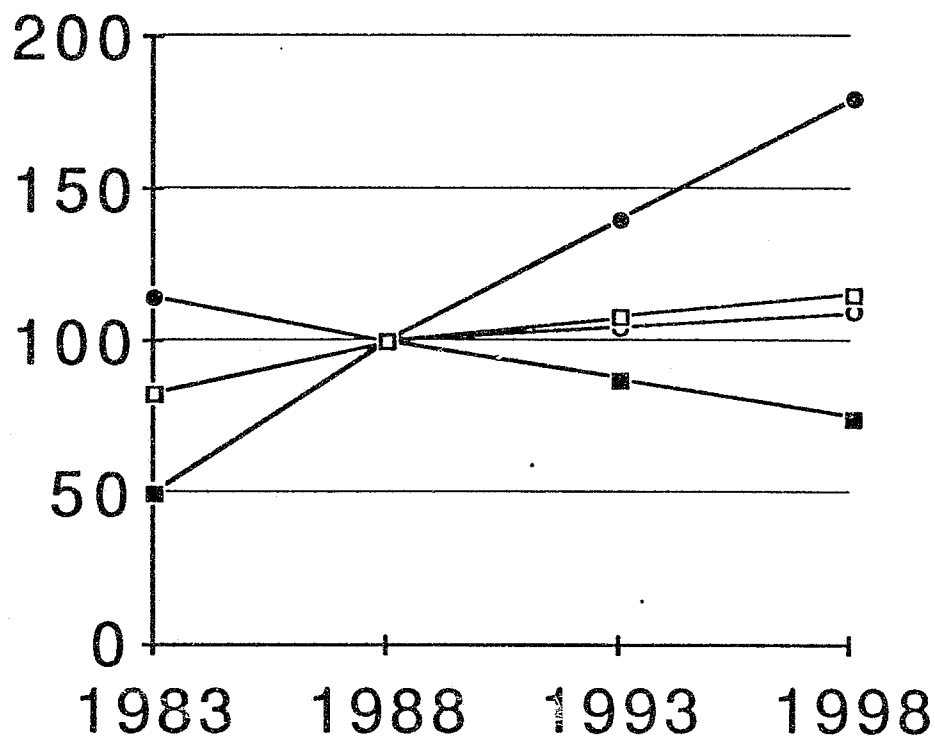
TREND #4

- HIGH RANGE
- WILL BE
- LOW RANGE
- SHOULD BE

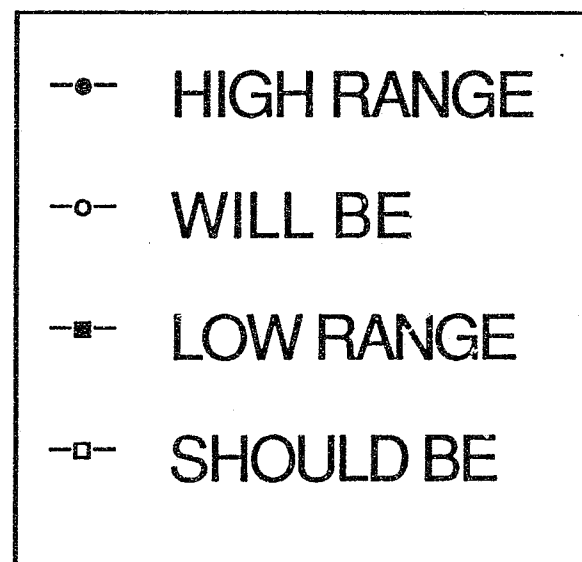
RE-ANALYSIS OF GOVERNMENT SPENDING

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TREND #5



Medical personnel will not be available to respond in a "macro disaster." The first response emergency medical personnel are fire department paramedics. The Fire Chief, who was a member of the studies group, stated that during routine operations, approximately 80% of fire department responses are for medical calls. During a major disaster the priority use of safety/fire personnel changes. The ratio reverses; 80% of response is directed toward firefighting.

Even in routine emergencies law enforcement will have multiple performance tasks. In a catastrophic event their multiple tasks will be magnified several times over. Law enforcement must cope with isolation, traffic collisions, injuries, fire, dead bodies, and quite probably with a reduced level of personnel during the initial stages of the incident.

The question is asked, can law enforcement rely on its routine compliment of field personnel? Lieutenant Cleat Hyman, Emergency Services Coordinator for the City of Redlands Police Department, accepts the presumption that there will be a uniformed casualty loss of 15% to 30% of their personnel.

The group saw no improvement in this trend over the next ten years. It is a serious problem that must be addressed.

Increased reliance upon technical and automated systems. Technology is blossoming. The computer age has finally reached law enforcement. The perceived trend suggests a nearly 50% increase in new technologies available to law enforcement over the next ten years. Production for law enforcement could be available today if sufficient funds were available to generate a competitive market place for the technological environment. The rule of supply and demand would generate creative thinking and development for the law enforcement field. The question is asked, at what point do we reanalyze the

value of cost benefit ratios versus the benefit of technology in a field where human life is at stake and should be a priority.

General lack of earthquake preparation by law enforcement and the public to handle an incident. Government efforts at the Federal and State level frequently remind law enforcement and the public of the impending disaster. A lot of time and effort has been placed on recommending preparation measures to be established. However, many public agencies and the general public have been slow either developing action plans or acknowledging the threat exists. Major companies seemed to be more prepared by developing independent organizational disaster plans. In these companies funding is not as great an issue as small independent firms who are not spending time or money to prepare their businesses or personnel. There is an interest toward preparation with greater awareness than ever before, but the trend suggests that our current status of disaster preparation will remain fairly static in future years.

There is an ongoing interest to raise public consciousness of earthquake preparedness and the doctrine of self-sufficiency preparedness in terms of the citizens, says Fritz Patterson, Deputy Chief of the Office of Emergency Services for Law Enforcement. Are we properly preparing the public toward the acceptance of this concept? They are conditioned that when they pick up the telephone and dial 911, a peace officer will be there in two to three minutes. According to Patterson, the Governor's office established an Earthquake Preparedness Month to try and increase public consciousness of the problem and to inview them toward the concept that when an earthquake happens, don't expect police and fire to respond as they have traditionally known.

Patterson feels that law enforcement has not planned adequately for a catastrophic event. "We are all planning for law enforcement to do certain

tasks, but law enforcement is not planning how they intend to perform those tasks."

Pressure for greater use the Incident Command System [ICS]. An Incident Command System [ICS] is a process to command and control resources at emergency incidents. The system consists of procedures for controlling personnel, facilities, equipment, and communications. The system was developed as a consequence of fires that consumed large portions of wild land, including structures, in Southern California in 1970. It provided agencies a means to work together toward a common goal in an effective and efficient manner. It is designed to begin developing from the time an incident occurs until the requirement for management and operations no longer exist. The system can be used for any type or size of emergency, ranging from a minor incident involving a single unit of people, to a major emergency involving several public agencies, including a catastrophic earthquake event of "macro-disaster" proportions. Because the system has been used very effectively as an emergency management system with firefighting agencies throughout the nation, it is now being adapted for use by law enforcement agencies.

Several law enforcement agencies within the state of California have been developing a concept of ICS for their individual agencies, whether it is called ICS or something else. William Medigovich, the Director for the Office of Emergency Services in the State of California, says his office intends to incorporate the ICS as a key component of the disaster operations plan and that OES intends to develop an ICS standard.

In the meantime, other cities and counties throughout the state will probably not wait and will continue to develop systems of their own. The

problem is compatability. According to Bob Hill, Chief of Law Enforcement for the Office of Emergency Services, there is a belief that within the year [1988] the Governor is going to mandate state agencies to utilize the ICS system. When such a system is developed, it will become a standard by which agencies will be measured regarding deployment of resources and command of a situation under emergency situations. Law enforcement does not need to be criticized for inappropriate utilization of manpower and equipment and other valuable resources. A standardized system enhances the concept of mutual aid and will secure the point that, given certain conditions law enforcement can refer to the ICS Command System as being state of the art.

ICS puts law enforcement personnel into specific job assignments and focuses their expertise and knowledge into a specific functional area. Because of the interest throughout the State of California and the positive results of an ICS system, the group anticipates an approximate 50% increase in system development and use during the next ten year period.

Reanalysis of government spending. Public entities such as Federal, State, and Local governments have special concerns that set them apart from private enterprise when it relates to managing fiscal resources for their respective organization. Law enforcement has had a turbulent history during the past fifteen or more years keeping its feet above water, so to speak, providing adequate and responsive service to its communities. State and Federal funding for creative and innovative programs were available to those agencies who took the opportunity. These programs became a means for a few police agencies to reach above and provide additional services that they normally had a problem providing. Today, control and responsibilities are being returned to the local level to sift out methods for financing those

often free services. As revenue sharing funds are predictably being dried up, law enforcement agencies may have significant financial problems in the future. Those problems could even be greater than the result of Proposition 13 voted on several years ago.

Today, law enforcement is faced with significant future financial problems. Problems that are forcing an evaluation of service needs and responsibilities to the community. Evaluation of what the future might suggest. Evaluation of events within the community that are impacting the environment and resources, not only today but tomorrow. On the other hand, the community in general is looking for continued and often increased service with limited spending and effect upon their tax dollar.

Critical Events

Continuing with the NGT process and using the same format as in trend development, the group identified a list of key events they felt would have a significant impact on the identified issue that looks at the level of service that can be expected of law enforcement during a future catastrophic disaster. (Refer to Appendix B). Through a voting process, the committee selected five events considered to be the most critical that could potentially alter the trend. Given a prepared format, an event evaluation form, the committee individually and then collectively determined the probability of each event occurring by the year 1998. The five key critical events are:

1. A major judgment against a City government for lack of emergency management and planning.
2. A Federal mandate for all emergency response agencies to adopt the Incident Command System [ICS] to qualify for disaster relief funds.
3. Substantial [major] commitment at national and state level to fund disaster preparedness and training at the local level.

EVENT EVALUATION

	EVENT STATEMENT	PROBABILITY		NET IMPACT ON THE ISSUE AREA (-10 TO +10)	NET IMPACT ON LAW ENFORCE- MENT (-10 TO +10)	
		YEAR THAT PROBABILITY FIRST EXCEEDS ZERO	BY 1993 (0-100)			BY 1998 (0-100)
1	MAJOR JUDGEMENT AGAINST A CITY GOVERNMENT FOR LACK OF EMERGENCY MANAGEMENT AND PLANNING	1990	55.5	88	5.3	4.3
2	FEDERAL MANDATE FOR ALL EMERGENCY RESPONSE AGENCIES TO ADOPT I.C.S. TO QUALIFY FOR DISASTER RELIEF FUNDS	1993	58.3	79	7.5	6.2
3	SUBSTANTIAL (MAJOR) COMMITMENT AT NATIONAL AND STATE LEVEL TO FUND DISASTER PREPAREDNESS AND TRAINING AT THE LOCAL LEVEL	1993	41.6	57	7.4	4.8
4	"DIMES FOR CRIMES" INITIATIVE IS RE-ACTIVATED AND PASSES TO PROVIDE MORE POLICE ON THE STREET	1990	58.8	66	3.9	6.0
5	50% OF MALES BETWEEN 18 AND 35 TEST POSITIVE FOR AIDS	1998	7.2	19	-3.9	-4.3

Table #2

4. "Dimes for Crimes" initiative is reactivated and passes to provide more law enforcement on the streets.

5. Fifty percent of the male population between 18 and 35 test positive for AIDS.

Included in their evaluation was an impact estimate on the issue and, separately, upon law enforcement. Each event was rated by the individual committee members. A mean value was determined by compiling the evaluations of each committee member. The results are demonstrated in Table Two.

Major Judgement Against City Government. Historically law enforcement has generally been praised for their participation in an emergency incident that dealt with life threatening possibilities. In more recent time, law enforcement has been criticized for their use of poor judgment and lack of emergency management systems with specific operational procedures to direct critical situations. Often, a lack of communications among command personnel was a key issue. Fritz Patterson, from OES, relates that currently there are cases pending to sue law enforcement agencies and their cities specifically in the specialized discipline of search and rescue. The substantive issues are conduct of search operations, management of search operations, expertise of personnel managing the operation, the commitment of resources, the timeliness of resources, and the type of resources that are consistent to the need of the situation.

The future, quite possibly, is leading toward major litigation that may ask the questions:

1. Who did the planning?
2. By what standards were the plans drawn?

Considering that the committee qualified this event with the term "major judgment", they felt that there was a significant chance of a judgment

occurring after the year 1990. It was such a pressing issue that there was more than a 50% chance by the year 1993 and nearly a 90% chance by the year 1998.

Federal mandate for all Emergency Response Agencies to adopt ICS. Should a catastrophic earthquake occur, it will be increasingly more important that law enforcement have the capability of implementing some system whereby they can work independently or have the ability to work efficiently in harmony with other law enforcement and allied agencies. Deputy Chief Ringhoffer of the San Bernardino Sheriff's Department states, "the ability of the responsible agency to manage the incident appears to decrease in direct proportion to the complexity of the situation and the number of agencies involved." (15) Because the Incident Command System is becoming recognized nationwide and particularly within the State of California, the committee suggests that the system will be legislated to include all law enforcement and fire departments for city and county agencies; and these agencies will be mandated to adopt an ICS system that would be compatible to other governmental agencies. The committee qualified this event by stating that governmental agencies must adapt and utilize an ICS system to qualify for disaster relief funds. They felt that an event of this magnitude with a specific qualification would encourage and expedite the development and utilization of an ICS system. The committee's evaluation suggested that there was a nearly 60% probability for this event occurring by 1993, and nearly an 80% chance by 1998. Of all events identified, ICS was suggested to have the most substantial impact on the emerging issue.

Substantial commitment at national and state level to fund disaster preparedness. Although the event identified suggests funding not only at the

state level but also at the federal level, the feeling of the committee was that the issue of earthquakes is more pronounced in certain states such as California and some mid-west states. Therefore, blanket funding would not be as easily committed for events that do not have affect upon the entire nation or state, e.g. toxic waste that has nationwide implications. However committee consensus suggested, if this event should occur, the structure or implications of the event would not be "earthquake" preparedness but, in fact, would stress "disaster" preparedness. There was a higher probability that the event would occur since "diaster" has implications that would effect all states in the nation and include all disasters such as earthquake, flooding, volcanic eruption, tornado, hurricane, and any other that might be categorized. The committee considered the probability relatively high, nearly 60%, by the next ten years and if it should occur it would have significant impact upon the emerging issue.

"Dimes for Crime" initiative is reactivated. In a recent election, the voters rejected an initiative that would place a monetary value upon all liquor that was sold in California. The funds collected from that initiative would be utilized in an effort to fund law enforcement goals toward reduction of crime within the state, however that initiative failed. It was suggested that the initiative may surface again and be rewritten to accommodate a perhaps even more pressing issue, that of survival in a catastrophic disaster, perhaps an earthquake. Through the evaluation process, it received one of the highest probabilities of first occurring, perhaps by the year 1990. Perhaps with the right impetis, the initiative could be reactivated and passed by the voters.

Fifty percent of males between 18 and 35 test positive for AIDS. The committee identified this event because currently the issue of AIDS as an

epidemic in our society is profound and prevalent in the minds of public service personnel. Although the probability of the event reaching 50% is relatively low, the question was asked, what if it were 25%? How would that impact the probability and the issue? It was suggested that as the preventive percentage decreased, the probability would certainly increase. Although the net impact on law enforcement was not significant, it was certainly meaningful and a concern to everyone on the committee. It's not really known what the status of AIDS will be ten years from now. There is considerable speculation. There is lots of hope. On the other hand, new strains keep cropping up and millions of dollars are being poured into research seeking a cure. The concern, of course, is if no way was found to curtail the spread of AIDS in the near future. The committee asked what would happen in a catastrophic event such as an earthquake should we have a population of 50% male testing positive? How would law enforcement officers react knowing that one of every two males that they assisted in a critical life saving effort had AIDS? How will officers respond or react in that given emergency situation, especially within the context of a "macro disaster". It was suggested that law enforcement must prepare the officer through orientation of the disease, techniques to lessen contact exposure, provide current data of the anticipated expectation, and provide the tools to safely handle the injured.

Cross Impact Analysis

The events were placed in a cross impact grid format to evaluate the effect one event would have upon another, if it should occur. Additionally, events were evaluated against the perceived trends to determine what influence they may have upon the trend level previously estimated. (Table #3)

CROSS IMPACT ANALYSIS = 1998

Suppose that this event with this probability actually occurred.... How would the probability of the events shown below be affected?

How would trend levels be affected?

		TRENDS									
		E - 1	E - 2	E - 3	E - 4	E - 5	1	2	3	4	5
E - 1	88%		No Change	Decreased to 60%	No Change	No Change	No Change	No Change	Decreased to 22%	Increased to 5%	Increased to 8%
E - 2	79%	Reduced to 50%		Increased to 80%	No Change	No Change	No Change	No Change	Decreased to 40%	Increased to 83%	Increased to 13%
E - 3	57%	Reduced to 50%	Increased to 98%		No Change	No Change	No Change	Increased to 20%	Decreased to 46%	Increased to 83%	Increased to 15%
E - 4	66%	No Change	No Change	No Change		No Change	Decreased to 43%	No Change	No Change	No Change	Increased to 15%
E - 5	19%	No Change	No Change	No Change	No Change		Increased to 30%	Increased to 8%	No Change	No Change	Increased to 27%

LEGEND:

EVENTS

- E-1 = MAJOR JUDGEMENT
- E-2 = MANDATE TO ADOPT I.C.S.
- E-3 = COMMITMENT TO FUND
- E-4 = INITIATIVE RE-ACTIVATED
- E-5 = AIDS TESTING

TRENDS

- 1 = LAW ENFORCEMENT UNDERMANNED
- 2 = TECHNOLOGY
- 3 = LACK OF EARTHQUAKE PREPARATION
- 4 = USE OF I.C.S.
- 5 = RE-ANALYSIS OF SPENDING

Table #3

Cross Impact Evaluation

Each of the events identified would cause some change to three of the five events and to all five trends. The two "actor" events that identify a substantial commitment at national and state level to fund disaster preparedness and training at the local levels [57% probability] and that a federal mandate for all emergency response agencies to adopt ICS to qualify for disaster relief funds [79% probability], would cause the most significant effect upon the identified trends.

A funding commitment was considered extremely important toward improving technology, and as a means to influence, not only law enforcement but the general population toward earthquake preparedness. Funding would significantly enhance the interest level of law enforcement to adopt an Incident Command System. Of course, as a result of additional funding, local government should reanalyze its current fiscal priorities. Increased allocation funding levels are available to alter the trend direction of the other identified trends.

Should an Incident Command System be mandated by the federal government, then that could significantly alter the probability for litigation toward the government entity. It was also felt that if ICS would be mandated, it would have a significant impact upon support funding for disaster preparedness and training. This mandate suggested law enforcement would be instilled to enhance their interest in earthquake preparation. It was thought that the Incident Command System planning would develop new insights and interests toward disaster preparation into new operational concepts. The most significant change was in the pressure for greater use of an ICS system. Obviously, if such a system was to be mandated at the federal level, it

automatically places significant pressure for its adoption and use. Again, a reanalysis of funding must take place. The mandate has occurred, but the substantial commitment of funding at the national and state level may not necessarily happen.

The most significant "reactor" was the trend for reanalysis of government spending to reflect priorities, limitations and restrictions. That trend was influenced by every event suggested. Each of the events will cost money; each of the events means government entities must either look for new revenue streams or change the way they are doing business today, which means the priorities and goals of today's working environment must be altered for the new futures environment.

Scenarios

The data has been collected, massaged and documented into a trend forecast, event evaluation and then analyzed via a cross-impact analysis. Now there is an opportunity to look into the future and suggest some alternative futures. These futures scenarios become the basis for developing an interactive Strategic Management Plan.

Scenario I - Most Likely

How often we talk about the "big one"; the earthquake that will seriously devastate a great portion of Southern California. Today it is 1998 and that earthquake still has not arrived. Between 10 and 15 years ago people were talking about how unprepared this country would be if a catastrophic, 8.0+ earthquake should strike. People frequently ask "what if." During that time the news media made an effort, through television broadcasts and newspaper coverage, describing the lack of governmental and public preparation this country had taken toward such a disaster. After a series of earthquakes that

occurred during those years, people started to be concerned about how they might survive such a disaster. Interestingly, when the concern level was at a high point and people had earthquake preparedness as a priority, few earthquakes occurred during the next 10 years. Oh, we have felt some tremors throughout California. However none have been as strong as the earthquake that occurred in 1987, striking the City of Whittier. Other parts of the country were not as fortunate. An incident occurred outside California that had a major effect upon the public governmental systems, especially law enforcement. There was some concern whether public entities were adequately prepared for response to a catastrophic disaster. The event was a moderate 5.9 earthquake centering itself and radiating along the New Madrid Fault that extends downward through the southeastern portion of the United States. Although there was an expectation that a large earthquake could occur on this fault line, little had been done to prepare communities for the potential damage. Even though in 1984, Federal funds had been committed to address earthquake issues along the New Madrid Fault line, comprehensive disaster preparedness plans were only developed by a few cities. In this incident a moderate-size community was at the epicenter of this devastation. It was an older community. Many people lost lives and several million dollars occurred due to the destruction. The management of this community had not been prepared with a viable, current and tested disaster operations plan. The community took an issue into litigation, stating the city failed to prepare the local citizens for the probability of such an earthquake, nor did the City properly prepare its employees to cope with major catastrophic disasters. As a result, in 1995, a major judgment was awarded to members of the community for the city's lack of emergency management and planning efforts.

California took note. Until that time and during the period after the Whittier earthquake in 1988, when earthquake activity was at one of its' lowest points, the public remained rather status quo on continuing its' education and preparation for a future earthquake. Although preparation and planning concepts were documented at the State and County level, local police did little to continue its' plans and preparations should a catastrophic earthquake occur. Law enforcement continued with the excuse that they were undermanned to prepare for an event that was somewhat unpredictable and somewhere in the future. However, as a result of the New Madrid earthquake, a series of events seemed to force a transition toward necessity and desire to prepare for future disasters. Soon after the federal government mandated that all emergency response agencies must adapt to an Incident Command System (ICS) to qualify for disaster relief funds. That got the attention of local government. Although some funding became available at the national level filtering through individual States to assist funding disaster preparedness and training at the local level, it really wasn't sufficient at this late date to accomplish a major planning effort. Local governments began a process of reanalyzing and setting new priorities for funding disaster preparedness and training.

ICS had been around for many years. Some law enforcement agencies had attempted to utilize the system that had been considered to be an effective method of controlling major incidents. However, when the federal mandate was established municipal government and law enforcement agencies began to seek an active role in establishing sound and solid operational plans using the Incident Command System. There was still an issue of law enforcement's ability to be properly staffed at the law enforcement level should a

catastrophic earthquake occur, and a concern for sufficient funding to supply additional manpower. As a solution to these concerns, a 10-year old initiative that was rejected by the voters in 1986, was reactivated and rewritten. The public passed this initiative in 1996. It was written very specifically to fund local law enforcement agencies for training its' personnel and the community for a catastrophic earthquake in California.

During the later 1980's the great wave of AIDS was a major issue in many communities. Emergency service personnel, including law enforcement, had concerns for law enforcement, had concerns for their welfare when coming into contact with young males. The epidemic was continuing to grow and statistically there was an upward trend that the younger male population was testing positive for AIDS. However, in 1991 a major pharmaceutical laboratory firm produced a medication that would effectively treat the AIDS virus. As a result, since that time, AIDS is being effectively treated and the downward trend of deaths due to AIDS has been dramatic.

Scenario II - Worst Case

The year is 1998. What a turmoil the state of California and, in particular, the southern portion of California has been in during the last six years. I found an article that was written in 1982 that Frank Schober, who was the Commanding General of the California National Guard, stated: "When the major earthquake predicted for California strikes, it will be the largest disaster in American history in terms of lives lost, property destroyed, and essential services disrupted. Not only California, but the entire country will suffer a serious setback. People everywhere will respond. There will be assistance from nearby areas, from state and federal governments, and from charitable agencies across the nation. That a major quake will occur is as

certain as any scientific prediction can be."

Frank Schober was making a pitch that the inevitable will occur and that we should be prepared. Well, ten years after he wrote that article, the inevitable did occur. In 1992, that catastrophic earthquake struck Southern California.

Scientists knew that such an earthquake would occur someday based on calculations derived from historical occurrences. What was uncertain was exactly when and the intensity. They often talked about an 8.3 earthquake on the San Andreas fault. But some scientists were in disagreement and said it would never reach that intensity. Perhaps a 7.9 would be the upper limit. Few scientists ever thought it would exceed 8.3 magnitude. Well, this one did; an earthquake measuring 8.6 on the Richter Scale. Scientists and structural engineers knew that if an earthquake of 8.0 should occur on the San Andreas fault, that there would be heavy devastation with structural damage to even the most modern building. I suppose if an 8.0 earthquake would have occurred, our modern structures would still be standing. But, I don't feel that anyone had contemplated the devastation that an 8.6 would have on our communities. In 1987, when Whittier had a moderate 5.9 earthquake, there was a lot of concern and public reaction. The news media spent hours of research and dedicated time talking about the potential of a catastrophic earthquake, disaster planning and preparedness, thinking that the public would arise to the moment and begin to prepare and take action for a future event. A frequent response is a "knee-jerk" reaction. People are interested and concerned as long as the incident is fresh and reoccurring. People, communities and public service return to the routine and often complacent way of doing business, as the fright level reduces and time diffuses memory.

There was a push by law enforcement during the mid and latter 1980's to seek a better method of taking control and command of major incidents, including disaster operations. The method being developed was called an Incident Command System (ICS). Sporadic training and program development had occurred at the municipal and county level; but most public agencies were struggling with a rising cost of doing business. Government was in a mode of re-analysis. Inflation forced a review of fiscal priorities, limiting new program expansion and futures manpower concepts that had been identified to enhance disaster planning. After the earthquake in 1992, several cities in Orange County incurred major destruction. The citizens of one community filed a class action suit against that city for lack of emergency management and planning. A judgment was awarded to the community, stating that citizens had not been informed where potential hazard locations were within the community; specifically, flood planes, sites predisposed to liquefaction, underground fuel lines, and areas of greatest shaking intensity. The municipality had not established a clear plan of action within its own infra-structure nor communicated a mitigation plan to the community. During the four years prior to the catastrophic earthquake, there were attempts made to seek funding at the federal level to mandate a higher level of emergency planning for major disasters, with an objective to gain sufficient funds for adequately preparing public agencies and the community.

But the political arena became a stumbling block. During that four-year presidential term (1988-1992), the administration continually reduced spending at the federal level, and reduced existing programs, eliminated new programs and rejected proposed programs. Pro law enforcement legislatures even attempted to re-initiate the old "Dimes for Crime" initiative. Only this

time, the initiative was written to enhance law enforcement by providing additional manpower for disaster action planning, training people in the community and law enforcement personnel in catastrophic disaster preparedness. Sadly, the initiative was not passed by the voters. The community had an opportunity to become involved in building future plans for their safety and welfare of home, property, and children. Complacency is a dangerous virtue.

Scenario III - Most Desired

California certainly has come a long way in its preparation for mitigating a major disaster. Has the "big one" hit us yet? No, it hasn't; but, if it should we are probably more ready today than at any time in our history. As we look back from today, 1998, I am reflecting upon the many accomplishments this state has developed that provide a groundwork and network for effectively managing disaster operations.

In the latter 1980's California had a series of earthquakes in the Southern California area that played havoc with the minds of the general population and the resources of public agencies in response to the incidents. I recall that the Whittier Narrows Earthquake in 1987 was the largest in the series; however the tremblors were of significant intensity and of a frequency that there was sufficient scare and concern. Local and state politicians felt the pressure to take some positive action and force active planning of disaster operations.

During the early 1980's a management concept for disaster operations had been effectively used by Fire Services in parts of our Nation and especially in California. A few law enforcement agencies had individually developed an operations concept based on the system used by the fire services. They called

it an "Incident Command System" (ICS). ICS training began to surface throughout the state to recommend and orientate public agencies, especially law enforcement, that such a system would be beneficial in most emergency operations. Since a conceptual ICS system was being taught and plans developed by agencies were not necessarily consistent between agencies, it was difficult to operate in an inter-agency operation using concepts of mutual aid response. The Office of Emergency Services for the State of California saw this problem developing and with the support of the governor's office, and pressure by regional politicians, the State of California adopted the Incident Command System as a standard for public agencies to operate in a natural disaster. The Office of Emergency Services coordinated the development of a master system that became the model and formula for local entities, becoming effective in the Spring of 1990.

In the fall of 1991 the federal government made an unprecedented move that affected the entire nation in the preparation of natural disasters. The Federal Emergency Management Administration (FEMA) had been watching California's adoption of the ICS System and how effectively and efficiently it was put into operation. As a result, the federal government mandated that all emergency response agencies in our Nation were to adopt an ICS System as a model to manage emergency operations. The government went one step further to ensure compliance, stating that to qualify for disaster relief funds an Incident Command System must be operational, used at the time of the incident, and in a formalized, documented, written plan based on the model recommended by the Federal Emergency Management Administration. The development of an ICS System did not negate the fact that it takes a lot of people, trained people, to effectively manage a major or catastrophic incident. It was well known

that law enforcement was grossly undermanned to handle any catastrophic event in addition to every other facet of the public entity where the event might occur. It was also a well-known fact that the public, just like law enforcement, was not truly prepared should any event of great magnitude occur. There was great debate regarding how field operations would be effectively administered to gain optimum use of the limited personnel available in any given operation. As a result, an old initiative from 1987 was revitalized. It was called "Dimes for Crimes." That initiative was reactivated, with the same title but with a new twist. The dimes were not for crime, per se, but it was for law enforcement. It was for law enforcement's use to educate its personnel on how to effectively take control of an emergency situation in the environment of a catastrophic disaster, primarily that of an earthquake. Law enforcement knew that the emergency response actions to be taken in a catastrophic event would be significantly different than other "routine" emergencies that field personnel handle as a daily occurrence. The initiative also provided for training of our civilian population, within the community, to make them an integral part of the plan. Although the initiative did not provide for more uniformed officers on the street, it did provide for additional personnel dedicated toward operational development, organizational training, community training, community organization networking, and scenario development and application. That initiative was passed by the voters in an off-year election, 1991. That measure did more for solidifying an emergency management concept than at any other point in our history. It drew the community into the framework of its governmental system; especially the area of a public safety system. The programs that were developed as a result of this initiative became the bonding

agent that suggested the community and its government were a team that could effectively work together in an emergency environment.

Again the federal government was watching the State of California. They knew that every state would not have an initiative such as the one that California had developed and approved. What they saw was a program that worked. A program that was effective, a program that was expensive, a program that could substantially reduce the opportunity of litigation toward public entities. Litigation was still a way of life as a response toward methods by which emergencies were mitigated. However, the cities that had complied with a master plan using the Incident Command System as a model, and those who utilized that system as a basis for conducting an emergency operation were generally found to be safe from negative judgments against the city government. The federal government apparently felt that "a penny spent is a penny saved." In 1994 a major commitment for funding was made at the federal level, to assist the plan development, implementation and community training at the local level. Again, the concept to be developed was similar to the program now being utilized in the State of California.

As a side note, administering aid to diseased people has always been a concern of emergency services personnel. Contracting deadly diseases through public contact is an issue that law enforcement has constantly fought to overcome. As we all know, AIDS became a black mark on our society. During the 1980's and well into the 1990's reported cases of AIDS in California rose nearly 200%, and AIDS-related deaths had reached nearly 25,000 people. The epidemic escalation and general concern for emergency services personnel caused local government to spend considerable resources lobbying for laws to protect emergency personnel who came into contact with suspected victims of

the AIDS disease. At the same time, lawmakers sought out products to provide protective measures and to seek new technologies that would enhance the protection from contracting this terrible disease. How fortunate we are though, that medical research, as costly as it has been, has developed a medication that has begun to curtail the disease spread.

Has our world become a safer place to live? Not necessarily, but I do know that we are more prepared today to work within a catastrophic environment should it occur in some future day.

STRATEGIC MANAGEMENT PLAN

A committee has identified key trends and events that may impact upon law enforcement in the future as it relates to service levels by law enforcement to the community should a "macro disaster" such as an earthquake occur during the next decade. Through the process of cross-impact analysis of the trends and events, a series of scenarios were developed. The scenario titled "Most Desired" was utilized for the remainder of this study as the basis for constructing a strategic plan. The strategic plan projected toward the future with the intent that its findings will provide improvement for the decisions that we must make today to mitigate the futures issue.

Methods: Identification

Using the selected group in an interactive and dynamic process, a strategic planning model termed "SMEAC" defined a series of planning steps that looks at the Environment, Mission, Execution, Administration, Logistics, and Control.

Methods: Implementation

Environment

"Each year 11,000 tremblers strike Southern California---one of the world's most quake-prone regions." Scientists believe that a truly big quake has been building for years in the San Andreas (fault), 40 miles north of Los Angeles, and will probably strike sometime in the half century. When it does, they say it... "will release 1,000 times the energy of the recent (Whittier October 1, 1987 earthquake) and cause many times the destruction." (16)

The Los Angeles area is one of the highest earthquake risk areas in California. Several well-known, large active faults are in its general vicinity--the San Andreas, Newport-Inglewood, Sierra Madre, and Santa

Monica faults. For example, they have caused several destructive earthquakes in the past and are the potential sources of future destructive shocks. The Richter magnitudes of possible future earthquakes along these faults can be as high as 8.3 on the San Andreas, 7.5 on the Santa Monica, and 7.0-7.5 on the Newport-Inglewood fault. (17)

...More than a million quakes shake the world each year, although only 100,000 are strong enough to be felt and fewer than 1,000 cause any damage. Eighty percent of the earthquakes occur within the area of the Pacific Ocean dramatically called, "The Ring of Fire." More than 90% of all Americans live in an area where there is a significant danger of earthquakes. (18)

California is a prominent part of that Pacific Ocean rim and is positioned at a boundary between the Great Pacific and North American plate.

California sits on the edge of earthquake central, the meeting place of two of the great restless, rocky plates that make up the earth's crust. The San Andreas, in fact, marks the boundary between the North American and Pacific plates. And as these masses, every-shifting chunks of plate jostle each other, they shake the earth. (19)

"California is the most populous state in the United States...and the...bulk of the population and many of the industrial and commercial centers are unfortunately also in zones of high seismic risk." (20)

A major earthquake in California is inevitable. But while there is no shortage of vague predictions and theories about the big quake, no one knows exactly when it will happen. What is certain is that the San Andreas fault, which splits the state, is building up pressures which eventually must give. The question is not "if", but "when": when will the big one--an earthquake measuring more than 8.0 on the Richter scale--erupt along California's San Andreas fault? (21)

Two recent earthquakes made a large impression on state officials. First was the May, 1983, Coalinga quake... "After we confronted Coalinga, the Governor realized that earthquakes had to be a top priority," said Bill Medigovich, OES Director. "The other...was Mexico City. We saw an urban setting take a heavy hit...not everything applies, but we learned a lot from it." (22)

Tom Tobin, Executive Director of the California Seismic Safety Commission states he

...and other State Officials know the great phantom earthquake is real,....and they also know that the state isn't ready...or close to it...for a great quake. Maybe, they say, by the turn of the century....Unless we substantially step up our hazard reduction programs and fate allows us 10-20 years to carry them out, the next California earthquake will be a catastrophe with national consequences. (23)

The general effects of an 8.3 earthquake along the San Andreas fault in Southern California,...will be accompanied by a fault rupture 250 miles or more in length, strong shaking lasting 40 to 60 seconds (with a lesser shaking for another minute or more), an unusually wide-spread and irregular pattern of damage over a region approximately 400 miles long and 150 miles wide. Very large earthquakes produce high levels of long-shaking, which dies off very slowly as it moves away from the fault rupture. (24)

There is an environmental concern for communities close to the fault line. "San Bernadino County, has been growing by 35-40% every decade (since 1960) and is expected to top three million by the turn of the century.... Riverside's (population) will have quadrupled." (25) A major thrust of the population explosion is a result of

...those who work at the jobs Orange County was creating in offices and high-tech industries and could not afford to live in the County (Orange), or at least could not afford to buy homes...Young working couples were compelled to look elsewhere--principally in adjacent Riverside County....(26)

How successful is the State of California disaster awareness, preparation and infra-structure rehabilitation. Economically,

the earthquake budget has increased steadily from 17 million to, in 1977, to 25 million in 1987. Last year (1986) under legislation sponsored by democratic State (California) Senator Alfred Alquist of San Jose and his Republican colleague, William Campbell of Hacienda Heights, the state put into effect an ambitious 5-year plan, the first of the series aimed at improving preparedness by the year 2,000. The plan targets six main areas: reinforcing buildings; improving emergency planning and response; regulating future development to avoid high-risk areas; planning recovery after a great quake; and enhancing programs and research, education and public information...."We're interested in saving lives first, before property,"...Tobin says...."The priorities to the plan show that. There are more lives to be saved by implementing the first two parts of that program than anything else we do...."Yet", Tobin says, "that current funding is far from enough...less than a dollar per resident each year." (27)

In an effort to enhance the predictability of impending earthquake tremblers Assemblyman Richard Katz, from Panarama City, through a state proposed bill,

...wants to install 100 seismic stations in Southern California during

the next three years at the cost of 1.5 million dollars...Under the amendment to an already proposed earthquake bill in the Assembly, \$500,000 a year would be spent to install the seismic stations....The new equipment would measure ground motion more accurately during major earthquakes and provide better data for predicting when tremblers will recur on those faults. (28)

Environmentally, hospitals seem to fall into the same troublesome class.

...A survey several years ago in six Southern California counties found that more than 90% of the buildings on hospital campuses could not withstand a major earthquake. "...Most of those buildings do not meet the 1972 standards says Richard Andrews, Deputy Director of the Office Of Emergency Services and head of the Department of Earthquake Preparedness Program." (29)

The 5.9 earthquake that occurred in Whittier in October, 1987 "caused minor structural damage at twenty hospitals, the Hospital Counsel of California said. At least four other hospitals reported more serious damage." (30)

Aside from improving hazardous buildings, the other compelling issue is coordinating emergency response. Most officials believe that "the big one" will simply overwhelm the state's emergency response capability if, as feared, it roars from county to county, city to city. Officials are even less sure that the state's residents understand the nature of the aftermath...."I think that California is well prepared for moderate earthquakes," says Andrews. "But if we get the big one, greater than 7.0 on the Richter scale, then that is a very different situation. The demands on the state are going to outstrip its resources." (31)

...California's population has been extraordinarily nonchalant about earthquake risks. In his 1986 book, "Waiting For Disaster: Earthquake Watch In California," Ralph Turner notes that even those in high-risk seem "likely unaware of other risks, such as the dangers by inundation caused by dam collapse and the danger of rapid brush fires in an arid community with the disruption in a water supply." Turner, a psychologist at U.C.L.A., surveyed more than 3,500 adults in the state for his book. Few were well-informed. Turner also found that while Californian's overwhelmingly endorsed increased government spending for earthquake safety, they tend to think of it as a luxury, behind education, police services and hospital protection....Incredibly few people spontaneously thought of earthquakes when asked about community problems and hazards of living in Southern California. (32)

Law enforcement is at the cutting edge, the expected leaders, in a catastrophic disaster. The law enforcement officer is on the street, the

first to be seen and recognized as a responsible public servant to which the community would seek assistance. How responsibly has law enforcement been trained for their role in a "macro disaster" and their expected leadership role within the community. I suspect that skeletal plans have been developed by most law enforcement agencies and are only superficially known or understood at the operational level. The law enforcement officer is concerned about crime and its impact on the community. Law enforcement establishes priorities based on the responsive needs of the citizen, the goals of the department, the City Council, or mandates of the State. Fritz Patterson from the Office of Emergency Services in California, states, "we have relegated emergency planning to the very place that is; its buried somewhere in the police agency, Fire Department or City administrative office." If someone assumes the responsibility

...there is a requirement to complete certain reports and their submittal in a timely fashion to some level of bureaucracy to satisfy the governmental funds given to an agency, and that spent funds were done in a manner consistent with the developed operational plan. (33)

Development of emergency operational plans is a tedious task. Law enforcement is so burdened with the task of their everyday operations, disaster operations is not set as a high priority. However, before governmental funds are available, emergency plans must have been drawn and placed into operation. Therefore, Bob Hill from OES says,

The task of preparation is given to an individual who has little to no knowledge of emergency operations, especially those of law enforcement, and the plan is given to law enforcement to put into operation. Little attention is paid to the plan. (34)

Is a catastrophic "macro" earthquake going to happen? Experts feel the probability is high. Law enforcement officials must take the time, when the opportunity still exists, to acknowledge the risk and the potential and

establish priorities for the development of operational standards that will cope with and mitigate the emerging issue.

Trend Impact

Earlier in this study, a series of trends were developed that a group of concerned managers perceived could affect the future of law enforcement's roles and responsibilities should a "macro disaster" occur during the next decade. Five of the trends were considered to be more significant than the others. Members of that group reviewed the selected trends and discussed some perceivable impacts those trend may have upon law enforcement.

Trend 1: Law Enforcement Grossly Undermanned for Required Tasks.

Organizational tables for law enforcement generally reflect staffing at minimal levels to accomplish the organizations goals and objectives. Fiscal constraints do not allow staffing for the unexpected or low probability events. As a result, it must be understood that if an earthquake of the suggested magnitude should occur, traditional services to the community will probably come to a halt. The field officer will have a feeling of helplessness in a catastrophic environment that he has not been trained to understand, to cope, and anticipate the changing service level and role responsibility that will be required. It may have a great psychological impact upon the field officer. Inadequate emergency planning and an undermanned environment, will truly diminish the field officers response and leave that officer with a feeling of inadequacy.

Trend 2: Increased Reliance Upon Technical and Automated Systems.

As law enforcement becomes more attuned and dependent upon automated systems there are advantages and disadvantages that would occur in a major disaster. When service levels become disrupted, there is a higher probability

that there will be limited access to the automated systems. As we develop greater reliance, we must also maintain our capability to fall back on a system to manually capture necessary data. On the other hand, automated technology provides the capability to document all activities that result from a disaster and the ability through new technologies to better respond and assess a disaster environment. Government seems more attuned toward purchasing new technology that relates to law enforcement. As the private sector sees an increased market for related technologies, law enforcements ability to enhance its role in emergency operations would increase.

Trend 3: General Lack of Earthquake Preparation by Law Enforcement and the Public to Handle an Incident.

If local government and citizens within the community continue to hold disaster preparedness at a low priority level, then it can be expected that a higher mortality rate will occur within that community. If all affected don't understand their unique roles and responsibilities, whether it be precautionary preparation or knowing their response assignments, success of the rescue operation will be greatly diminished. As a result, there will be increased reliance on mutual aid from outside the local area. It is anticipated that help will be very slow in arriving, even as much as 72 hours from the time of the incident. Should an earthquake of this magnitude occur, it will also have catastrophic financial impact on local government and community resources.

Trend 4: Pressure for Greater Use of Incident Command System (I.C.S.) from the Federal and State Level.

The incident command system will provide a unified and organized management approach in a disaster operation. It provides a framework and structure for response to an emergency. It provides an opportunity to

exchange resources when they are available and be adaptable and compatible with other emergency response agencies. It is considered to be the number one hope today as a basis for instilling new confidence in law enforcement's ability to respond and interact during a catastrophic event.

Trend 5: Re-analysis of Government Spending to Reflect Priorities, Limitations and Restrictions.

It is expected that as we move into the future, government will increase its spending to support law enforcement technology and programming, although not necessarily for earthquake preparation. After an earthquake occurs, less discretionary funds will become available and local governments, along with state government, will redirect current programs to accommodate the need for rebuilding during the recovery phase. The expectation is that the recovery will be long term and that law enforcement should expect major reduction in current operating programs. It is called "going back to basics". It was suggested that less restrictions be placed on earthquake funding and redirect resources to enhance earthquake awareness and preparation. However, a result of re-analysis and the expectation that funding from current revenue streams may be limited, programs would only be approved with adequate justification by focusing on specific identified needs and usefulness to the community.

Capability Analysis

The participants used a prepared form to assess an organizations existing capabilities and to identify some of that organization strengths and weaknesses. Two areas were evaluated. The first analysis looked at law enforcements "present capability" to provide service in a catastrophic disaster. The second analysis reviewed law enforcement's "future adaptability" to provide service in a catastrophic disaster. (Refer to

PRESENT CAPABILITY AND ORGANIZATIONAL ANALYSIS

FOR

CALIFORNIA LAW ENFORCEMENT TO PROVIDE SERVICE IN A
CATASTROPHIC DISASTER

INSTRUCTIONS:

Evaluate each category item listed below based on the following criteria:

- | | |
|-------------------|--|
| I. SUPERIOR | Beyond present needs. |
| II. ABOVE AVERAGE | Suitable for present needs with no problems; better than average. |
| III. AVERAGE | Meets present needs but there is room for improvement; acceptable. |
| IV. BELOW AVERAGE | Not as good as it should be; problems; deteriorating. |
| V. POOR | Real cause for concern; action must be taken to improve. |

<u>CATEGORY</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>AVG.</u>
Manpower	---	---	---	---	---	3.2
Technology	---	---	---	---	---	3.2
Equipment	---	---	---	---	---	3.0
Facilities	---	---	---	---	---	3.7
Money	---	---	---	---	---	3.8
Supplies	---	---	---	---	---	---
Management Skills	---	---	---	---	---	3.1
Officer Skills	---	---	---	---	---	3.1
Training	---	---	---	---	---	3.2
Attitudes	---	---	---	---	---	3.0
Image	---	---	---	---	---	2.4
City Council Support	---	---	---	---	---	3.3
City Manager Support	---	---	---	---	---	2.0
Community Support	---	---	---	---	---	3.1
Management Flexibility	---	---	---	---	---	3.0
Turnover	---	---	---	---	---	2.2
Morale	---	---	---	---	---	3.3

Figure: 1

FUTURE

ADAPTABILITY ANALYSIS

FOR CALIFORNIA LAW ENFORCEMENT TO PROVIDE SERVICES IN A
CATASTROPHIC DISASTER

INSTRUCTIONS:

Evaluate each category as it relates to the future with the ability to adapt and seek change in a new environment using the following criteria:

- I. CUSTODIAL Rejects change
- II. PRODUCTION Adapts to minor change
- III. MARKETING Seeks familiar change
- IV. STRATEGIC Seeks related change
- V. FLEXIBLE Seeks novel change

Ratings of I and II indicate very little ability to change.

Ratings of III indicate reactive change.

Ratings of IV and V indicate proactive change.

<u>CATEGORY</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>AVG.</u>
<u>TOP MANAGERS</u>						
Mentality/Personality	---	---	---	---	---	3.0
Skills/Talents	---	---	---	---	---	3.1
Knowledge/Education	---	---	---	---	---	3.5
<u>ORGANIZATIONAL CLIMATE</u>						
Culture/Norms	---	---	---	---	---	2.6
Rewards/Incentives	---	---	---	---	---	2.6
Power Structure	---	---	---	---	---	2.0
<u>ORGANIZATIONAL COMPETENCE</u>						
Structure	---	---	---	---	---	3.0
Resources	---	---	---	---	---	3.2
Middle Management	---	---	---	---	---	3.7
Line Personnel	---	---	---	---	---	3.7

Figure: 2

Figures 1 and 2) The assessment for "present capability" was reviewed, and the following judgments were made relative to law enforcement's strengths and weaknesses.

Strengths

Image
City Manager's Support
Management Flexibility
Turnover

Weaknesses

Manpower
Technology
Facilities
Money
Training
Morale

The rating composite does not indicate any overwhelming strengths or weaknesses. The three strongest strengths were City Manager's Support, Turnover and Image. The City Manager's office generally is supportive of law enforcement and there is a high expectation that the office would attempt to provide resources should a catastrophic event occur. The question is whether City Managers are truly aware of what impact a catastrophic disaster would have upon a community and does that office know how great the potential for a "macro" earthquake looming in the future. The turnover ratio has been relatively low for law enforcement. Benefits, salary in most cases, and security of position tends to hold personnel on the job. The economic conditions within our nation and an open recruitment employment system for the law enforcement position draws individuals to the position. Image was slightly skewed to the strength side. Law enforcement favors a strong image by the community and local officials for service provided to the community in emergency situations. There is a reasonable expectation that in a "macro disaster" that same image will prevail. However, that image is an expectation of the community and law enforcement is uncertain of their present capability to manage and cope with a disaster of the magnitude implied.

The greatest weaknesses, and area of concern, were facilities and money. During routine operations, on a day-to-day basis, law enforcement buildings are generally adequate as a facility to service the organization within the community. The concern is how serviceable the facility will be after a catastrophic event. The concern is the need for an adequate facility to command an emergency operation of the magnitude implied. Money is not necessarily salary. The concern is with the futures environment. Financial support is not adequate for planning development, personnel training, community awareness, preparedness, and volunteer support.

The greatest polarization occurred in the category of training; evenly spread over all the rating criteria except "superior". It depends on where an individual is sitting within the organization and their specific assignment. Training is skewed to the weak side where there is great cause for concern. Law enforcement is not prepared, nor trained for a catastrophic event. Law enforcement is becoming aware that the situation is critical. Funding would be welcomed to prepare the organization and intertwine that preparation with the community for addressing this critical issue.

Future Adaptability

The "future adaptability" analysis displayed considerable polarity among the participating raters. Their perception of law enforcements ability to adapt and seek change in a new environment was diverse. Depending upon where one sits in the organization and the assignment or role responsibility, it would appear that perceptions are greatly influenced. In the "top manager's" category, there was a skewing into the custodial rating suggesting that upper management tends to reject change or finds it difficult adapting to change within the organization. Likewise a similar skewing occurred related to

flexibility for the needs and demands of the organization, even though there has been considerable education to think strategically, be goal oriented, and skilled in the development of short term/long term objectives. Education does not mean that there is a will to change. The category of "organizational climate", indicates a strong skewing into the custodial rating that suggests a power structure within the organization that strongly rejects any change. The skewing was so strong in this case it may suggest that there are actual power dynasties within the organization with the mentalities that divisions within that organization generally see themselves as separate entities. That suggests little internal cooperation and support between integral sections of the organization developing a strong division of goals, objectives, and a definite lack of team commitment. The category of "organizational competence", although polarized, had a strong skewing in the category of line personnel. It suggests that generally there is good confidence that the field officer will adapt to the changing environment that a "macro" disaster will bring. It does not mean that the officer understands that there will be significant change in the task currently being performed. It does mean that there is competence that the field officer can adapt under emergency conditions.

Mission Statement

Law Enforcement Mission - Macro

To protect citizen life and property through the prevention of criminal activity by enforcement of published laws and to provide emergency care and public assistance.

City Police Mission - Micro

To serve the City by protecting the community's citizens and property through aggressive, courteous and pro-active enforcement. To conduct an

active crime prevention and community relations program bridging the community with the police department to cooperate in providing a safe and secure environment. To cooperate closely with the Fire Department, and other departments within the City to provide emergency assistance in time of disaster, accidents and medical emergencies.

Execution

Strategic planning requires the critical thinking and input from other members of the organizational environment, who have acquired knowledge in the issue field. Managers were selected because of their concern and direct involvement in the planning of disaster operations and are working in an environment whereby they will be effected by any change that this study would suggest. Members who participated in the earlier phase of the study were asked to reconvene. The participants were told they were part of a process for a strategic plan development that will generate long range thinking toward the future management of the identified key issue. They were to assist and identify the important thrust for the organization to guide it toward the future that has been envisioned. The meeting would consist of a series of planning strategies. Initially they were to prepare in writing three policy/strategy alternative statements that would take law enforcement into a ten year future and direct a course of action that would address the issue of service levels by law enforcement during a future catastrophic disaster, e.g., a "macro" earthquake. The participants were supplied with the first phase of the study that included a historical introduction and background and the futures study that included the identified trends, events, with a cross impact analysis and a futures scenario to be utilized for the remainder of this study.

Stakeholder Identification and Analysis

The last phase in reviewing the situation within our plan is a process called "Strategic Assumption Servicing Technique" (SAST). The SAST process identifies stakeholders who are related to the strategic issue being addressed. The stakeholder is identified as any person, group of people (special interest group), or organization who might be affected by or has an invested interest and might attempt to influence future policy/strategy alternatives.

There are some stakeholders called "snaildarters". That person, group or organization is a non-obvious or insignificant stakeholder who may have a small interest in the policy/strategy alternative that has and can exert a lot of power toward impacting the organizations selected course of action.

The group identified twenty-three stakeholders who they determined could influence future policy alternatives that addressed the issue on the affect a major catastrophic earthquake would have upon law enforcement service levels to the community. The level of support was identified by each stakeholder to the three primary strategies selected for future plan development. To understand the support level anticipated by the key stakeholders, a symbol identifying positive support (+) and negative support (-) or identified as neutral or uncertain as to the support that can be anticipated (+/-). To further identify the stakeholder relevant to policy alternatives, each stakeholder was plotted on a policy/alternative graph. (Refer to Figure 3). It indicates the level of importance a stakeholder has upon the policy alternative based on the identified assumptions for the stakeholder. Likewise, the graph identifies the level of certainty that a stakeholder will support the policy alternative based on the identified assumptions for the

STRATEGIC ASSUMPTION SURFACING TECHNIQUE

STAKEHOLDERS

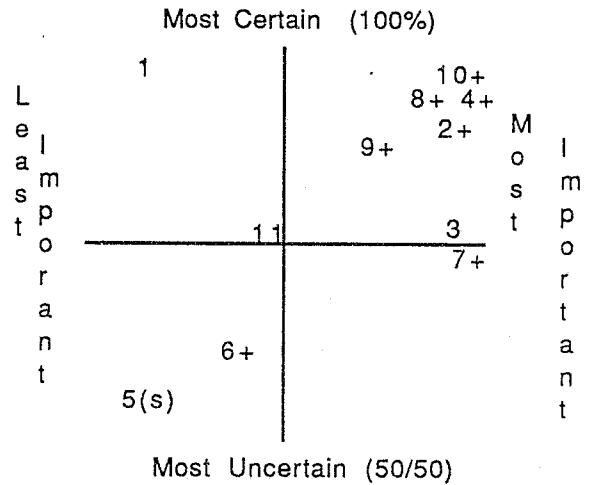
- 1 - PUBLIC
- 2 - POLITICIANS
- 3 - LAW ENFORCEMENT ASSOCIATIONS
- 4 - FIRE DEPARTMENT ASSOCIATIONS
- 5 - CHAMBER OF COMMERCE (s)
- 6 - BUSINESS AND INDUSTRY
- 7 - EMERGENCY MANAGEMENT ORGAN.
- 8 - FEDERAL GOVERNMENT
- 9 - PEACE OFFICERS STAND. & TRNG.
- 10 - VOLUNTEER ORGANIZATIONS
- 11 - BURDENED INDUSTRY

LEGEND:

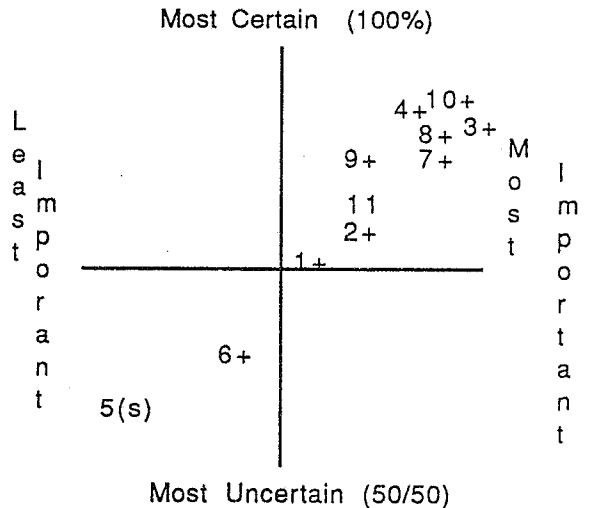
+ means Positive Support
 - means Negative Support

No symbol means Neutral or Uncertain Support

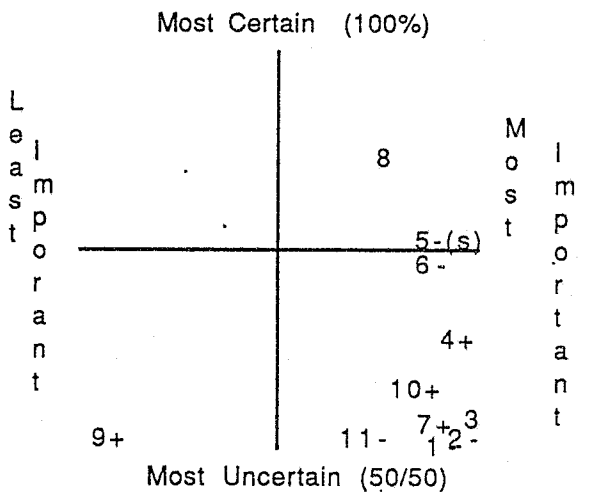
Alternative #1 - Incident Command System



Alternative # 2 - Law Enforcement Training



Alternative #3 - Funding Initiative



stakeholder. To clarify, based on the assumptions, how important is each stakeholder to the policy and what degree of certainty will each stakeholder have toward the support of the policy/alternative.

The following stakeholders were identified by the committee:

- | | |
|-----------------------------------|-----------------------------|
| 1. Public | 13. Politicians |
| 2. Law Enforcement Associations | 14. Fire Dept. Associations |
| 3. Chamber of Commerce (s) | 15. Charitable Org. |
| 4. Business and Industry | 16. Emergency Mgmt. Org. |
| 5. Governor | 17. Federal Government |
| 6. Peace Officer's Stand. & Trng. | 18. CSTI |
| 7. Tourists | 19. City Employees |
| 8. Building Industry | 20. Volunteer Organizations |
| 9. Regulatory Organizations | 21. Pacific Bell |
| 10. Alcohol Industry | 22. So. Cal. Assoc. of Gvt. |
| 11. Labor Unions | 23. Professional Org. |
| 12. Burdened Industry | |

The Committee selected eleven key stakeholders, who could have the greatest interest and potential influence. One of the stakeholders was identified as a "snaildarter" and is identified with an (s) symbol. Assumption statements were identified. Consideration was given to the dominate response a stakeholder may have toward a policy or strategy alternative, taking into consideration the stakeholder's beliefs, interests, concerns, resources, and political clout. The following is a list of the key stakeholders and their related assumptions.

Key Stakeholders:

<u>Stakeholder</u>	<u>Assumptions</u>
1. Public	1a. They do not want to pay taxes. 1b. They want something for nothing. 1c. Apathetic toward future problems.
2. Politicians	2a. Are reactive and have ulterior motivations. 2b. They are mainstream oriented. 2c. Considered to be short sighted.

- | | |
|----------------------------------|---|
| 3. Law Enforcement Associations | 3a. Are apathetic toward organizational goals and responsibilities.
3b. Are reactive to environmental shifts.
3c. Do not believe disaster/earthquake response is their business. |
| 4. Fire Department Associations | 4a. They do not realize their leadership role in disaster operations.
4b. They have time to promote and develop an ICS system. |
| 5. Chamber of Commerce (s) | 5a. They are naive to law enforcement and their responsibility in a "macro" disaster.
5b. They are a self-serving organization.
5c. They are money motivated. |
| 6. Business and Industry | 6a. Are money motivated.
6b. Their interests are preservation of business.
6c. Will be supportive if convenient. |
| 7. Emergency Mgmt. Organizations | 7a. They are idealistic.
7b. They are process oriented.
7c. Actually believe that the public is interested. |
| 8. Federal Government | 8a. They have all the answers to disaster operations.
8b. Slow to react; process oriented.
8c. Indecisive and unstable. |
| 9. P.O.S.T. | 9a. Seeking revenue for more training.
9b. Very politically oriented.
9c. Are an asset if they support policy/strategy. |
| 10. Volunteer Organizations | 10a. Don't grasp the big picture; naive to the future environment.
10b. Wanting to help, promise more than they can deliver.
10c. Questionable motivation due to special interest groups. |
| 11. Burdened Industry | 11a. Resistive if any financial impact.
11b. Have political influence and will use it. |

The committee did not have a positive and comfortable feeling toward most of the stakeholders identified. They are a key element toward strategy development and future implementation. Support is crucial. Such terms as apathetic, short-sighted, reactive, naive, self-serving, indecisive,

financially motivated are big obstacles to overcome. These assumptions will be very critical for implementation strategies.

Policy/Strategy Alternatives

An evaluation was conducted by the members of the committee to evaluate each of the policy/strategy alternatives presented. (Refer to Appendix C) Committee members were supplied a rating sheet for "Policy Delphi". The evaluation indexes are indicators of policy implementation "feasibility" and "desirability" relative to their effectiveness and benefits toward the emerging issue. Individual scores from the group were totaled and averaged to reflect the composite of the rating committee. (Refer to Figure 4)

Recommended Strategies

The results of the modified policy delphi identified Alternative One, the State of California mandating an Incident Command System and Alternative Two, the State of California mandating disaster law enforcement training. A third alternative, considered to have the greatest polarization, was identified as Alternative Eight, a ballot initiative identifying a revenue stream to be used specifically by public safety/law enforcement agencies for emergency management planning and training in the event a "macro" disaster occurs. These three strategies will be the basis for future planning and action during this study. Although three alternatives emerged as the key and primary strategies, the group suggested that the remainder of the identified alternatives should not be excluded from this report and should be identified as supporting policies for consideration in the planning process. Discussion continued with each of the key strategies to identify some of the positive and negative considerations should these alternatives be implemented.

POLICY DELPHI - GROUP RESULTS FOR ALTERNATIVE STRATEGIES

Legend:

VD = Very Desirable	DF = Definitely Feasible
D = Desirable	PF = Possibly Feasible
U = Undesirable	PI = Possibly Infeasible
VU = Very Undesirable	DI = Definitely Infeasible

						<u>TOTALS</u>
Alternative #1: <u>Incident Command System - Mandate</u>						
Feasibility	DF	PF	PI	DI	SCORE=	34
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		
Alternative #2: <u>Law Enforcement Training - Mandate</u>						
Feasibility	DF	PF	PI	DI	SCORE=	32
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		
Alternative #3: <u>State Volunteer Organization</u>						
Feasibility	DF	PF	PI	DI	SCORE=	23
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		
Alternative #4: <u>Manual Backup Systems</u>						
Feasibility	DF	PF	PI	DI	SCORE=	24
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		
Alternative #5: <u>Pre-Identified Resources</u>						
Feasibility	DF	PF	PI	DI	SCORE=	31
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Figure: 4

Alternative #6: Pre-Identified Communications

Feasibility	DF	PF	PI	DI	SCORE=	31
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Alternative #7: Pre-Set Emergency Expenditure

Feasibility	DF	PF	PI	DI	SCORE=	27
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Alternative #8: Funding-User Fee Initiative

Feasibility	DF	PF	PI	DI	SCORE=	25
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Alternative #9: Mutual Aid System Reorganized

Feasibility	DF	PF	PI	DI	SCORE=	25
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Alternative #10: Field Officer Operating Procedures

Feasibility	DF	PF	PI	DI	SCORE=	23
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Alternative #11: Early Warning Predictions

Feasibility	DF	PF	PI	DI	SCORE=	19
	(3)	(2)	(1)	(0)		
Desirability	VD	D	U	VU		
	(3)	(2)	(1)	(0)		

Alternative #1: State Mandated Incident Command System

A few agencies throughout the state of California have developed and put into use their own concept of an Incident Command System (ICS). One of the intentions for the ICS system is to establish uniformity and compatibility between public safety agencies.

Development of an ICS System is perhaps the first key element to solidify the management of a "macro disaster". The ICS System combines all emergency response forces into a single command point that will provide direction to all individual departments and agencies (mutual aid). The ICS System establishes who is in control of an operation; no one has to guess. Every responding department or agency outside of the local jurisdiction will have been trained with the identical system. Terminology is a key element to compatibility, that is, everyone understands what is being communicated. It is a standard by which agencies will be measured regarding deployment of resources under emergency conditions. It provides a means of interaction between Police and Fire Departments throughout the State of California. If a State ICS System is to exist, it must be mandated; it is not going to evolve by itself. Smaller departments have limited resources, limiting the number of personnel that can be devoted to planning and training.

However, for the smaller agency there is a positive element. It will help smaller agencies to combine resources and closely interact in the planning, development and training phases. Why must there be a State mandate? Unless there is, statewide continuity and compatibility will never exist to establish incident control. It will build a positive mindset that law enforcement currently has not demonstrated.

Uniformity promotes a greater use of the mutual aid system thereby obtaining the best use of available resources. The State system will not only promote efficiency during an operation, but build confidence in the public safety environment.

However, on the negative side, an Incident Command System requires extensive training and program development that is expensive. Training is continuous so entire agencies are adequately trained and retrained for a thorough understanding of the system concept and role responsibilities at all levels of the organization. Of course, that means a tremendous drain on the resources, i.e. scheduling, assigned personnel and adequate funding. There is a weak link in the system. Federal Government fire service operations, within the State of California, would not be mandated, so the potential for conflict developing during an emergency operation is quite probable.

Alternative #2: State of California Mandates Disaster Training

To understand the concept of an Incident Command System and the suggested impact of a "macro disaster", training is an essential key element. To accommodate the objective of a system implemented statewide, all law enforcement officers must have a thorough understanding of a new system, an understanding of its potential multiple use, and its use in a future "macro disaster". To accommodate the objective, a percentage of law enforcement training time must be devoted to catastrophic disaster scenarios. That objective will only be met if the State of California mandates the training to coincide with a universal law enforcement Incident Command System. Funding is important and must be included for equipment and personnel costs during the training operation. A revenue stream must be generated to accommodate this need. Like the development of an ICS system, training is extremely time

intensive and erodes daily personnel resources. Of course, any time a program is mandated, it usurps local control. County and local agencies find it difficult to accept programs that have been developed without their input.

On the other hand, it is accomplishing an objective that is not being met today. It is a means for local government and communities to improve the state of emergency preparedness. It is an opportunity that will promote operational efficiency at all levels, including necessary volunteers. Dedicated training time ensures a continued awareness of "macro disaster" probability and promotes a positive mindset that "I" understand the future, that "I" understand my responsibilities and "I" am prepared to cope. Mandated training suggests uniformity of instruction and uniformity provides continuity of a program. Since there is continuity in the training format, instructional resources can be shared throughout the state suggesting a smaller cadre of instructors, reducing the financial support of the program.

Alternative #3: State Ballot Initiative to Fund Public Safety Emergency Management Training

Is this just one more tax? Perhaps, but I suggest a palatable tax. It could be a value added tax, similar to the old "dimes for crimes" initiative that was rejected by the voters. It may be more acceptable if it were identified in a more positive frame of reference involving preparedness of public safety and incorporating it with community interaction. A percentage of the lottery funds could be dedicated to emergency preparedness at the local level developing and training the field police officer and community through a Neighborhood Watch concept. An initiative would be the voice of the people to inform the government that disaster preparedness is an issue. Support from the community that their involvement would provide a team approach toward

increasing public awareness, solidifying the emergency management concept of uniting the leadership responsibilities of the law enforcement field officer and the necessity of volunteerism in a macro emergency.

There is a fear that, should the voters establish a new revenue stream, the Federal Government would see a conflict in disaster funding and rescind any financial support that it currently provides the State. If the initiative were to succeed, the question is then raised, will sufficient funds be generated to satisfy the objective needs to accommodate planning, development, administrative support, salaries and other resources.

Course of Action

The identified key alternatives recommend that the strategic course of action is to seek a mandate for an Incident Command System and to seek a mandate that law enforcement will conduct specified training in disaster operations and to seek support for a ballot initiative that funds emergency management training. The notion suggests that without these alternatives in place, the future of emergency preparedness specifically to accommodate a "macro disaster" will be no further along in the year 2000 than it is today. If our situation is status quo, then law enforcement will continue to operate with its current systems and priorities and place emergency management on a back burner. The field officer will have no more knowledge of the impact from a "macro disaster", the service level that will be expected, and the responsibility of his changing role. Therefore, a new direction for law enforcement will not be accomplished without the key strategies in place.

The concept of emergency management is at an impasse and will only obtain a spirit of cooperation and level of preparedness that is known today. Disaster preparedness is fragmented. There is little unity among systems, cities, and government entities. To change the concept is essential. To

change the concept and develop new awareness in law enforcement agency roles and responsibilities will require the adoption of these key alternatives.

Law enforcement must take an aggressive posture to initiate support for the key alternatives. It has been suggested that Southern California has the greatest potential and likelihood of a catastrophic earthquake in the near future. Within the next twenty years, the probability is high for that earthquake to occur along the southern San Andreas fault with an 8.0 or higher magnitude. Since that is the case, it is incumbent upon the individuals, agencies and organizations that are most closely affected to take the necessary action toward seeing the initiation of the alternatives.

How do key alternatives become accepted? Support for the alternatives is validated through a pre-planning process that demonstrates what can and will be accomplished if the strategic plans are implemented. Pre-planning identifies the appropriate course of action necessary to accommodate the roles and responsibilities of law enforcement at a catastrophic earthquake. Proper planning can demonstrate to the community they will become a beneficiary and that all citizens should actively participate to support the funding initiative.

Pre-planning recommendations were developed from personal interviews and interactive discussion during the group processes. The recommendations are included in this study as a source of implementation concepts to integrate within each organizations strategic plan. (Refer to Appendix D) The concepts are not all inclusive, but are meant to stimulate creative thinking to provide a basis for direction and action.

Adminstration and Logistics

The mandated strategies are specifically directed to law enforcement for establishing compatible command center operations and disaster training

exercises. The third strategy seeks supportive funding through a ballot initiative directed specifically toward emergency management planning and training for public safety agencies. These alternatives, obviously are not implemented at the local government level. However, the strategy concept is envisioned as a necessary means to accomplish an overall objective to provide leadership as a primary role by law enforcement in a catastrophic disaster operation such as a macro earthquake. The initial support must come from the local government governing body, be it the City Council or City Manager, by exercising their authority that emergency planning is a priority. Once support has been developed and personnel resources have been assigned, pre-planning can begin to justify and support the benefits of a mandated system for the State of California. Support must continue upward to include the local Chief's of Police organization including the Sheriff of the affected county before taking the next step. Support must then be sought from the local state legislature representatives. At the same time, communication with the State's Office of Emergency Services should be entertained. It is a governmental support group that would be considered as a positive force at the state level in seeking other critical support.

The design of the alternatives are intended to be a positive factor to nearly the entire community. Therefore, support should be sought from key community stakeholders that logistically can influence the greatest number of people.

IMPLEMENTATION PLAN

Disaster can strike at any time! As communities become larger and more interrelated, the number and type of potential disasters multiply, and as this study has suggested, an earthquake of "macro" proportions is imminent and in the near future. The impact of that disaster is compounded by the technological, social and political environment of today's society. Law enforcement has an obligation to respond. Resources for the initial response will be limited and determined by the personnel working at that moment depending on the time and day. Law enforcement will have a leadership role. The ability to capably respond and protect depends directly upon a series of pre-planning roles and responsibilities, pre-identified resource and response procedures, a developed disaster response plan, and effective training and exercises to validate the response plan. The strategies have been identified to accomplish this objective. Their success depends directly upon the interests and abilities on a number of organizations, political entities, individuals, and governmental agencies to meet the challenge of successfully negotiating a successful level of support. It is felt that the timing is right, politically, socially, and hopefully, economically to prepare law enforcement and concurrently the community for the disaster future. There is a perception that at this moment there can be a common goal between the community, law enforcement and other public agencies. In the realm of emergency preparedness it is understood that the strategies could easily become a political football raising issues of cost, time, authority, and perhaps inter-organization jealousies. However, mutual cooperation is a must, therefore, this study will look at some key issues of the stakeholders and determine what may be negotiable and non-negotiable.

Negotiable and Non-negotiable Issues

Strategy-Points Not Willing To Give On

1. The Incident Command System is a necessary tool for response to a catastrophic event such as earthquakes, floods, fires, riots, and other natural or human caused incidents.
2. Law enforcement has not been adequately trained to cope with a catastrophic event. Staff officers and field officers have limited knowledge of the changing role and responsibility for such an event.
3. Development of the mandated Incident Command System will include a cadre of law enforcement and emergency service coordinators that have a known expertise in the emergency management field.
4. The supportive ballot initiative is an integral part of the funding process if public safety, including law enforcement, emergency management, planning and training is to be actualized. The development of a formalized civilian volunteer group(s) must be established to provide assistance to law enforcement in the event of a catastrophic disaster.
5. The strategy concepts are a pro-active approach to a perceived problem today and to the future. Appearances may be that it is reactive. The future dictates a continual re-evaluation of the current situation.

Strategy-Points Willing To Give On

1. The State recognizes the importance of having a central controlling body and voice for review and recommendations. Since the State initiated the mandates, it has visions for its direction and has final vote for all actions to be taken.
2. Law enforcement must be invited to participate as advisors. They have direct concerns and impact on any action taken. Not only will it provide objective impact to a major strategy, but it promotes a sense of ownership and having a say regarding the future.
3. Action plan time lines must be flexible to ensure proper planning. Rigid dates can influence quality decision making. Too often, rush decisions based on hurried and perhaps inaccurate information negatively impacts the strategies. Time is on the planner's side. Decisive steps will not be set until agreement that all pertinent data has been reviewed providing sound decisions.

Stakeholder's Points of Negotiation

Public/Community - Can Be Expected Not To Give On

1. Additional programs must not be a cost factor to the community.
2. If a ballot initiative is to pass the voters, it must be tightly written to meet the specific intent of funding emergency management, planning and training for law enforcement and the community.
3. Service levels to the community will not be reduced as a result of new programming and extensive training that may be required under the mandate.

Public/Community - Can Be Expected To Give On

1. There is a feeling of apathy and complacency concerning emergency management planning with the anticipation of a catastrophic earthquake. A concentrated and well-planned program may instill the community to actively participate.
2. The initial expectation would be non-supportive of the ballot initiative.

Politicians - Can Be Expected Not To Give On

1. Any new program must not economically interfere or supplant other programs currently in force.
2. New programming must not be chargeable to the taxpayer.
3. The stream of funding from the Federal Government must not be reduced even though alternate funds were made available for emergency management planning and training.

Politicians - Can Be Expected To Give On

1. Their non-supportive position will be inflexible even though there is positive public support.
2. The need for a flexible action plan. Cross sections of the state are targeted areas although the entire population is a stakeholder. The State will seek input for collaboration to agreed upon priorities before implementation.
3. A need for exposure of the entire plan to public/private concern and their reactions of other proposed alternatives.

Police Associations - Can Be Expected Not To Give On

1. All training will be conducted on an overtime basis.
2. Service level to the community and reduction of organizational strength must not occur for training exercises.
3. They will remain blase' and apathetic toward supporting a ballot initiative for emergency management planning and training.

Police Associations - Can Be Expected To Give On

1. Emergency services and disaster preparation is considered to not be a primary role of the law enforcement officer.
2. Associations will have the option of selecting a planning representative.
3. Mandated programming by the State usurps control of the local jurisdiction.

Fireman Associations - Can Be Expected Not To Give On

1. The strategy programs are imperative to the future success of an emergency operation of "macro" proportions.
2. Law enforcement must be an integral part of the disaster planning and future disaster management. They will be active and positive supporters of a funding initiative for public safety, emergency planning and training.

Fireman Associations - Can Be Expected To Give On

1. The Fire Department is the controlling voice in all disaster operations.
2. The mandate must identify Fire Departments as the initial response agency for managing emergency response.

Chamber of Commerce - Can Be Expected Not To Give On

1. The need for their organization to align with the City or community. They have a strong tie to the community to improve the general quality of life today and in the future. They recognize the need to maintain community and neighborhood integrity. They are believers that a strong neighborhood environment is conducive to good business.
2. Although they see a need to align with the City, their support will be latent. There will be a need for additional resources to support emergency services, preparation effort, and disaster

training strategy. It is expected they would prefer looking at existing resources for re-allocation before acknowledging a need for additional resources.

Chamber of Commerce - Can Be Expected To Give On

1. The need to support the "burdened industry". There will be a need to support a primary stakeholder called "the burdened industry". The Chamber of Commerce is a support organization for the business community. The burdened industry, the business organization that will be impacted by the funding initiative, will be seeking support from their local Chamber of Commerces.

Business and Industry - Can Be Expected Not To Give On

1. The need to support the program as an important means to develop emergency planning. Smaller businesses will see the alternatives as a positive measure to assist in their efforts in preparing their organization for an earthquake and other emergencies.
2. The need for their business to be the first priority and emergency planning will not interfere with business operations.

Business and Industry - Can Be Expected To Give On

1. The need to not openly support the impending alternatives for emergency preparedness.
2. That the alternatives will negatively impact their organization or businesses of fiscal and personnel resources.

Emergency Management Organizations - Can Be Expected Not To Give On

1. The strategies will be instrumental in developing a uniform and compatible emergency management system.
2. There is a need for funding to support the alternative programming, because of the enormous resources required to support the level of planning and training necessary to meet the future needs of public safety, particularly law enforcement, as it interrelates with the community.
3. Control must be at the state level to ensure compliance of Incident Command System implementation and designated disaster training.
4. The commitment to emergency management preparation must have statewide continuity.

Emergency Management Organization - Can Be Expected To Give On

1. Local organizations will see the need for more discretionary control than the mandate provides.

2. State authorities will not include local control in the programming mandate. There should be a realization that adaptation will be necessary at local levels, that there may be unique political and operational considerations that may not lend itself to the mandated ICS application; that certain variations will have to be accommodated.

Federal Government - Can Be Expected Not To Give On

1. The need for allocation of additional funding to support the enhanced programs will not be provided.

Federal Government - Can Be Expected To Give On

1. The need for continuing current financial support for emergency management planning and training. It would be anticipated that current funding would not be jeopardized by creative thinking.

Peace Officer's Standard and Training - Can Be Expected Not To Give On

1. The need for State mandated programming. The alternatives are absolutely necessary to mold law enforcement agencies of the State of California into a single unit when necessary under "macro" emergency conditions.
2. An alternate source of funding is imperative to finance a training and planning endeavor of the magnitude suggested.
3. P.O.S.T. cannot fund the required academic training with current revenue sources.

Peace Officer's Standards and Training - Can Be Expected To Give On

1. The need to manage and coordinate emergency management training under the alternative program. The Department of Justice or the State Office of Emergency Services could also be considered as a coordinating agency for training.

Volunteer Organizations - Can Be Expected Not To Give On

1. The importance for their participation in management training.
2. The need for financial support in community planning.
3. The importance of preparing the community of their role in a "macro" disaster.
4. The need to be an active participant in the planning stages to ensure that they are an integral part of the emergency management process.

Volunteer Organization - Can Be Expected To Give On

1. There is a need for their involvement in the planning of citizen's roles as volunteers at the State level.
2. Selective members from the volunteer organizations will be funded for having key responsibilities in local emergency management and training within the community.

Negotiation Strategy

The strategic alternatives have been selected. The plan to set the alternatives in motion have been identified. The key strategic players, stakeholders, have been selected for they may hold the power that can make or break the future environment of emergency preparedness for a "macro" disaster. Needs of the stakeholders have been identified to offer some diagnosis of a particular negotiating strategy that would best move that individual or organization to agree on an appropriate course of action. A broad discussion of the issue and strategic solutions provides an opening for a variety of alternative actions. It offers a review of the political atmosphere that is certainly to follow. We guess how people will react, but are never certain. In this case, law enforcement wants to develop a win-win situation. There are a lot of people, property and resources at stake. It would be advantageous to carefully review each stakeholder's situation and determine what it would take to be reasonably happy with the end result.

The tools for this analysis can be found in the book "The Art of Negotiating", by Gerald I. Nierenberg (43). In his book, he identifies two primary strategies to assess the stakeholders for determining the best approach to accomplish one's objectives. Nierenberg suggests that a sense of timing is critical when applying a particular or specific negotiating strategy. The other strategy is twofold and suggests how a particular

negotiation strategy will be used and where is it most appropriately used during the negotiations. Nierenberg calls them the "when" strategy and the "how and where" strategy.

Public: The public is complacent about emergency management. It is difficult to be excited over an issue that is not in the forefront. Disasters are in the future. Unless dramatically shown how directly effected they might be, it becomes a low priority. Initially the public will not care about the Incident Command System and would only have a minor interest in disaster training. They have not been particularly supportive of ballot initiatives that suggest a "user" type of fee and, in their estimation, another tax. However, they are extremely important to the funding initiative. The public should be well-educated and bombarded through every available media informing the purpose of ICS, disaster training, and what the near future holds for a catastrophic earthquake. They must be met head-on, no fooling around and jolted into believing that these three alternatives are essential to their survival in the future. This is a form of the "surprise" strategy. It is drastic and dramatic. Since we are talking about the public en masse, the "blanket-shotgun" approach will be best suited to communicate with the general population.

Politicians: The politicians will want the ICS system and disaster training if their constituents want it. Their constituency includes the public in general, business and industry, volunteer organizations, and the many Chamber of Commerces. They are situation reactive. They are motivated by the near future but need to have vision of the extended future. The politician must be convinced that the near future may be a disaster of macro proportions; that lack of preparation may be detrimental to their future; that

inaction may cause considerable more devastation then if there had been action. Inaction, may cause considerable monetary loss to their communities from the destruction and civil litigation from inadequately prepared public service agencies. "Surprise" is a straight forward strategy coupled with "limits" strategy informing that time is running out and inaction is the wrong action.

To accomplish our objective is to enlist "participation" that we need one another and that as a result of inaction, he is imposing the law of chance of when a disaster might occur; using the strategy of "randomizing or outbluffing".

Law Enforcement Associations: Law Enforcement Associations may suggest to their officers that emergency management is not their business, but crime fighting is. Historically, the Associations tend to provide support that they see as a personal gain. However, they know if the strategies are set in motion, officers will comply with the mandates. If support is not extended in the early stages, then the organization should back-off and continue negotiations with other primary supporters, thereby utilizing a strategy of "apparent withdrawal". The organization must show support for the concern of officers that combating crime is the organization's first priority. But, a need exists to extend the organization into a predestined future. Feeding the organization, bit-by-bit, with supportive data to seek positive acceptance. This would be suggestive of the "salami" approach.

Fire Department Associations: Firemen are anxious; they see a great need. They will be great supporters. The act of "forebearance" is a strategy for firemen. They need to place themselves in a holding pattern, except for the support they can give to the alternatives. They are not adversaries.

They will be supportive as "participation" minded and will be enlisted as supporters for the cause.

Chamber of Commerce: You will not hear a lot from the Chamber, they are "snaildarters" and will only be heard if the side they support needs reinforcing. Appearance is that they are avoiding the issue. But, this is not the case. They know the issue is important to their constituents and the betterment of the community. I would suggest that a negotiation strategy would be one of "forebearance"; to hold back, wait, and watch. However, at the right place effort should be made to enlist the Chamber as an ally. They should be approached and should be negotiated in the terms of "participation", however, they are a strong force and will surface when the need arises.

Business and Industry: Business and industry's main objectives are the preservation of their business interests and to make a profit. Their interest in emergency service issues are supportive if thought to be convenient; however, in recent times, more major corporations are incorporating disaster related training into their organization. Smaller organizations have indicated the same interest, however, personnel resources and financial constraints have limited their activity. Therefore, businesses are considered a supporter of the alternatives in most instances. Their greatest need is to be certain that they are not additionally taxed or that the "burdened industry" with whom they would support was not negatively affected by the funding measure. Strategically "forebearance" would be the key tactic; that in due time, they may see positive results from the initial planning and would develop support for a ballot initiative. Because they see something to gain and really little to lose, "crossroading" the alternatives allows the negotiations to discuss and weigh the advantages versus the limited disadvantage.

Emergency Management Organizations: These organizations, such as the local and state office of Emergency Services are 100% supporters of the strategic alternatives. There is no conflict, they are there to create a win-win situation. They are the supporters and the backers and will reinforce the need to anyone who asks. They will use any negotiation strategy that is necessary with an opposing force to meet their objective.

Federal Government: This governmental agency will wait and see. If the program works, it may be a viable alternative for a national program. The federal government will generally be in favor of any program to enhance emergency preparedness. They know the emergent issue is a reality. The Federal Government wants to know how much money they can save. On the other hand, a message is being delivered to the Federal Government. Local government has identified the emerging issue and considered it a major concern for the future. It has been determined that a resolution to that issue requires mandates at the state level. The message suggests the Federal Government's financial support is insufficient to answer the need for emergency management in a catastrophic event. Strategically, a form of "feinting" is being used as a negotiation tool to seek the interest and continued funding support from the Federal Government.

Peace Officer's Standards and Training: P.O.S.T. are supporters of the alternatives. Their concern is who will coordinate and conduct the training. Where will, and how will, the program be financially supported. The negotiating strategy in this case would be "forebearance", that is, to wait and see before determining where the coordination of training should lie. Perhaps at the proper time the strategy of "random sampling" would be necessary to properly negotiate the appropriate medium for training. The

objective is to maintain support for the alternatives. Knowing when to act and when to stop is the key for this successful negotiation.

Volunteer Organizations: They also are 100% supporters of the strategic alternatives. They want to help and be involved in everything. They promise much more than they can give. They see a need to be an active participant in the planning process. That is not always feasible, nor advantageous at certain planning levels. One strategy would just be plain "bland withdrawal" and at the appropriate time plead ignorance to the fact that volunteers were not included in all areas of planning. However, since they are considered supporters of the strategy, the organization will not want to turn that group into a negative force. It would be best to use a tactic of "accommodation." There is a time and a place that is appropriate for their services in the planning stages. Perhaps it might be more directly related to the negotiation strategy of "bracketing". Proper thought and planning will place them in an effective role of emergency planning.

Burdened Industry: The industry effected, although unknown until the selected revenue stream is identified, will not be supportive of the initiative. If a user fee is attached to a product, as suggested in this study, then the manufacturer will see his product being adversely impacted, and the consumer will be charged an additional fee for the product being purchased. The manufacturer is concerned that the buyer has no obligation to purchase the product and therefore, sales and revenue will decline for the burdened industry. An appropriate tactical strategy is "Fait Accompli", to reach the objective against an opposition. The source of revenue is absolutely necessary to support the program and other alternatives. The initiative must be brought before the voters no matter how strong the

resistance from the burdened industry. The public must be told that the impact on industry and themselves is minimal. The cost versus the benefits must be identified and weighted to demonstrate the benefit is greater than the fiscal impact. Submitting the cost benefit tactic at the proper time, perhaps when opposition is the greatest, suggests a "crossroads" form of strategy that discusses the values on each side of an issue and that concessions are appropriate to benefit the population majority.

Who becomes the winner. The intent is for all to have a feeling of winning. It is hoped that all sides will listen to the concerns of each other. If pre-planning is part of the strategy, then great success will surface if the dominant party will help all those involved to understand the true purpose of the change; that there is a need, even though it sometimes hurts; but after it is over the good it will bring will be demonstrated; and, provide some benefit for all.

TRANSITION PLAN

Statement

The study has supported there is a consensus among scientists that an earthquake with a magnitude of at least 8.0, as read on the Richter Scale, is imminent in Southern California before the year 2000 or shortly thereafter. The study suggests that law enforcement will play a major role having leadership responsibilities; that law enforcement organizations are not prepared to cope with the massive responsibility demand; that destruction to the community will disrupt normal expected police services. If that is the case, then a leadership awareness program must be developed and implemented by management. Given the scope of a "macro disaster", traditional planning will prove to be inadequate. It involves more than the local community; it requires an integration of public agency emergency planning at all levels of government, especially regional. It will also require more resources than law enforcement can provide. It will require a cooperative effort by law enforcement with other government agencies and private services to provide adequate resources. The police officer should be trained toward his role of sustaining order, rendering aid and acquiring resources in a "macro disaster" environment by taking leadership responsibilities. A new mind set is needed.

The third objective for the study is to tactfully manage the data collected and analyzed in the strategic plan, and develop a transition plan to successfully manage the selected futures scenario.

Methods: Identification

The transition plan will define participants, their roles, and related commitment with reference to law enforcements managing "macro disasters", such

as a major earthquake. These participants, called the "critical mass", will be identified. An analysis of their anticipated support and needed support will be conducted. Strategies will be discussed and developed to obtain the necessary commitment. Changing environments often require a different management philosophy. This study will review and recommend a management structure to accommodate the transition.

The last phase of the transition process is a review and identification of technologies that might accommodate the changing environment. A new way of doing business is often more easily accepted when there is some support to facilitate the change. That support will come from changing technologies.

Methods: Implementation

Critical Mass Identification

The critical mass chart and the analysis that follows identifies critical people in a transition plan, their current level of commitment, their future level of commitment, and a suggested approach to achieve the change commitment. (Refer to Figure 4)

CRITICAL MASS

Anticipated Commitment

<u>ACTORS IN CRITICAL MASS</u>	<u>CHANGE</u>			
	<u>BLOCK</u>	<u>LET HAPPEN</u>	<u>HELP HAPPEN</u>	<u>MAKE HAPPEN</u>
Chief Police		0 -----▶	X	
City Council/City Manager	0 -----▶		X	
Regional Politicians	0 -----▶		X	
State Office Emer. Services				⊗
Governor		0 -----▶		X
Public	0 -----▶			X
Volunteer Organizations		0 -----▶	X	

Legend: 0 = Current Commitment
X = Needed Commitment

Figure: 4

Chief of Police: The issue and strategic plan has been conceptualized at a local level. Therefore, the idea that the issue is real and resolution is a high priority must first be established by the Chief of Police. The thoughts of a future catastrophic earthquake is the last problem on a Chief's mind. However, provided support documentation is adequate, that the issue is a priority concern, and the plan is justifiable and reasonable, agreement can be reached so action will be initiated. An initial response might be "what will be, will be" or "emergency preparedness is not this organizations key responsibility". The Chief's position might be, "I will forward the problem that has been identified into the proper channels and we'll see what happens." The identified law enforcement mission also includes "to provide emergency assistance in time of disaster, accidents and medical emergencies" within the community. The Chief of Police must recognize the potential for future liability, should a macro disaster occur and personnel within the organization have not been adequately trained nor have a clear understanding of their roles and responsibilities. The Chief of Police is an initiator and needs more than an attitude of "let happen". He must be in a frame of mind and sincerely believe in the proposition the issue poses. With a "grass roots" belief, the Chief of Police is in a strong position to help "make this plan happen." He needs to be concerned with developing synergistic relations with other public agency officials before major emergencies occur.

City Council/City Manager: They are certainly are in a position to "block" any further action. Their position is that the City is complying with current federal standards required by the Federal Emergency

Management Administration (FEMA) and the State Office of Emergency Services (OES). They have authorized an Emergency Services Coordinator position to develop a local disaster plan supplying information to the City and conducting an occasional training exercise. The magnitude of a future event and the anticipated depth of destruction to people, property and fiscal resources is truly realized only by an Emergency Services Coordinator, learned through his efforts and knowledge of plan design. The City is dealing with many other major issues and concerns that are immediate and in the forefront of City operations. At this point, hopefully, not only is the City's representative of Emergency Services keenly aware of the issue, but now the Chief of Police can identify with the problem and become united with the Emergency Services Coordinator. Key departments within the City structure, such as the Fire Department and Public Works, who will be greatly affected by a major earthquake, can be approached and brought into the fold as a core committee to discuss the emerging issue with the City Council and City Manager. Support and concern from key personnel may make the impression that the issue is real and action is necessary. That may be the step to move the City Council and City Manager into a positive position of "help happen", which is a critical step forward. They will be politically sensitive. The implementation will have a significant impact on residents, businesses, and land/property owners. City officials have the responsibility to provide leadership in coordinating emergency planning with their counterparts in regional government.

Regional Politicians (Southern California): This will include the County Board of Supervisors and the Legislators for the Senate and House

of Representatives. The initial reaction from most will be to establish a "block" thinking that emergency planning is a program currently in effect and there is operational and financial support for disaster operation centers. That thinking is shallow, it must be extended to demonstrate that there are two basic needs lacking. One, that law enforcement is not an integral part of the emergency operations management program. They superficially support an operation but in fact, there is an identified need that their role and responsibility is much greater than the current plan suggests. Secondly, education and preparation for the communities is severely inadequate. They must be shown there is a great need to establish a solid organization of core civilian volunteer groups that can respond to provide assistance to law enforcement in the event of a catastrophic disaster. The politician are in a position to receive political pressure from surrounding businesses and homeowners. They will be politically sensitive. The implementation will have a significant impact on residents, businesses and land/property owners. They will become a support unit to the new strategy and any future task force who recommends specific action. With that support, the supervisors and legislators "can make the change happen."

State Office of Emergency Services: This office is perhaps the key to the entire strategic plan, and act as liaison to federal emergency services. They are the key supporters in every sense of the word. They see that each of the key strategic alternatives are absolutely essential to adequately prepare the State of California Local Emergency Preparedness Offices and law enforcement for, not only a "macro" earthquake, but for any catastrophic event that requires the use of

multiple resources including those beyond the capability of public servants. They are in a "make it happen" position now and will remain there in the future. They are a direct liaison between law enforcement and local offices of Emergency Services to the Governor's office. OES is seeking support from the local level and a plan that would include enhancing the roles and responsibilities of law enforcement in emergency management and specifically in a "macro" event. Documented support would provide impetus demonstrating to the Governor the merits of the alternatives identified.

Governor: The initial response from the Governor's Office would be perhaps to "let it happen". The Governor's initial position is different than other politicians. He is keenly aware that the catastrophic potential exists. Governor Deukmejian made an opening statement in a course catalog for the California Specialized Training Institute. He stated,

California leads the nation in many areas, including the potential for natural and technology disasters. The earthquake, annual wild lands, fires, floods, and other events necessitate the activation of emergency plans and teams. The effective handling of these events can only be realized through comprehensive and continuing training.
(44)

His position would be "let it happen". Disaster plans have been established; training is available; disaster exercises have been instituted; the plan has already been established. The strategy is to meet the Governor from two sides. One from the law enforcement via the Office of Emergency Services, and the other from the political side via the legislators. The Governor has a strong tie to the state and wants to improve the quality of life within its communities. The Governor is the key to the future. He can "make it happen".

Public: The alternatives that recommend mandating an Incident Command System and disaster training will not be affected by the general population. However, they are the key support to the ballot initiative that provides funding for public safety agencies. In a recent election, they rejected a measure that would have provided additional funding to suppress crime. They see any initiative as a form of taxation. The voters of California are the true key for the entire plan. Should only mandated programs be put into effect, supportive funding would be limited to the extent that minimal preparation and application would occur to meet the mandate requirements. To effectively meet the objective, there must be extensive open communication by the mass media. Advertising support must be promoted at all levels of government to seek a buy-in from major corporations, small businesses, and volunteer organizations. A cooperative state-wide effort is absolutely necessary to promote the belief that support for this initiative will merge local public safety agencies and the community as a team to mitigate large losses of life and property from the catastrophic event that is destined to occur.

Volunteer Organizations: The list of organizations include, as an example, the Red Cross, Salvation Army, ham radio operators, and Neighborhood Watch groups. These organizations and others are supporters of the alternatives. They already will say "let it happen", but a "help it happen" position is needed. Volunteer organizations will become part of the mass media. They will be a main source to inform the public. They will reinforce the need. It is a matter of public agencies reaching out to volunteer groups and accepting them as a part of the overall public safety organization. Volunteers have a specific role, not only in

response to a catastrophic event, but, as a resource in educating the community to develop a preparedness attitude.

Management Structure

What is being managed is more than a change within an organization; it is changing the attitudes and beliefs of a community. It is changing a concept by which the way a community looks at itself. It will bring people forward who feel the need to become an interested party in community planning.

Who should manage the change? What is the most appropriate management system and structure for effectively managing this ambiguous transition state of affairs so that it creates the least tension with the ongoing system and the most opportunity to facilitate and develop the new system? (45)

Beckhardt and Harris identify a variety of management structures that may be appropriate in the transition state due to the uniqueness of roles, tasks, and resources.

Structuring management change is twofold. First, at the local level to set the plan into motion and gain acceptance to move it toward a higher level. The other, after local acceptance, the thrust for implementation of the alternatives and subsequent plan development.

The first phase of management structure identifies the Chief of Police as a project manager. He is selected for that position and responsibility because the conceptual issue is directly related to law enforcement. Since the issue and the event will effect all departments within the City, the Chief will invite a representative group of constituencies that have a major role in advocating the acceptance of the issue and its strategies by the City Council and City Manager's office. This group of executives may select supporting staff people to refine a proposal for presentation to the City Council and City Manager. However, it is the responsibility of executive department heads

to present a proposal and justify its validity. The City staff will continue work as a management/project team at the local level while coordinating expanding efforts with their own constituency counterpart in surrounding communities. For example, the Chief of Police, with the Local Chief's Organization, the City Council, with other local councils, the Board of Supervisors and local legislators. When the Chief's of Police Association is in agreement, it is essential that liaison is made with the State Office of Emergency Services. At that point, a new management structure will begin.

The Director for the Office of Emergency Services (Chief Executive) is the project manager. However, the task scale is extremely broad and requires a variety of technical skills and input. In this role, the project manager must be in a position to be politically sensitive; be committed to the strategy; be a soundboard to public/private concerns for their reaction to the plan proposal. He is the link to the political structure, i.e. the Governor's Office and State Legislators. The Director would select a representative group from his organization that would sit as advisors and directors of the project. All data would flow through this group of people. They would evaluate all proposals and recommend a course of action to the Director. They would be representative of the needs to effect strategy change and will sit as advisors for the project. The operational management of the transition plan is a structure of line-management hierarchy. Each has a responsibility related to a specific area of expertise. More importantly, each has a responsibility to work as an inter-connected team to produce a product for recommendation to the Governor's Office and the State Legislators.

Finally, when the strategies have been implemented, the Office of Emergency Services will continue with implementation responsibilities. The

Director will then select or appoint a project manager to implement the plan. A constituency representation would be a valid form for a change management structure. Selected representation from law enforcement, fire service, local Office of Emergency Services, Peace Officer's Standards and Training, and key volunteer organizations will become a participatory group to guide the implementation of a plan destined to mold the State of California into a cohesive emergency management team.

Technology Support:

Law enforcement is perhaps on the edge of a technology explosion. Not that the technologies are necessarily new, but that the marketplace sees a need for the technology in the law enforcement field, and in this case, in the area of emergency management and rescue operations. Some of the technologies are new and innovative and may not be specifically identified for an application today, but they are identified to suggest that creative thinking is an important application in emergency management planning.

1. The Environmental Systems Resource Institute in Redlands, California, has developed a reference mapping system of data via graphics that can project structural problems, gas, electric and waterline problems, and project needs for hazardous material incidents should an earthquake of a greater magnitude occur.
2. The Odetics Incorporated, in Anaheim, has developed a three-fingered robot hand. The self-contained, electric hand will be able to grip objects as small as a pencil and as large as a railroad tie. It can also clamp onto objects with as much as 100 pounds of force per finger and control its force to within .1 pound. (46)
3. The Federal Emergency Management Association (FEMA) has a computer

system for emergency planning and training. This system can now be accessed from an IBM PC terminal. This new development will provide a wider audience access to emergency systems at a much lower cost. It is an interactive computer system for emergency manager's use in planning, training and real time operation decision making. Graphic software, available from Grafpaint, in San Jose, California, provides the ability to simulate emergencies and display maps. (47)

4. The CADCO Company, in Garland, Texas, has a civil emergency alert system to inform the public utilizing cable television distribution system. The interface with the cable system is remotely activated by a switching device in a responsible location within the City. It allows an official to broadcast a public service announcement to all active television sets within that specific cable system.
5. In an interview, William Tafoya, a futurist at the F.B.I. Academy in Quantico, Virginia, (48) noted the following technologies.
 - a. A prototype airborne heat sensing device to locate burned bodies even when they are buried in rubble. It is extremely sensitive and adjustable.
 - b. An ultra-high resolution surveillance photography from high altitudes to assess damage and locate bodies. It will indicate what is on the ground and, if hidden, will show movement or activity. The technology allows for viewing at real time. It provides for wide-range or big picture look at a situation.

- c. The use of artificial intelligence to establish a database of "what if" situations. For example, the type of earthquake response program that would be required given a specific Richter Scale reading. Also from that reading, what damage can be expected, the number of victims, injuries and deaths anticipated, and the extent of all damage and injury potential. This database would be capable of detailing the situation and producing scenario guidelines for an actual plan.
 - d. Computer graphics generation for identification of human beings by reconstructing what may be a dismantled body.
5. Fire Departments have begun to use software programs accessible on small computers for the management of emergency operations. Programs are available to predict the spread of poisonous gas clouds and ensure people are moved from its path, for weather tracking that automatically updates computer estimates of chemical concentration in the wind, and detailed city maps that show streets, floor plans of businesses, oil pipelines, water mains, fire hydrants, and other details that might be necessary. These programs have been used in Mackintosh computer systems. The known systems are called ICHIEFS, sponsored by the Fire Chief's Association in Washington, D.C., Cameo (emergency operations) and Firelink for Fire Department administrators. (49)
6. According to Tom Heaton, Chief Scientist with the United States Geological Survey Office, in Pasadena, California, the groundwork has been set for a warning system that would sound an alert before an earthquake shock hits population centers. At this point, the advance

warning would only be 30-60 seconds, but even at that, it is expected to save thousands of lives. (50)

A "...system has been in place for nearly twenty years." (Tokyo)

"... have been alerted to impending quakes on four or five

occasions." (51) The California network would extend for

approximately five hundred miles from the area of San Francisco to

near the Mexico border. The instruments would sense earth movement.

Electronic impulses generated by the earthquakes first movements

would trigger Civil Defense warning sirens and cue taped emergency

messages at radio and television stations.

CONCLUSION

Oh what a glorious day tomorrow could be! You know, California may be considered the earthquake capital of the world. In the short time that this report was being compiled four earthquakes occurred in the state. California is destined for no less than an 8.0 on the Richter scale, somewhere along the San Andreas fault during the next 10 - 20 years. An earthquake of that intensity would be catastrophic to any city that is effected and to the service agencies, public and private, that will need to respond. This will be an event of "macro disaster" proportions. Law enforcement will play a major role during that event. The roles and responsibilities will be considerably different and enhanced from a disaster of lesser magnitude. Several concerns and prospects were considered for the future. Law enforcement does not have a cohesive and compatible operational plan to coordinate emergency incidents that affect multijurisdictions. At the same time law enforcement is generally understaffed and have not maintained an appropriate level of training in the event of a major disaster that would meet the needs and requirements for effective response. Fiscal constraints play a role that affects the time and effort dedicated to an event considered as a low level probability. Substantial funding would be required to meet the needs of a new objective. New revenue streams need to be identified and committed so public entities can reprioritize their programming and resource allocations. If law enforcement fails to take time for evaluating the issue and supporting concerns, then there should be an expectation that in the near future public entities will be prospect for litigation. Law enforcement could be considered negligent for not anticipating a known future and preparing its agency personnel on responsibilities and methodology for coordinating and commanding an emergency event.

If that is our future, then how do we attack it; what's our game plan? There are key people or organizations that will have a concern about the issue and the action being recommended. Future policies and strategies may impact them personally or in their business. Concerns were addressed that these key people (stakeholders) will impact or influence other people or organizations in a negative manner. Three key policy/strategic alternatives were selected on the basis that the issue affects all California law enforcement and resolution can only be accomplished at the highest level of policy development within the state:

1. The state of California mandate an incident command system
2. The state of California mandate disaster training for law enforcement
3. A ballot initiative to fund public "macro disaster" emergency management planning and training for public safety/law enforcement agencies.

To support the strategies, law enforcement must demonstrate through pre-planning new key roles and responsibilities that will be required to prepare and respond to a catastrophic event. Support can now be sought from peer organizations and leaders who can influence the development of the policies/strategies. We now enter the political arena of negotiating with the key stakeholders seeking acceptance with a win-win solution for everyone affected. Law enforcement must be creative, innovative, and develop entrepreneurial skills to seek out additional funding sources that can be dedicated to emergency management such as corporation and foundation grants. The research indicated that the best source revenue stream would be derived from a "user fee" identified in a ballot initiative.

The objective is to transition the research to a scenario that prepares law enforcement for the envisioned future. There are people who are important as support agents to the plan. They are called the critical mass. Analysis of their current level of commitment and the future level of commitment, that is deemed necessary to achieve the objective, was identified along with recommendations to achieve that commitment level. Multiple organizations are involved or are affected by the new plan. In effect, a new organization is being developed to manage the transition and facilitation of the plan. A new management structure is identified to accommodate the unique roles, tasks, and resources necessary to set the plan into motion and gain acceptance by all parties involved. Finally, a series of technologies have been identified that may compliment and enhance the process for law enforcement to meet this objective of successfully managing a "macro disaster" operation.

The role of law enforcement in "macro disaster" management must be enhanced, not diminished. It can only be done by a synergistic cooperative effort of a concerned government and community.

To conclude: We can have a vision. We can prepare the way. But, those above will set the course beyond our control. Whatever the decision may be, the law enforcement officer will stand out, in disaster, as a knight in shining armour.

More properly said by someone, long before our time: "Good fortune will elevate even petty minds, and give them the appearance of a certain greatness and stateliness, as from their high place they look down upon the world; but the truly noble and resolved spirit raises itself, and becomes more conspicuous in times of disaster and ill fortune". (Plutarch 46 - 120 A.D.)

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APPENDIX A

LIST OF EMERGING TRENDS

EMERGING TRENDS

1. More training will be mandated for law enforcement in emergency first aid.
2. Economic issues will greatly change the role of law enforcement.
3. There will be less young people and more older people with increased growth of communities.
4. Increasing grid lock on the freeways.
5. Law enforcement will become grossly undermanned for the task to be performed.
6. Increased influence for greater protection of life versus property.
7. More emphasis toward mental health considerations versus property considerations.
8. Changing attitude of law enforcement personnel toward their role.
9. Increase reliance upon vendors for technical support.
10. Increase lack of life experience in younger officers.
11. AIDS will make it more difficult to provide emergency medical care.
12. Politics will impact on how the job gets done.
13. General lack of preparation on both law enforcement and the public to deal with catastrophic incident.
14. A greater availability of law enforcement helicopters.
15. Increase civilianization in law enforcement.
16. Increase need of personal work equipment to get the job done.
17. More public education regarding disaster preparedness.
18. Less substantial support from the State and Federal government.
19. Continued poor land use planning of home construction resulting in more complex problems.
20. Severe shortage in all aspects of medical personnel.

21. An increased number of smaller earthquakes that will affect disaster preparedness.
22. An increase in law enforcement privatization.
23. Lack of personal loyalty of newer employees toward the organization.
24. Increased demand/reliance on communication systems.
25. Citizens expect more money from government for relief/recovery.
26. Unstable government via short term politicians failing to provide consistent policy direction.
27. Continual limitations of government spending via Gann type initiatives.
28. Increased reanalysis of government spending to reflect priorities of government.
29. Lack of hospitals to take care of injured.
30. More jails, prisons, and prisoners in custody.
31. Lack of commitment by business and industry who rely too much on local government emergency services.
32. A fluctuating economy. "
33. More reliance on private sector to meet the community needs.
34. Greater reliance on "super stores" with less reliance on self-sufficiency.
35. Regionalization of some services while others remain local.
36. Pressures to force use of an Incident Command System [ICS].
37. People becoming more personally involved in caring for themselves.
38. Less serious crimes are handled differently.
39. Entire criminal justice/judicial system going through major changes.
40. Decentralization of civic centers.
41. Apathy toward others [me first mentality].
42. Reliance upon technology and automated systems.
43. Increasing complexity of disasters.
44. Economic constraints hinder disaster planning.

45. Increase in non-English speaking people.
46. Expected reliance on mutual aid.
47. Continued development of hazard materials with no way to handle mishaps.
48. Increased pressure for regional solutions to many problems.
49. Developing new inter-departmental relationships for disaster planning.
50. Increased responsibilities of Neighborhood Watch.
51. Unjustified reliance on self-sufficiency of public resources/facilities.
52. Increased availability of psychological services to Emergency Services/Law Enforcement Responders.
53. More efficient radio systems via use of satellite.
54. Political apathy to deal with mitigation issues due to lack of funds.
55. Greater use of fire emergency management system.
56. No insurance available to rebuild; public reliability on insurance.
57. Multi-tasking results in overburdening all government agencies during disasters.
58. Increased liability of public officials.
59. Decreased ability to improvise solutions as dependence on technology increases.
60. Overloading the infrastructure due to increased population.
61. More programs developed for family support systems.
62. Leadership/Management delegated to field level during emergencies.
63. Increase in the number of gated communities.
64. Gang activities increasing.
65. Increased building requirements for earthquake safety.
66. Increased use of volunteers.
67. Increase in high-rise construction.
68. Greater training of top-level management.
69. To keep emergency management with emergency services.

70. Greater utilization of other City departments.
71. Lack of essential medical supplies.
72. Greater reliance of outside logistical support.

APPENDIX B

LIST OF CRITICAL EVENTS

CRITICAL EVENTS

1. Increase funds for disaster preparedness and training
2. Incident Command System for public education grades 6 - 12
3. Significant less crime, fewer law enforcement personnel needed
4. Incident Command System mandated for all law enforcement agencies
5. State mandate and funded minimum staffing for emergency management per population base
6. Earning "cap" for law enforcement and fire personnel
7. Mandated manpower limitation; hiring freeze
8. GANN initiative abolished
9. Aids hit 50% of males 18 - 35 years
10. Peace Officer Standards and Training (P.O.S.T.) requires computer literacy as condition of academy graduation
11. Media supports disaster preparedness
12. Multi-task assignments eliminated via union MOU
13. Cure for aids and cancer
14. Recession
15. Drastic weather change world wide
16. Major earthquake in New Madrid Fault
17. Government spending limits upheld by voters and California Supreme Court
18. Insurance companies require disaster plans and completed preparedness before issuance of coverage
19. Surplus jail space
20. Robotics and video monitoring of neighborhoods
21. Financial incentives for youth to join law enforcement
22. Supreme Court restores local government immunity

23. National Guard assigned to cities and counties for disaster preparedness
24. Multi-jurisdiction response plan adopted
25. Major industries migrate out of California
26. World War begins
27. Major judgement against city government for lack of emergency management planning
28. Construction of space station begins
29. Trade embargo with Japan
30. Desk top computers reduced to wrist watch size
31. Anti-growth initiative passed in California; development stops
32. California lottery funds reallocated from schools to law enforcement
33. Test Tube births are perfected.
34. Hazardous material landfill located in every county
35. California Highway Patrol assumes general law enforcement duties in cities
36. LEAA funds become available
37. Drug seizure funds may be used for salaries for law enforcement
38. Repeat of baby boom era
39. Reactive "Dimes for Crimes" initiative and passes
40. Legalize and tax marijuana
41. California reaches zero population growth
42. Hiring age for law enforcement drops to age 18
43. Depression in Mexico

APPENDIX C

LIST OF POLICY/STRATEGY ALTERNATIVES

POLICY/STRATEGY ALTERNATIVES

The following are strategies identified via group participation.

1. The State of California mandates the development and implementation of a statewide universal Incident Command System (ICS).
2. The State of California mandates that a percentage of law enforcement training time be devoted to catastrophic disaster training.
3. The State of California establish a formal organization of volunteer civilian groups that could provide assistance to law enforcement in the event of a catastrophic disaster.
4. Local law enforcement organizations develop manual back-up systems to all computer automated operational systems and conduct regular training exercises.
5. Resources required for an emergency operation are pre-identified, located, and documented to provide immediate or 24 hour access including prearranged contracts resolving any financial issues prior to the event.
6. Communication frequencies necessary for an emergency operation will be pre-identified with pre-agreed decisions regarding operation locations, authority for use, priority for use and call signs that are necessary for emergency response.
7. Authority for emergency expenditure of funds will be established to include a preset maximum expenditure predefined system for emergency purchases.
8. A ballot initiative will be developed to provide a revenue stream through a form of a user fee with revenues to be proportioned to local governments throughout the state of California and earmarked specifically for the use of public safety/law enforcements agencies in planning and training for macro disasters.
9. The mutual aid system concept will be reviewed and reorganized to include the notion of response capabilities in a "macro" disaster versus a local disaster.
10. Develop within the field officer a new sense of the changing role in a disaster operation and establish a standard operating procedure identifying a level of authority commensurate with the leadership responsibilities in a "macro" disaster.
11. Participate in the research and development and acquisition of an early warning/prediction monitoring system for the local law enforcement agency that would provide an expected level of shock intensity.

Appendix: C

APPENDIX D

PRE-PLANNING ALTERNATIVES

PRE-PLANNING ALTERNATIVES

1. Accept and adopt the Incident Command System model. Modify the plan to meet local requirements, including political considerations, fiscal procedures and administrative policies unique to that organization.
2. Law enforcement adopt a position assigned directly to a local office of Office Emergency Services to assist in all facets of ICS development, disaster training, and disaster exercises. The Police Department will become an integral part of the disaster planning operation.
3. Conduct specific training for law enforcement officers that identify the probabilities of a macro earthquake and the anticipated impact it would have upon the community.
4. Review the literature that scenarios the impact a macro earthquake will have upon the community.
5. Based on the scenario, identify the changing roles and responsibilities that the field officer should anticipate.
6. Where should management begin to train? A macro disaster is going to dictate an entirely different response than other emergencies. For example, if a field officer should experience a riot, communications will still be operational, power lines are intact, roadways to and from the scene are still open, lifelines are still in existence, and as a result, mutual aid is an alternative resource that is readily available and accessible. On the other hand, if a catastrophic earthquake should occur, communications would be adversely affected, power lines down interrupting service to the community, waterlines broken disrupting service, natural gas lines ruptured, collapse of bridges, damaged freeways, and the likelihood of no local mutual aid assistance since surrounding jurisdictions would have been impacted in the same way.
7. ICS system compatibility allows implementing a policy that officers not working when the catastrophic incident occurs, and live in a jurisdiction other than the City where they are employed, shall report to the police agency jurisdiction where they reside. If the officer is off-duty and resides in the jurisdiction where employed, the officer will report to his agency for an assignment. If the officer cannot report, then he shall take a leadership role within his immediate neighborhood.
8. Develop a program with private security agencies to provide a network system for their personnel to provide perimeter guard duty in destructed areas relieving field officers from the responsibility. This type of planning shifts resources to law enforcements advantage utilizing its own full-time peace officers in other critical areas.
9. Field personnel's initial responsibility is damage assessment via mobile reconnaissance of the area accessible. The officer will provide visual assessment of the area reporting conditions of buildings, roads and lifelines.

10. In the military, leadership training is received at a very early level. The military are looking for leaders first, then they teach supervisory skills. Law enforcement makes an assumption they are hiring leaders, but spend little time training and preparing for that role. Leadership principles should be taught in the basic academy to imprint on the officers minds that they are leaders and should be prepared for that role. Police officers have no problem with a routine emergency response. They may have a problem if not trained for the leadership responsibilities necessary in an emergency environment. Given a macro situation, the officer will be thrust into this new role with the responsibility of supervising and leading other citizens within the community. Conceptually, law enforcement does not prepare an officer for the supervisory/leadership role until promoted to the rank of Sergeant. We may be thrusting that officer into a situation and role responsibility where he may be ill-prepared.
11. Develop a program that utilizes the Neighborhood Watch concept to incorporate earthquake preparedness, awareness, self-help, and self-sufficiency to damage assessment reporting. At the Gilroy Police Department, in California, "...Disaster preparedness has become a component of the existing Neighborhood Watch Program ... since February, 1984." (35) Establish a structure that the Neighborhood Watch block captain would be responsible to report damage assessment for his assigned block. This program would help free the field officer from routine assessing. The program provides immediate assessment of many neighborhoods within the community. The officer can respond to other areas of the community where Neighborhood Watches are not in effect, such as commercial areas. It would allow performing a leadership role to coordinate the efforts of volunteers in rescue operations, life saving and removing debris to open roadways for emergency equipment response.
12. Establish a pre-identified communications frequency within the community using a frequency that has been abandoned from use. Neighborhood Watch captains would be supplied portable radios and charging units to be used only for emergency management response. Operational orders and specific criteria for use of radios will be established. The primary use allows Neighborhood Watch captains to report damage assessment via a pre-designed check box format and systematically relay that information to a command center.
13. Neighborhood Watch captains and other specified civilian volunteers, during an emergency management operation, will be considered attached to the Police Department of the government entity under emergency conditions. That action qualifies the participant for Worker's Compensation coverage as an organized volunteer unit.
14. The field officer will have a predefined response plan for the area that he is assigned. Based on the conditions after the impact, response decisions will be precalculated to determine area assessment, establish contact with Neighborhood Watch units, direct response to retirement communities, hospitals, schools, or other undetermined emergencies.

15. Provide instruction on the State of California mutual aid system to police officers. The educational part of the mutual aid system has fallen to the wayside. The plan was in place before the Watts riots in the 1960's and law enforcement knew of the plan and how the plan worked. During an interview with Bob Hill, from the Office of Emergency Services, who reflected that,

Since the riots have ceased, people who were on the street then, that worked with the system are now administrators. These people were on the street, arm-in-arm, with several other City or County agencies. They really didn't know how they got there; and today, because of its seldom use, they still don't know.(36)

The Office of Emergency Services have now begun training Chief's of Police, Sheriff's, and staff to refresh the mutual aid system. The need is greater than that, when we are planning for a catastrophic event of the future. Knowing what the future holds, it is time to prepare a method to periodically reinforce that system, so that ten years from today, personnel from throughout the organization will be familiar and relatively comfortable about the mutual aid system. This is a long-range plan.

Initiate training at the basic academy as an orientation for the new police officer to hear of the system and understand how it operates. Refresher training will be incorporated into an advanced officer course on a two year cycle as required by the Peace Officer's Standards and Training. Finally, during Supervisor's Training, the full concept of the mutual aid ICS System will be presented since these officers will now become first-line supervisors. This course of action provides an opportunity to re-enforce the system concept several times during the police officer's early career.

16. Procedures will be established to communicate effectively with field personnel, other designated organizations, the news media and the public affected by the disaster.

Communication needs consist of informing, warning, directing, coordinating and requesting....The quality of information available to the public in a potential life-threatening situation is of vital importance. This information has a significant bearing on the capacity of people to respond to the disaster, on their emotional health, and on their willingness to accept instructions, guidance and help from responsible public officials....Important messages must be followed-up to ensure that they are properly understood, including people who are handicapped by hearing or visual impairments, and language barriers. (37)

Person-to-Person contact can be the only available means of communication with some people whose lifestyles have isolated them from society. It can also be very important when dealing with minority groups who may not respond to broadcasts in the same way as the rest of the population does. (38)

The field officer should be trained to coordinate several neighborhoods in a house-to-house search and notification process. The notification process may require going door-to-door and searching each premise for those people who may have some impairment that prohibited their retreat from inside.

17. Officers should know the High Risk Areas in the City where working.

Ground failures caused by liquefaction can produce major structural damage in an earthquake....In a severe earthquake, liquefaction can occur as far as 80 miles from the energy source. Ground rupture of this type commonly produces severe damage to any buildings or underground pipelines in its path. (40)

Older residential areas and high rise commercial properties are more prone to destruction by intensive shaking and many have not been reinforced to meet earthquake standards. The State of California has identified more than four hundred jurisdictions and high-risk areas. There is work underway in many cities to inventory all unreinforced masonry buildings. However, the most difficult problem for local officials is the cost of retrofitting. The same situation applies with hospitals and schools and the need to upgrade structures. Barry Meeks, Director of the Office of Statewide Health Planning and Development says, "we don't expect those buildings (hospitals) to fall down, but we still think beds will be rendered unusable. It will be useless until it can be fixed up. In an emergency, no one will be able to do that." (39) The field officer should know or have this information available for use to identify primary target areas for reconnaissance immediately after the tremor occurs.

18. The police officer as a leader and coordinator in field rescue operations, should understand identifiable stress syndromes. Rescue operations will continue for hours and days and "...in an emergency a man will work beyond his limits to protect his family and friends." (41)

"Nobody is immune (from stress), even the most stable people" says Dr. Terrence M. Keane, Director of Post Traumatic Stress Disorder Clinic at Boston's Veteran's Administration Medical Center....Everybody can be traumatized...fire fighters, police officers, paramedics, and other rescue workers may be more vulnerable to debilitating stress than once thought...with education and early intervention,..."hero stress" can be eased before stress disorder takes hold. (42)

It would be valuable for the field officer to understand stress syndromes and remove rescue workers from the shock environment. In a rescue operation people tend to take on a "John Wayne" syndrome.

APPENDIX E

COMPOSITE OF NOMINAL/GROUP FOR NGT

INDEPENDENT STUDY

NOMINAL GROUP TECHNIQUE (NGT)

Composition of Nominal Group Participation:

Chief, Fire Department

Deputy Chief, Sheriff Department

Assistant City Manager

Manager, City Disaster Services

Manager, Emergency Services, County Health Department

Lieutenant, Division Commander, Police Department

Lieutenant, Commander Training and Research, Police Department

Lieutenant, Emergency Services Coordinator, Police Department

Lieutenant, Emergency Services Coordinator, Police Department

Lieutenant, Emergency Services Coordinator, Police Department

Appendix: E