2.2

TO: BOARD OF SUPERVISORS

FROM: Mark Finucane
Health Services Director

DATE: August 1, 1989

Contra Costa County

SUBJECT: County Service Area for Emergency Medical Services
(Measure "H" Implementation)

SPECIFIC REQUEST(S) OR RECOMMENDATION(S) & BACKGROUND AND JUSTIFICATION

RECOMMENDED ACTION

Approve Proposal and Service Plan to create a County Services Area (CSA) for Emergency Medical Services as recommended by the Health Services Director.

FINANCIAL IMPACT

The establishment of a County Service Area for emergency medical services will enable the Board to place annual assessments on real property to fund the cost of improvements in the emergency medical services system. The actual assessments would be set by the Board following creation of the CSA. Based upon the budget illustration contained in the attached service plan, an assessment of $5.35 per benefit unit would raise approximately $2,568,000 for FY 1990-91, $2,140,000 of which would be used to fund service improvements. The remaining funds would be for administrative and collections costs ($214,000) and a contingency reserve ($214,000).

BACKGROUND

On July 18, 1989 your Board directed staff to prepare for Board approval an application to the Local Agency Formation Commission to establish a countywide CSA for emergency medical services and authorized the Chair to invite each city council to adopt a resolution to include its territory within the CSA. The attached Proposal and Service Plan were prepared with input from various groups and organizations including the Emergency Medical Care Committee, Fire Chiefs Association, Police Chiefs Association, and Public Managers Association. A draft was reviewed at a public meeting held by the Health Services Department on June 29, 1989. A final draft was reviewed and approved by the Measure "H" Implementation Task Force on July 26, 1989.

Following approval by the Board, the Proposal and Service Plan will be distributed to each city council and will be included as a part of the LAFCO application. In addition to the Proposal and Service Plan each city will be provided with an account of the benefits of the CSA pertaining to that jurisdiction. Copies of materials sent to the cities will be provided to Board members.

CONTINUED ON ATTACHMENT: ___ YES SIGNATURE: Mark Finucane

___ RECOMMENDATION OF COUNTY ADMINISTRATOR ___ RECOMMENDATION OF BOARD COMMITTEE

___ APPROVE ___ OTHER

SIGNATURE(S):

ACTION OF BOARD ON AUG 1 1989 APPROVED AS RECOMMENDED X OTHER ___

VOTE OF SUPERVISORS

X UNANIMOUS (ABSENT _____)

AYES: _____ NOES: _____

ABSENT: _____ ABSTAIN: _____

CC: Health Services Department
Emergency Medical Services
County Administrator
County Auditor

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF AN ACTION TAKEN AND ENTERED ON THE MINUTES OF THE BOARD OF SUPERVISORS ON THE DATE SHOWN.

ATTESTED AUG 1 1989

PHIL BATCHELOR, CLERK OF THE BOARD OF SUPERVISORS AND COUNTY ADMINISTRATOR

BY C. Matthews, DEPUTY

M382/7-83

CONTRA COSTA COUNTY

HEALTH SERVICES DEPARTMENT

EMERGENCY MEDICAL SERVICES

CSA EM-1

Proposal and Service Plan
To Create a County Service Area for
Emergency Medical Services
(Measure "H")

7/27/89

TABLE OF CONTENTS

I. PURPOSE

The purpose of the proposed County Service Area (CSA) is to reduce deaths and complications resulting from medical emergencies in Costra Costa County by making needed improvements in the County's existing Emergency Medical Services System and to assure the continued availability of high quality emergency medical and trauma care services throughout all parts of the County. In order to accomplish this purpose, the CSA will assess fees on real property to fund:

- Ambulance subsidy costs necessary to assure availability of Advanced Life Support (paramedic) ambulance service for timely response to all medical emergencies.

- Improvements in the communications systems necessary to assure efficient ambulance dispatching and hospital medical direction for paramedic units in the field.

- Training for medical dispatchers in giving prearrival instructions and recognizing the level of urgency for different medical emergencies.

- Specialized medical training and equipment for designated first responders, including a first responder early defibrillation program.

- Stockpiling caches of first aid equipment and supplies to be maintained by the fire services in communities throughout the county for use in response to disasters and multicasualty incidents.

- Other improvements as may be needed from time to time in the countywide emergency medical and trauma system.

II. LEGAL BASIS

The County Services Area Act (Government Code Sections 25210 et. seq.) allows a county board of supervisors to create a county service area (CSA) for emergency medical services to include advanced life support paramedic services and to finance the service area with a benefit assessment. The territory of an incorporated city may be included within the CSA by a majority vote of the city council.

Authority for a county to establish an integrated emergency medical services system, including advanced life support (ALS) paramedic services, is contained in the Emergency Medical Services Act (Health and Safety Code Sections 1779 et. seq.). The Board of Supervisors in 1983 (Resolution #83/310) designated the Health Services Department as the Local Emergency Medical Services Agency and the County Health Officer as its Medical Director.

III. BACKGROUND

In August 1988, the Board of Supervisors placed an advisory measure (Exhibit A) on the November 1988 countywide ballot to determine the support for a countywide emergency medical services benefit assessment on real property, not to exceed $5.50 per benefit unit or single family residence for the first year and not to exceed $10.00 annually thereafter. This action was taken in response to recommendations from the County's Emergency Medical Care Committee, recommendations of a Board appointed Committee on Funding County Programs, and in response to reported community concern over the lack of adequate response in some areas to requests for emergency medical assistance received through the 9-1-1 emergency telephone system.

Specifically, Measure "H" asked voters if a countywide Emergency Medical Services benefit assessment should be established to finance improvements in the emergency medical and trauma care system including:

- Expanded countywide paramedic coverage,
- Improved medical communications and medical dispatcher training, and
- Medical equipment, supplies, and training for firefighter first responders, including a specialized program of advanced cardiac care (first responder early defibrillation).

The measure received the support and endorsement of diverse political, medical, public safety, and taxpayer groups, including the American Heart Association, County Taxpayers Association, Alameda-Contra Costa Medical Society, County Fire Chiefs Association, Regional Ambulance Service, fire fighter associations, hospitals, as well as numerous individual paramedics, public safety personnel, physicians, nurses, and public officials. Voter support countywide totaled 71.6 percent. Within every municipality in the county, voter support exceeded 66 percent. (See Figure 1.)

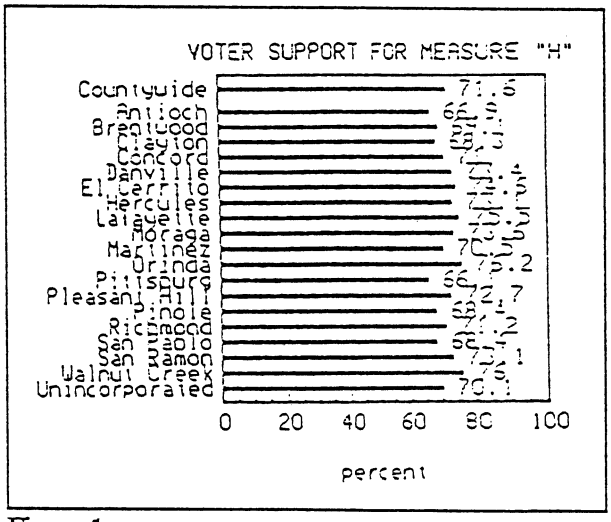

Figure 1

Following the election, an Implementation Task Force was formed and the Board of Supervisors directed the Health Services Department to proceed with the steps necessary to implement Measure "H". Included on the Implementation Task Force were representatives from the County Administrator's Office and other County departments which would have involvement in establishment of the CSA, representatives from the Public Managers' Association, the chief of Consolidated Fire, and the chair of the Emergency Medical Care Committee. The County Emergency Medical Care Committee (EMCC) and the County Fire Chiefs Association were asked by the Health Services Department to review EMS priorities and to submit their recommendations to be used in development of the Measure "H" service plan. The recommendations of the EMCC and the Fire Chiefs are contained in Exhibits B and C, respectively. Both organizations have endorsed the formation of the proposed CSA and have urged the Board and city councils to take the appropriate actions to form a countywide Emergency Medical Services District.

In addition to the close involvement of the Implementation Task Force, the EMCC, and the Fire Chiefs Association in developing this proposal and service plan, the Health Services Department has made presentations and sought input from the Mayors' Conference, the Public Managers Association, and the Police Chiefs Association. A public meeting was held to provide an opportunity for all concerned individuals to provide comment on the proposed CSA.

IV. THE EXISTING EMERGENCY MEDICAL SERVICES SYSTEM

The County's existing EMS system is administered by the Health Services Department as the designated Local EMS Agency in accordance with the County Emergency Medical Service Plan; the County Trauma System Plan; applicable State statutes and regulations; the County Ambulance Ordinance; County contracts for emergency ambulance service, base hospital services, and trauma center services; and County EMS policies, procedures, and protocols. The major components of the EMS system include:

- Communications, including 9-1-1 access, medical dispatch, and ambulance-to-hospital communications.
- Medical first responders - fire service or other public safety agency.
- Medical transport services, including ground and air ambulance.
- Base hospitals to provide medical direction to paramedics in the field.
- Hospital emergency facilities which receive patients transported by ambulance.
- The trauma center, which provides definitive care to seriously injured patients.
- Training facilities which provide training to prehospital care personnel.
- The Emergency Medical Care Committee (EMCC) appointed by the Board of Supervisors to advise the EMS Agency and the Board on EMS matters.
- The local EMS Agency, which provides overall coordination and administration of the system.

Emergency Medical Communications and Dispatch

EMS communications begins with the 9-1-1 system used by the public to report law enforcement, fire, and medical emergencies. Nine-one-one calls in Contra Costa County are answered by a local Public Safety Answering Point (PSAP), usually a part of a local police or combined police/fire dispatch center. Depending upon the jurisdiction, medical emergencies are either handled by the PSAP answering the call or transferred to a secondary PSAP which handles fire and medical emergencies. An operator interrogates

the caller and, if there is a medical emergency, dispatches or requests dispatch of the appropriate medical resources - usually a fire engine as first responder and an ambulance. The six PSAP's or secondary PSAP's which handle medical 9-1-1 calls for their respective jurisdictions are:

- Richmond Police Department
- West Bay Dispatch (Pinole Police)
- Sheriff's Dispatch Center (Comm-1)
- Consolidated Fire District
- Delta Regional Communications Center (East County)
- San Ramon Valley Fire District

These medical dispatch centers are responsible for interrogating the caller to determine the nature and location of the medical emergency, dispatching a first responder, and requesting the designated ambulance provider to dispatch an ambulance. Except in Moraga, San Ramon Valley, and east County areas served by DRCC,requests for an ambulance response are made by voice telephone from the medical dispatch center to the ambulance company dispatch center which, in turn, dispatches the nearest available ambulance by telephone or radio. (In Moraga and San Ramon Valley where ambulance service is provided by the fire district, ambulance dispatch is handled directly by the medical dispatch center. In east County areas served by DRCC, the ambulance request is handled through the DRCC computer with a terminal located in the ambulance service dispatch center.) While most 9-1-1 dispatch centers have computer aided dispatch systems which enable the dispatcher to "capture" the location of the call directly from the 9-1-1 system and transmit the call information directly to the appropriate fire station to initiate a fire response, the ambulance dispatch must be initiated by a voice telephone call. This results in delays from a few seconds up to several minutes, especially when multiple emergencies are being handled, and sometimes results in dispatch errors when addresses are miscommunicated.

In many areas of the country, emergency medical dispatchers receive special training enabling them to employ a system of PRIORITY DISPATCHING and PREARRIVAL INSTRUCTIONS. State guidelines and County standards for emergency medical dispatching and dispatcher training have been have been in effect since 1986. Under a system of priority dispatching, medical dispatchers are trained to identify those 10 to 20 percent of emergency medical calls which are clearly non-life-threatening. These requests need a prompt ambulance response to transport a patient to the hospital, but do not require the full response of a fire first responder and paramedic-staffed ambulance. By identifying at the time of dispatch those calls which do not need a full fire and paramedic ambulance response, emergency resources can be kept available to respond to potentially life-threatening emergencies.

Dispatchers trained in priority dispatching are often also trained in a program of providing callers with prearrival instructions on how to assist the patient while waiting for help to arrive. These programs have proven effective in directing often hysterical or frenzied callers to take such simple life saving steps as repositioning the patient to open a blocked airway or administering abdominal thrusts on a chocking victim. Of the six medical dispatch centers in Contra Costa County, only Consolidated Fire has implemented priority dispatching and prearrival instructions.

Once the ambulance is en route to the medical emergency, the ambulance crew notifies Sheriff's dispatch, which continues to track the ambulance as it arrives on the scene, leaves the scene en route to the hospital, and arrives at the hospital. The MEDARS radio system operated by the County consists of two channels - one for ambulances to communicate with Sheriff's Dispatch for tracking and one for ambulances to communicate with hospitals. A system of hilltop repeaters provides communications capability throughout most areas of the County.

Ambulance-to-hospital communication is a vital component of emergency medical services and serves two functions: prearrival notification to the hospital emergency department so that appropriate medical personnel are ready to receive the patient; and communication between paramedics treating a patient in the field and the base hospital physician or Mobile Intensive Care Nurse (MICN) to provide medical direction in the care of the patient. While many urban counties have one radio channel for hospital prearrival notification and up to 8 channels on the widely used MEDCOM radio system for paramedics to receive directions from their base hospitals, in Contra Costa only a single radio channel is available for both purposes. To meet the deficiencies of the radio system, all paramedic units are now equipped with cellular telephones to make base hospital contact. The use of cellular telephones, however, has not provided a full solution since access to the system cannot be assured.

Medical First Responders - Fire Service

In Contra Costa, as is the practice throughout most of California, fire service responds as the first responder on most medical emergencies. In addition to their role in rescue and extrication, fire personnel are trained to provide CPR and basic first aid. The rapid response capability of fire service in most areas enables fire personnel to initiate critical life-saving measures prior to the arrival of ambulance personnel. When critically injured or ill patients are transported by ambulance, fire first responders frequently accompany the patient in the ambulance to assist with management of the patient while en route to the hospital. Fire personnel also decide when to initiate medical helicopter transport for critically injured patients who would otherwise have excessive transport times to the trauma center or other medical facility.

While all fire personnel in California are required to have training in first aid and CPR, many fire personnel receive training, either voluntarily or by departmental or agency requirement, to the EMT-Ilevel. In Contra Costa, the EMCC has recognized EMT-I level training as a goal for first responders, while also recognizing the need to provide more flexible training opportunities especially for agencies which rely heavily on volunteer firefighters. Some agencies in Contra Costa do require EMT-I certification and some may provide an equivalent level of training; however, it is estimated that only about one-third of the county's fire fighters are currently EMT-I certified.

One emergency care program that has become available to fire first responders under recently adopted State regulations is EARLY DEFIBRILLATION. With only a few hours of training, first responders can learn to use one of the newly developed automatic defibrillators. These are similar to devices carried by paramedics to administer an electric shock to convert the nonprofusing rhythm of a heart attack victim to a normal sinus rhythm. More limited in its application the defibrillator carried by a paramedic, the automatic defibrillator is designed to monitor the patient and automatically deliver the appropriate shock only when clearly indicated. By reducing the time from onset of cardiac fibrillation until defibrillation by four to six minutes (typically the difference in arrival times between fire and ambulance), the mortality rate from witnessed heart attacks for which help is immediately summoned and CPR initiated can be cut in half. Currently, in Contra Costa, only the Orinda Fire Protection District has established an early defibrillation program. Other fire services, however, have expressed interest in undertaking such a program.

Emergency Medical Transport - Ambulance Service

Simultaneously or immediately following fire dispatch, an emergency ambulance is dispatched to every request for emergency medical assistance. Ambulances are staffed by two crew members - either

two paramedics trained and equipped to provide ADVANCED LIFE SUPPORT (ALS) or two EMT-I's trained and equipped only to provide BASIC LIFE SUPPORT (BLS) level care. These ambulances units are operated under contract with Contra Costa County by private or fire service providers in each of five designated emergency response areas (ERA's). Current contractors are:

- Regional Ambulance Service serving ERA's I, II, and V covering West/West-Central, East-Central, and East County, respectively.

- Moraga Fire Protection District serving ERA III covering the area of the fire protection district.

- San Ramon Valley Fire Protection District serving ERA IV covering Alamo, Danville, San Ramon, and the unincorporated areas of South County.

The emergency ambulance service contracts, which are awarded on a competitive basis, specify minimum numbers of ambulance units which must be available for emergency response and require that the contractor respond to 95 percent of emergency calls within 10 minutes for urban areas and 20 minutes for designated rural areas. The contracts provide exclusive operating areas with respect to County-dispatched calls, but provide no subsidy. In the areas served by Regional Ambulance Service and by San Ramon Valley Fire, costs are borne in whole or in part by patient fees. Moraga Fire provides ambulance service at no cost to the patient.

The level of ambulance service provided under the emergency contracts includes both advanced life support (ALS) service provided by paramedic-staffed ambulance units and basic life support (BLS) service provided by EMT-I staffed ambulance units. The distinction between ALS and BLS levels of service is of critical importance. ALS service is provided by paramedics who have received some 1,000 hours of training and, operating under base hospital medical control, are able to bring much of the life-saving capability of a hospital emergency department to the patient in the field. Paramedics can provide electric shock to a heart attack victim (defibrillation), intubate a nonbreathing patient to establish and maintain an airway, surgically open a blocked airway, relieve an tension pneumothorax by needle thoracotomy, apply medical anti-shock trousers to an accident victim with major blood loss, and administer intravenous fluids and a wide selection of emergency drugs.

Paramedic programs must be approved by the County Emergency Medical Services Agency, which is also responsible for certifying paramedic personnel, establishing the medical protocols under which paramedics operate, and providing the overall medical direction and quality assurance.

BLS service, in contrast, is provided by EMT-I's who receive approximately 100 hours of training. These personnel, who do not operate under base hospital medical control, are limited to "non-invasive" emergency care including CPR. EMT-I's cannot administer drugs, cannot intubate, cannot apply medical anti-shock trousers, cannot perform cricothyrotomy or needle thoracotomy, and, except under limited circumstances and as part of a specially approved program, cannot defibrillate.

Currently, emergency ambulance service is provided by a combination of ALS and BLS units stationed throughout the County as follows. Table 1 shows the locations of these units by city.

Table 1

AMBULANCE LOCATIONS

	ALS Units (Paramedic)	BLS Units (EMT-I)
Regional Ambulance:		
Richmond	1	1
San Pablo	1	4
Pinole	1	1
Martinez	1	2
Concord	1	2
Walnut Creek	1	2
Lafayette	1	2
Pittsburg	1	1
Antioch	1	1
Brentwood	1	-
San Ramon Valley Fire:		
San Ramon	1	2
Danville	1	1
Blackhawk	-	1
Moraga Fire	1	1
TOTAL	13	22

All ALS (paramedic) units are dedicated to emergency response. BLS units operated by the fire services are used for first response, providing patient transport only when a paramedic unit is not available or when it is determined that paramedic level skills are not required. BLS units operated by Regional Ambulance are used primarily for nonemergency transports (interhospital transfers, medical appointments, discharges), but respond to medical emergencies when no nearby paramedic unit is available.

During 1988 there were some 31,158 requests for emergency ambulance response to life-threatening or potentially life-threatening emergencies. (Table 2) Most of these requests, nearly 29,000, were handled by Regional Ambulance with 10 dedicated ALS units and 16 BLS units used for both emergency and nonemergency calls. San Ramon Valley Fire, with two ALS ambulance units and four BLS units (used both for first response and transport of noncritical patients) responded to over 2,000 medical emergencies; and Moraga Fire, with one ALS unit and one BLS unit, responded to over 500 medical emergencies.

Table 2

EMERGENCY AMBULANCE RESPONSES

	Number	Percent
Regional Ambulance	28,543	90
San Ramon Valley Fire	2,095	8
Moraga Fire	520	2
Total	31,801	100

Approximately one-third of all emergency medical responses result in no patient transport. For the most part, these involve potentially life-threatening incidents, such as reports of serious automobile accidents, in which fortunately no one was injured. An additional one-third of emergency medical responses involve transport of a patient who, while needing hospital attention, does not have a life-threatening or potentially life-threatening condition. The remaining one-third - about 10,000 patients per year in Contra Costa County - are transported to the hospital with serious medical conditions. These are the patients who benefit from the provision of advanced life support treatment by paramedics on the scene and en route to the hospital.

While paramedic ambulance service is available in all parts of Contra Costa County, the number of paramedic units is not sufficient to provide timely paramedic response on all emergency medical responses. Approximately 15 percent of all emergency medical responses are made by EMT-I-staffed BLS ambulance units. Thus, some 4,770 emergency medical calls in 1988 did not receive a paramedic response; and, of these, over 1,500 may have benefited from the advanced care that a paramedic could have provided.

Medical Helicopter Service

Medical helicopter transport is provided by four private air ambulance services approved by the County EMS Agency and in accordance with procedures and protocols established by the EMS Agency. Helicopter transport is usually initiated by the fire first responder for seriously injured trauma patients who would otherwise have an excessively long ground transport time to the trauma center. Medical helicopter response is requested through the 9-1-1 medical dispatch center and coordinated by the Sheriff's Dispatch Center. All approved medical helicopters are staffed with a pilot and two medical attendants, including at least one flight nurse or physician. All provide ALS level service. Once medical helicopter response is requested, the nearest available of the following helicopters is dispatched:

- CalStar (Hayward)
- MediFlight (Stockton, Modesto)
- LifeFlight (Stanford)
- LifeFlight (Davis)

These services are funded primarily by patient fees and do not receive public subsidy.

In addition to these medical helicopter services, the East Bay Regional Parks District and the California Highway Patrol operate helicopters which, although not staffed or equipped to provide ALS level service, are available for rescue and patient transport.

Base Hospitals

Base hospitals are designated by the County EMS Agency to provide medical direction to paramedic units in each of four base hospital zones. Base hospitals are required to enter into contracts with the County which specify hospital responsibilities for on-line and retrospective medical control and which set forth special training and staffing responsibilities. For example, a base hospital must have on duty in the emergency department at all times a specially trained and certified Mobile Intensive Care Nurse to provide

radio direction to paramedics. Each base hospital must conduct an ongoing quality assurance program to monitor the ALS program within their base hospital zone and must provide a Base Hospital Nurse Coordinator to administer the program and Base Hospital Liaison Physician to provide overall medical direction. Base hospitals provide medical direction for all patients who receive ALS field care within their respective zones, including patients who may be transported to the base hospital as well as patients who are transported to other receiving hospitals. No subsidy is provided for base hospital service and base hospitals cannot bill patients transported to other receiving hospitals..

Existing base zones and designated base hospitals include:

- Zone A (West County) - John Muir Medical Center
- Zone B (South Central County) - John Muir Medical Center
- Zone C (North Central County) - Mt. Diablo Hospital Medical Center
- Zone D (East County) - Los Medanos Community Hospital

Receiving Hospitals

Receiving hospitals include all hospitals licensed by the State to provide Basic Emergency Services and other facilities which may be designated by the County EMS Agency to receive specified types of patients. Hospitals with Basic Emergency Services in Contra Costa include Brookside, Doctors' of Pinole, Merrithew Memorial, Mt. Diablo, Los Medanos Community, Delta Memorial, John Muir, and the Kaiser Foundation Hospitals in Martinez and Walnut Creek. In addition, the Kaiser Foundation Hospital in Richmond and the John Muir EmergiCenter, which do not provide Basic Emergency Services, are designated to receive certain categories of patients. Patients may also be transported to Basic Emergency hospitals in adjacent counties.

Trauma Center

In 1986, the County Trauma System was implemented with the designation of John Muir Medical Center as the County's trauma center. In accordance with the County Trauma System Plan, field personnel were trained in trauma triage criteria and directed to transport most seriously injured patients directly to the trauma center. In accordance with the trauma center designation contract between John Muir and the County, John Muir is required to meet special staffing, training, and facility standards in order to provide care to injured patients. For example, the trauma center is required to maintain a trauma surgeon in house 24-hours a day and must dedicate one operating room to trauma. While John Muir is the only trauma center within the County, pediatric trauma patients may be transported directly to Children's Hospital in Oakland, which has been designated by Alameda County as a pediatric trauma center. The County EMS Agency has also established a reciprocal agreement with Alameda County for transport of trauma patients to an Alameda County trauma center when John Muir is temporarily unable to receive additional trauma patients.

Because critically injured patients are transported relatively long distances past closer hospitals to the trauma center, the County EMS Agency conducts a comprehensive monitoring program to assure the maintenance of standards and provision of a high level of trauma care. The cost of trauma system monitoring is funded through a an annual designation fee paid by the trauma center under the terms of its contract with the County.

During FY 1987-88, emergency medical responders in consultation with base hospital personnel evaluated 1,282 patients as serious or potentially serious trauma victims for whom trauma center treatment was appropriate. Of these, 1,182 were transported to John Muir, and 57 to an out-of-county trauma center. The remaining 100 were transported to a non-trauma center hospital, usually because their condition was too severe to withstand the longer transport to the trauma center. It is estimated that during the trauma system's first two years of operation, over 160 lives were saved. Countless others experienced improved outcomes following treatment of their injuries. While the trauma system has been successful in reducing deaths and disability from accidents, the longer patient transports to a trauma center remove ambulance and fire units from service for longer periods then when patients were transported to the nearest hospital emergency department.

Training Programs

Training programs to prepare prehospital care personnel for certification are approved by the Local EMS Agency. Approved training programs in Contra Costa County include:

- Contra Costa College for EMT-I training;
- Los Medanos College for EMT-I and MICN training;
- Mt. Diablo Hospital Medical Center for MICN training; and
- Med Help, Inc., for EMT-I training.

There are currently no in-county training programs for paramedics.

Emergency Medical Care Committee

The Emergency Medical Care Committee (EMCC) is mandated by State statute and appointed by the Board of Supervisors to provide oversight to the EMS system and to advise the Board and EMS Agency on EMS issues. The EMCC is comprised of 20 members, including 5 citizen/consumer representatives and one representative from each of the following agencies or organizations:

- California Highway Patrol
- Office of Emergency Services
- Fire Chiefs' Association
- Public Managers' Association
- Health Services Department
- Police Chiefs' Association
- Sheriff-Coroner's Communication Division
- Contra Costa Ambulance Providers
- American Red Cross
- Emergency Nurses' Association
- East Bay Hospital Conference
- Alameda-Contra Costa Medical Association
- Emergency Department Physicians
- Los Medanos College or Contra Costa College
- American Heart Association

Emergency Medical Services Agency

The Health Services Department is the designated Local EMS Agency. The functions of the EMS Agency are carried out by the EMS division of the Department. The EMS Agency is the lead agency for emergency medical services within the County. Specifically, the EMS Agency responsibilities include:

- Developing the County Emergency Medical Services System Plan and the County Trauma System Plan.
- Developing and administering contracts for emergency ambulance service, base hospital services, and trauma center services.
- Approving prehospital advanced life support programs including establishing field treatment protocols.
- Certifying prehospital care personnel (EMT-I's, paramedics, and MICN's) and carrying out investigations and disciplinary actions related to certification.
- Monitoring prehospital care, trauma care, and interfacility transfers.
- Reviewing and approving training programs for prehospital care personnel.
- Establishing plans for response to multi-casualty incidents and major disasters.
- Providing staff services to the EMCC.
- Carrying out other activities in relation to the County's EMS system.

While not mandated by law, a county or multi-county EMS agency must be designated for State approval of an EMS System Plan. An approved EMS System Plan is a statutory requirement for the operation of paramedic services, designation of exclusive operating areas for emergency ambulance service, establishment of a trauma system, or approval of prehospital care training programs.

The EMS division is headed by the EMS Director and includes a total of four full-time professional staff, one half-time physician consultant, and two secretarial staff. In addition, the Department Medical Director/Health Officer is the designated EMS Medical Director and has certain mandated responsibilities. The organizational structure of the Local EMS Agency is shown in Figure 2.

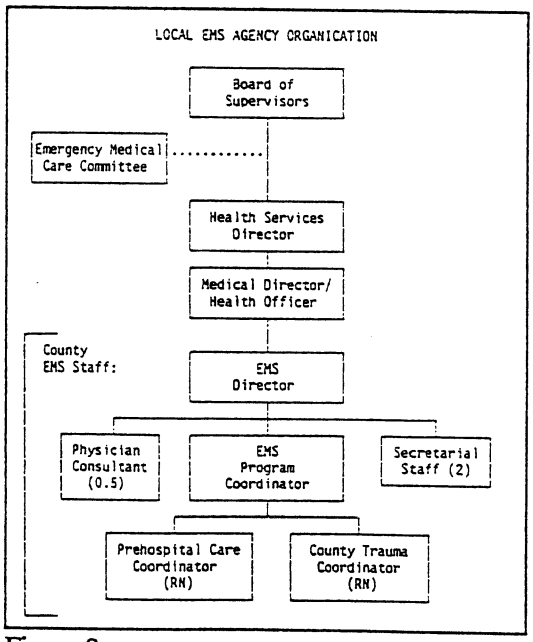

Figure 2

V. AREAS FOR IMPROVEMENT

Since Contra Costa County first established limited paramedic service in 1976, the county's emergency medical service system has undergone many improvements within the limited scope of resources available. Paramedic ambulance coverage has been expanded to include all areas of the county. A county trauma system has been established. Firefighters in many areas have received EMT-I level training. A system of medical helicopter service has been established. Certain components of the EMS system - paramedic coverage, first responder training, medical dispatching - exist at higher levels in some areas of the county than in other areas. If the county is to maintain a high standard for emergency medical response for its residents wherever they may live, work, play, shop, or travel throughout the county, many needed improvements must be made in the existing EMS system. The most important areas in which improvements are currently needed include:

- paramedic ambulance coverage,
- medical dispatch and communications, and
- additional medical training and equipment for fire service personnel who are first responders on medical emergencies.

Other deficiencies or areas for improvement also exist, and are identified in the EMS System Priorities developed by the EMCC (Exhibit B) and in the County Fire Chiefs' recommendations regarding the proposed EMS Benefit Assessment (Exhibit C).

Paramedic Ambulance Coverage

Deficiencies in paramedic ambulance coverage result in:

- An insufficient number of paramedic-staffed ALS ambulance units necessitating the use of EMT-Istaffed BLS units for emergency response when paramedic units are unavailable; and
- Insufficient ambulance coverage in peripheral areas of the county resulting in response time over 10 minutes.

Existing emergency ambulance agreements, which are awarded through a competitive bidding process based upon the highest level of service obtainable without subsidy, address ambulance coverage standards in two ways. First, the contractors are required to maintain a specified number of ALS (paramedic) and BLS (EMT-I) ambulance units available to respond to emergency calls. Second, contractors are required to respond to 95 percent of emergency calls within their areas of responsibility within 10 minutes (20 minutes for designated rural areas). The requirement for timely response may be satisfied either by an ALS ambulance or BLS ambulance response. Thus, while paramedic service is provided in all areas of the county, the requirement for timely response may result in a BLS ambulance response when the ALS ambulance which would normally respond is responding to another emergency call.

Figure 3 shows the locations of existing paramedic ambulance units circles depicting approximate 10-minute response zones. (Actual 10-minute response zones vary depending upon roads and traffic conditions.)

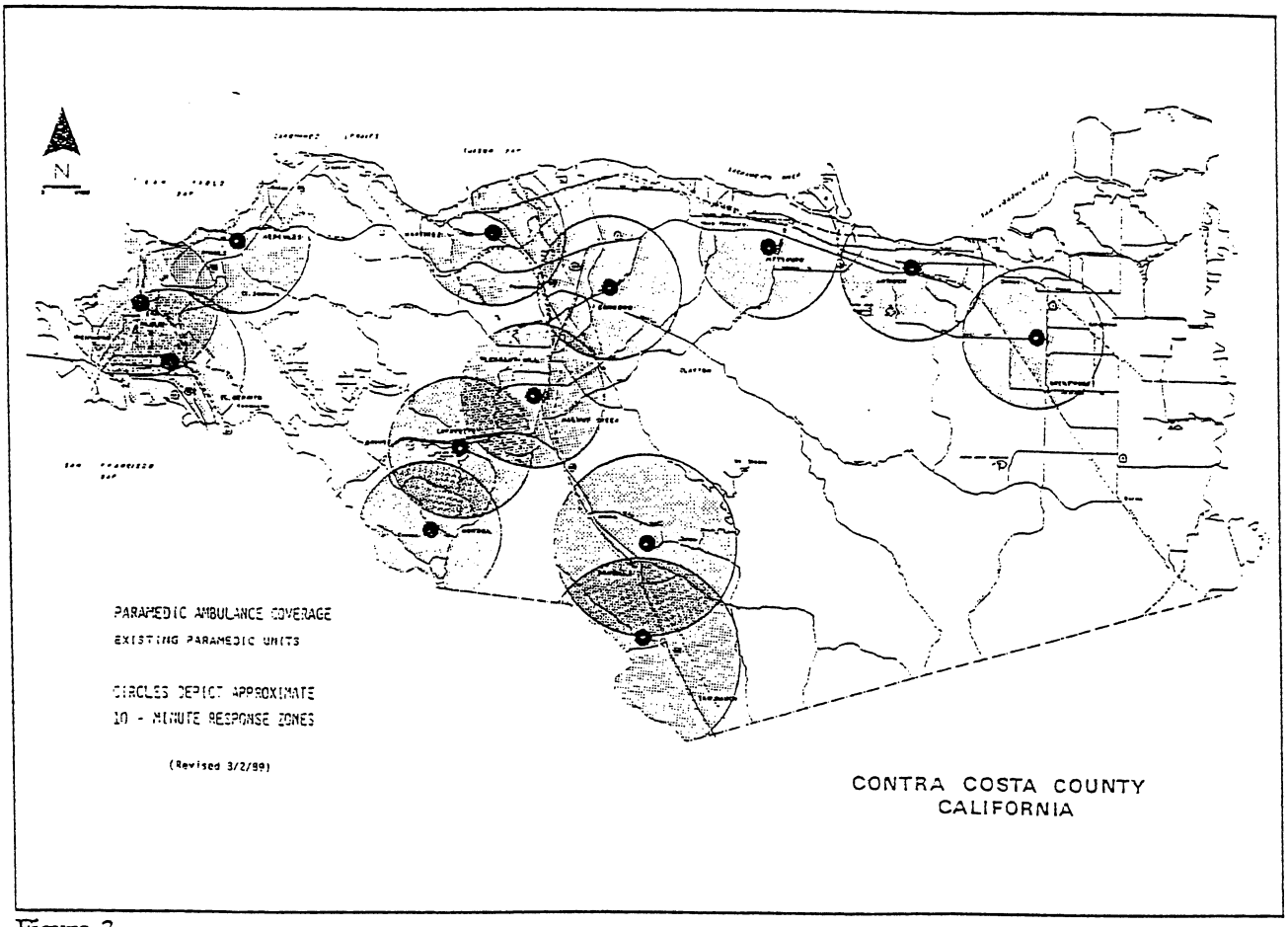

Figure 3

Table 3 shows, for each region of the County, the annual number of emergency ambulance responses, the number which do receive an ALS (paramedic) level ambulance response, and the number for which the ambulance response (ALS or BLS) was over 10 minutes.

Countywide during 1988, approximately 4,700 (15 percent) out of some 31,000 emergency medical requests received only a BLS ambulance response. Based upon existing paramedic response data, approximately 36 percent of all ambulance responses result in transport of a patient needing ALS level skills. Thus, it can be estimated that during 1988 some 1,700 city and county residents (15 percent of the 4,700 who received only a BLS ambulance response) failed to receive needed ALS level skills.

Table 3

DEFICIENCIES IN EMERGENCY AMBULANCE COVERAGE

(Estimates based upon annual emergency responses in areas served by Regional Ambulance)

	Number	Percent
Countywide		
Emergency Ambulance Responses	29,000	100
No paramedic ambulance	4,350	15
Response over 10 minutes	3,430	12
West County		
Emergency Ambulance Responses	12,000	100
No paramedic ambulance	2,640	22
Response over 10 minutes	1,080	9
Central County		
Emergency Ambulance Responses	10,000	100
No paramedic ambulance	900	9
Response over 10 minutes	1,600	16
East County		
Emergency Ambulance Responses	7,000	100
No paramedic ambulance	840	12
Response over 10 minutes	700	10

EMS Communications and Dispatch

Five major areas of deficiency exist in the EMS communications and dispatch system:

- First, the existing MEDARS system is antiquated and provides insufficient capacity for paramedic-to-hospital communications.

- Second, in most areas of the county, requests for emergency ambulance service must be relayed by voice telephone from the 9-1-1 PSAP to the ambulance company dispatch center. This results in delay and occasional error in ambulance dispatch. While the average time required relaying dispatch information by voice telephone is only about a minute, delays of

several minutes may occur when dispatchers are handling multiple emergencies.

- Third, medical dispatchers in five of the six 9-1-1 medical dispatch centers are not trained to the level recommended in the State Emergency Medical Services Authority Guidelines for Medical Dispatching.

- Fourth, in those areas of the County with private ambulance service, an adequate public agency backup system does not exist to handle ambulance dispatch in the event that the company dispatch center is for any reason unable to function.

- Fifth, most private ambulance units are not able to communicate while en route to a medical emergency directly with fire first responder units already on the scene.

MEDARS. The limitations in the County's MEDARS radio system have been recognized for years and have been the subject of recommendations by the EMCC and the Health Services Department. Radio equipment is antiquated, the system is not compatible with the MEDCOM system used for paramedic communications in most areas of the county, and the two available channels do not provide sufficient capacity for ambulance tracking and ambulance-to-hospital communications. A 1985 proposal submitted by Motorola Corporation recommended installation of a $1.1 million MEDCOM system for Contra Costa County. This proposal was never funded, and subsequent changes in communications technology suggest that the County's EMS communications needs be carefully reassessed before making a commitment to a new communications system. In the meantime, the introduction of cellular telephone technology has taken some of the load off the MEDARS radio system for ambulance-to-hospital communication.

Computer Linkages. When an emergency call is answered by a 9-1-1 public safety answering point, the caller's telephone number and address are automatically displayed on 9-1-1 terminal. This information is confirmed by the medical dispatcher and "captured" onto the dispatch computer for transmission to the first responder. The request for an ambulance, however, must be relayed by voice telephone from the 9-1-1 medical dispatcher to the ambulance company dispatcher. The ambulance company dispatcher, in turn, re-enters the dispatch information into the ambulance company dispatch computer. The technology exits to transfer the dispatch information directly to the ambulance company computer. Relaying the information by voice results in delays and introduces errors.

Medical Dispatcher Training. State standards have been set for the training of Emergency Medical Dispatchers to provide pre-arrival instructions and to prioritize emergency medical calls to distinguish those calls which may need immediate first responder and paramedic ambulance response from those for which a reasonable prompt ambulance response is clearly all that is needed. Pre-arrival instructions have been shown to save lives by involving the composed professional voice of the dispatcher in providing basic first aid instructions to the caller. Priority dispatching, when appropriately used, conserves resources by reducing unnecessary responses of fire and paramedic units, thereby enhancing availability for emergency calls.

Backup Dispatch Capability. Emergency ambulance service is a vital public service, and dispatch capability is a key part in the ability to provide this service. Currently, all emergency ambulance calls are tracked by Sheriff's dispatch. This is accomplished by requiring ambulance units to report to Sheriff's dispatch by radio when responding on a call. Sheriff's dispatch does not know of an emergency request received at one of the other 9-1-1 dispatch centers until the responding ambulance unit reports. Nor does Sheriff's dispatch monitor the availability status of ambulance units.

Ambulance-to-Fire Communication. Two common situations arise in which an ambulance unit en route to a medical emergency can benefit from direct communication capability with a fire first responder unit already on the scene. With direct communication capability, an on scene fire unit can radio directions to the ambulance to find a difficult or changed patient location and can provide the ambulance crew details of the patient's condition which may prepare the ambulance crew to initiate treatment more quickly upon their arrival.

First Responder Services

Rapid Response to Cardiac Emergencies (Early Defibrillation). Paramedic service was initially developed out of the need to bring advanced life support directly to the scene of victims of cardiac emergencies. It was found that lives could be saved by training ambulance technicians to hook up a patient to a device capable of transmitting a electrocardiogram (EKG) to a base hospital and to use another device to administer an electric shock (defibrillation). With additional training, these technicians could learn to interpret many EKG's themselves, thus removing reliance upon the capability of transmitting the EKG by radio. Paramedics were trained in the administration of special cardiac drugs to stabilize the patient following defibrillation and were trained and equipped to deal with other life-threatening emergencies as well.

While the development of paramedic service brought a major advancement to the care of cardiac emergencies, many patients were still being lost because defibrillation came too late. First responders, often arriving within three to five minutes of the onset of an emergency, could only provide CPR while waiting for the paramedics to arrive. Recently, however, a new device has been developed known as an "automatic defibrillator." Under regulations approved by the State, a first responder with only a few hours of training can learn to defibrillate a patient with an automatic defibrillator. The device uses a computer to measure the patient's heart rhythm and, if indicated, automatically delivers the appropriate shock. By reducing the time to defibrillation from twelve minutes to six minutes, it is estimated that a countywide early defibrillation program could save as many as 40 to 100 lives annually.

EMT-I Training. Although EMT-I level training for first responders has long been recognized as a goal in the county, it is estimated that only about one-third of the county's firefighters are currently certified to this level of training.

Disaster First Aid Caches. While fire and ambulance units are well stocked to treat several victims at the scene of an emergency, first aid supplies may be quickly exhausted in the event of a disaster or major multicasualty incident. Fire services in many areas of California have developed systems of stockpiling backboards, oxygen, and other first aid supplies commonly used by both fire and ambulance personnel in caches which can easily be transported to the scene of a major emergency. Disaster caches are designed to be easily transported by fire units and include equipment and supplies in routine use which is familiar to responders and which can be rotated to avoid deterioration.

Other Areas for Improvement

While paramedic ambulance coverage, EMS communications, and first responder defibrillation are the major areas identified for improving the EMS system in Contra Costa County, recommendations by the EMCC and by the County Fire Chiefs Association identify other areas as well. These include:

- Establishment of an EMS data system for monitoring system performance;

- Provision of training to medical responders in treatment of victims of hazardous materials incidents;

- Reduced reliance on firefighters to provide patient assistance en route to the hospital;

- Disaster and multicasualty preparedness;

- Public education; and

- Communicable disease prevention.

VI. SERVICE PLAN

The services to be provided under the proposed CSA include the following:

- Additional paramedic ambulance units necessary to provide response to all life-threatening medical emergencies and to improve the response to peripheral areas of the County.

- Replacement or upgrading of the existing EMS radio communications system.

- Improved dispatching, including medical dispatcher training and computer linkages between 9-1-1 medical dispatch centers, a central public safety dispatch, and ambulance provider dispatch centers.

- Funding for first responder defibrillation programs to provide rapid response to persons with cardiac emergencies.

- Additional medical training and equipment for fire first responders.

- Caches of first aid equipment to be maintained by fire services throughout the county for use in disasters or major multicasualty incidents.

County Service Area funding will be used to fund new services and service enhancements, including an allocation of ten percent of the operating budget to cover additional administrative costs which will be incurred. A first year budget illustration is shown in Exhibit D.

Administration of the Proposed County Service Area

The proposed County Service Area will be administered by the Health Services Department under the governing authority of the County Board of Supervisors. The Health Services Director will appoint an Oversight Committee to assist in ongoing program planning and monitoring and to advise the Department on preparation of the annual budget for the CSA. The Oversight Committee will include a representative nominated by each of the following:

- Public Managers' Association
- Fire Chiefs' Association
- Police Chiefs' Association
- East Bay Hospital Conference
- Emergency Medical Care Committee (2 consumer members)

Paramedic Ambulance Service

Ambulance coverage under the CSA will continue to be provided by ambulance services under contract to the County with contracts awarded through a competitive process. A Request for Proposal (RFP) will be issued for emergency ambulance services in each of the areas currently served by Regional Ambulance Service, Moraga Fire Protection District, and San Ramon Valley Fire Protection District, respectively. The RFP will set standards for emergency ambulance response which must be met by the

contractors. These standards will include paramedic-staffed ambulance response to all life threatening or potentially life threatening emergencies and response within 10 minutes to 95 percent of emergency calls within each city and the unincorporated urbanized area of the county. Additionally, in order to determine the feasibility of achieving 8 minute paramedic ambulance response times as recommended by the EMCC, bidders will be asked to submit a separate bid for an 8 minute response standard.

In preparing the RFP, attention will be given both to improving ambulance response times in areas such as El Cerrito/Kensington, Crockett/Rodeo, Clayton, Orinda, and the east County areas outside the immediate Antioch, Pittsburg, and Brentwood areas and to providing more paramedic coverage to the higher call volume areas of west and central County. While the actual number and locations of paramedic ambulances will be determined in response to the RFP, it is estimated that at least five or six additional units are required to meet peek demand and that two to three of these will need to be 24-hour/7-day per week units to achieve response time standards.

Figure 4 provides an illustration of how paramedic ambulance coverage might be improved using five additional paramedic units. (Compare with Figure 1 showing existing paramedic ambulance coverage.) The actual ambulance coverage plan, including the locations of ambulance stations, will be determined by each successful ambulance bidders based upon the their proposals submitted in response to the RFP. Regardless of the proposed coverage plan, however, a successful bidder will be required to station paramedic-staffed ambulances in sufficient numbers and appropriate locations to meet contract response standards.

The Health Services Department will conduct an ambulance selection process with the goal of selecting the most qualified providers to assure a high quality of ambulance service for Contra Costa County. The Oversight Committee (including city, police, fire, hospital, and EMCC representation as described above) will participate in the proposal review and selection process, including review of plans for the location of ambulance stations.

In addition to paramedic coverage and response time requirements, ambulance services will be required to provide appropriate staff to transport critical trauma patients from areas over 20 minutes from the trauma center without firefighter assistance en route to the hospital.

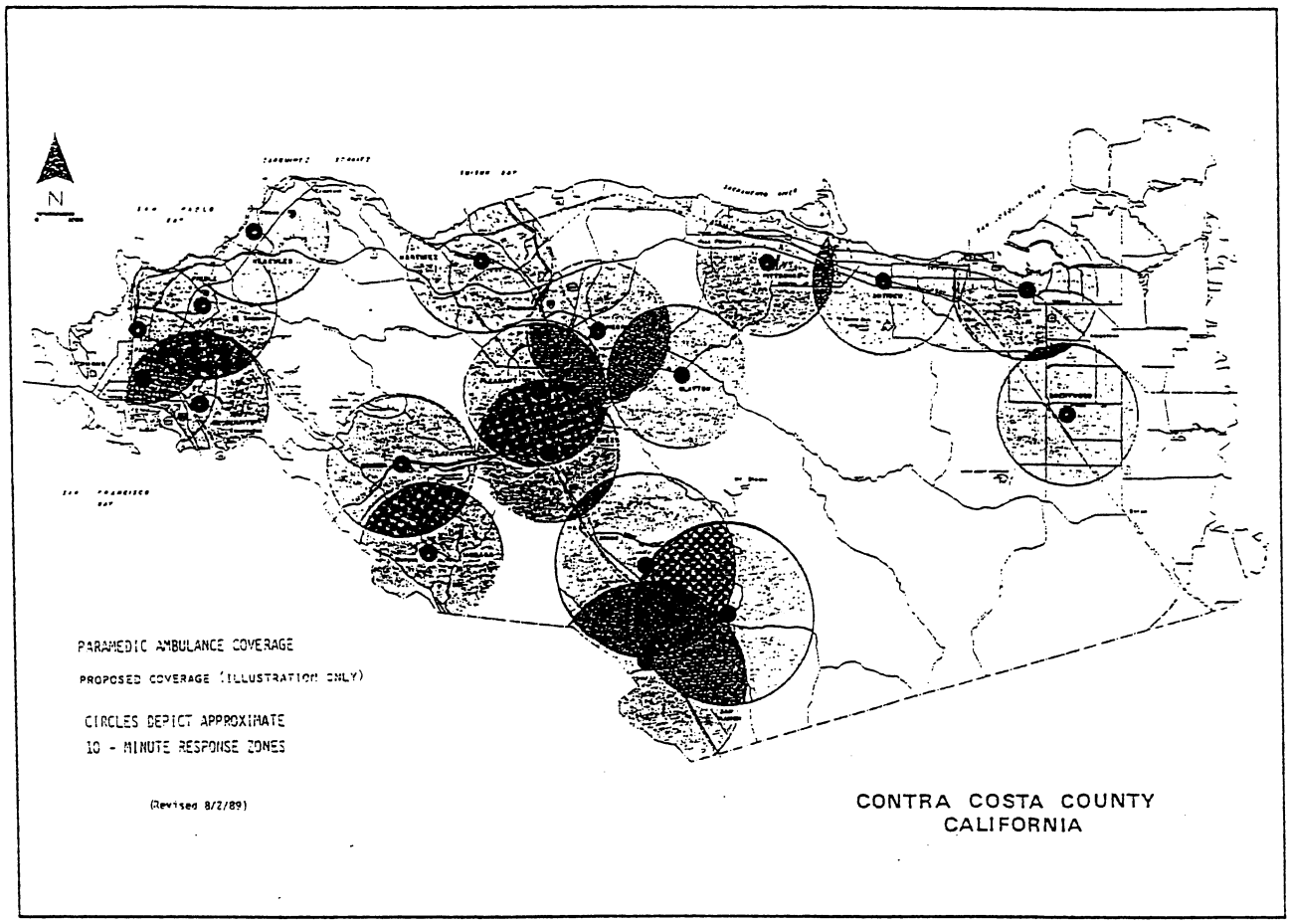

Figure 4

EMS Radio Communications System

It is well recognized that the existing EMS radio communications system must undergo major upgrading or replacement. While an earlier review process resulted in a recommendation for replacement of the 2-channel MEDARS system with a 10-channel MEDCOM system, rapid changes in radio communication technology suggest that options be reexamined. Therefore, an EMS communications plan will be developed during the first year of operation of the CSA, with purchase of new equipment scheduled to begin during the second year.

Improved Dispatching

The communications plan developed during the first year will include review of the system of ambulance dispatch. However, certain improvements in the existing system may be undertaken without completion of such a plan. These include, for example, establishing computer data linkages from existing 9-1-1 medical dispatch centers to the Sheriff's dispatch and ambulance company dispatch centers and developing a medical dispatcher training program to be made available to the 9-1-1 medical dispatch centers.

First Responder Defibrillation

A program will be established to provide training, equipment, and required monitoring for fire services electing to implement early defibrillation services. The program will include a physician medical director; a mobile intensive care nurse to provide training, monitoring, and program coordination; and funds for acquisition of automatic defibrillator and related equipment.

First Responder Medical Training, Equipment, and Supplies

Funds budgeted for additional first responder medical training, equipment, and supplies will be used to reimburse fire services for the costs of providing training necessary to qualify personnel for certification as EMT-I's or other EMS approved first responder certification and to purchase medical equipment and supplies to enhance first responder medical response, including equipment and supplies to be stockpiled in caches for use in disasters and multicasualty incidents. Funds may be used to the extent available to reimburse for other approved medical training, and purchase of approved medical equipment and supplies including equipment and supplies used to prevent the spread of communicable disease.

Local EMS Agency

The EMS Agency is responsible for coordinating, administering, and monitoring the EMS system. County Service Area funding will be used for additional services provided through the EMS Agency.

Exhibit A

Measure "H" (Ballot Measure)

EXHIBIT A

Contra Costa County Ballot Measure, November 8, 1988

MEASURE "H" - EMERGENCY MEDICAL SERVICES

(Advisory Measure)

Shall a Countywide Emergency Medical Services benefit assessment be established to finance improvements in the emergency medical and trauma care system including expanded countywide paramedic coverage; improved medical communications and medical dispatcher training; and medical equipment, supplies, and training for firefighter first responders, including training and equipment for fire services electing to undertake a specialized program of advanced cardiac care (defibrillation); said assessment to be limited to a maximum assessment on real property of ten dollars annually for each single family residence or benefit unit as defined in Resolution No. 88-500, a copy of which is contained in the Voter Information Pamphlet, and said assessment to be initially set at five dollars and fifty cents per benefit unit, subject to review following a public hearing on the assignment of benefit units and services to be financed, the public hearing and review to be conducted prior to the initial assessment and annually thereafter?

Argument in Favor of

MEASURE "H" - EMERGENCY MEDICAL SERVICES

A "YES" vote on MEASURE "H" may save your life! A "YES" vote on MEASURE "H" urges the Board of Supervisors and city councils to assure that enough paramedics are available for all emergency calls and to provide a means to make needed improvements in our emergency medical services. Emergency medical services are designed to provide rapid lifesaving response to victims of heart attacks, serious injuries, and other life threatening medical emergencies. Paramedics, under medical direction from hospital emergency doctors and nurses, bring advanced medical skills, equipment, and drug therapy directly to the emergency scene. Right now there are not enough paramedic units to respond to many emergency calls. ONE OUT OF SIX 9-1-1 CALLS FOR EMERGENCY MEDICAL HELP DOES NOT RECEIVE A PARAMEDIC RESPONSE.

The radio system paramedics rely on to receive on-scene medical direction is old and cannot handle the existing number of emergency calls. Medical dispatchers need to be trained to assist 9-1-1 callers waiting for help to arrive. Firefighters who are first responders to emergency medical incidents need to be trained to the recommended Emergency Medical Technician-I level and need to be trained and equipped with advanced lifesaving equipment approved by the State for use by first responders prior to arrival of paramedics.

For less than 3¢ per day per household, a "YES" vote on MEASURE "H" will:

- Add needed paramedic units,
- Provide medical training and equipment for firefighters,
- Upgrade emergency medical communications and dispatch, and
- Ensure a high level of trauma care throughout the county.

Please vote "YES" on MEASURE "H" and make Contra Costa County a better and safer place for all of us to work, play, and LIVE.

s/ Michael E. Mickelberry, Chairman
Contra Costa County Emergency Medical Care Committee

s/ Gregory A. Rhodes, M.D., Chairman
Emergency Committee, Alameda-Contra Costa Medical Association
Past Chairman, Contra Costa County Emergency Medical Care Committee

s/ Timothy A. Carlton, M.D., President
American Heart Association, Contra Costa County Chapter

s/ Allen Sebransky, M.D.
Surgeon

s/ Lyla Cromer
Health Sciences Educator

THE BOARD OF SUPERVISORS OF CONTRA COSTA COUNTY, CALIFORNIA

Adopted this Order on _____, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Resolution Number 88-502

SUBJECT: EMERGENCY MEDICAL SERVICES

WHEREAS, this Board of Supervisors proposes to establish, with the concurrence of each city council, a County Service Area for the provision of paramedic service, trauma care, and other emergency medical services on a county-wide basis; and

WHEREAS, a county may levy an assessment upon each property within a service area to pay for cost of the services; and each assessment may be determined by apportioning the total cost of the service, not otherwise offset by other available revenue, to each property in proportion to the estimated benefits to be received by each property from the service; and

WHEREAS, a special advisory election will be held to determine whether this Board of Supervisors should undertake the formation of an emergency medical servies area and the levy of an assessment; and

WHEREAS, a schedule of benefit units reflecting the degree to which different kinds of properties according to use would benefit from the service has been established, and the estimated dollar value of the benefit unit necessary to defray the cost of the service has been set at five dollars and fifty cents per unit.

NOW, THEREFORE, BE IT RESOLVED that this Board of Supervisors adopts the attached Schedule of Benefit Units (Exhibit A) for the different kinds of properties within the County as a guideline for purposes of the advisory election.

BE IT FURTHER RESOLVED that the Schedule of Benefit Units for different kinds of property and the cost of emergency medical services provided be reviewed following a public hearing to be conducted prior to any initial assessment and annually, thereafter; but that the maximum dollar value of each benefit unit shall in no event exceed ten dollars annually.

SCHEDULE OF BENEFIT UNITS

CATEGORY OF PROPERTY CODE	DESCRIPTION	BENEFIT UNITS ASSIGNED	
	RESIDENTIAL:		
10	Vacant, unbuildable	Ø/Ø	0*
11	Single Family, 1 Res on 1 Site & Duets with out common Areas	1	
12	Single Family, 1 Res on 2 or more sites	1	
13	Single Family, 2 or more res. on 1 or more sites	1	2*
14	Single family on other than single family land	1	
15	Miscellaneous improvements, 1 site	1	
16	Misc. Imps on 2 or more sites; includes trees & vines	1	
17	Vacant, 1 site (includes PUD sites)	0.5	
18	Vacant, 2 or more sites	0.5	
19	SFR; Det. w/common area (normal subdiv. type PUD) Duets w/common area	Ø/Ø	1*
	MULTIPLE:		
20	Vacant	0.5	
21	Duplex	2	
22	triplex	3	
23	Fourplex	4	
24	Combinations; e.g., single and a double, etc.	3	
25	Apartments, 5-12 units, inclusive	5	
26	Apartments, 13-24 units, inclusive	13	
27	Apartments, 25-59 units, inclusive	25	
28	Apartments, 60 units or more	60	
29	Attached PUD's, Cluster Homes, Co-ops, Condos, Townhouses, etc.	1	
	COMMERCIAL:		
30	Vacant	0.5	
31	Commercial Stores (not supermarkets)	3	
32	Small Grocery Stores (Mom & Pop, 7-11, Quick Stop	3	
33	Office Buildings	3	
34	Medical: Dental	25	
35	Service Stations; car washes; Bulk plants	3	
36	Garages	3	
37	Community Facilities: Recreational: Swim Pool Assn.	6	
38	Golf Courses	6	
39	Bowling Alleys	6	
40	Boat harbors	8	
41	Supermarkets (not in shopping centers)	5	
42	Shopping Centers (all pcls incl. vac for future shop center)	15	
43	Financial Bldgs (ins. & Title Cos. Banks & S&L	3	
44	Motels, Hotels, and Mobile Home Parks	10	
45	Theatres	3	
46	Drive-In Restaurants (Hamburger, Taco, etc.	6	
47	Restaurants (not drive-in; inside service only)	8	
48	Multiple & Commercial; Miscellaneously improved	8	
49	New Car Auto Agencies	3	

INDUSTRIAL

50	Vacant Land (not part of Industrial Park or P & D)	0.5
51	Industrial Park (with or without structures)	40
52	Research & Development, with or without structures	3
53	Light Industrial	20
54	Heavy Industrial	500
55	Mini-Warehouse (Public Storage)	3
56	Misc. Imps., including T&V on Light or Heavy Indust.	3

LAND

61	Rural, Res. Improved; 1A up to 10A	1
62	Rural, with or without Misc. Structures 1A up to 10A	1
63	Urban Acreage 10A up to 40A	1
64	Urban Acreage, 40A and over	2
65	Orchards; Vineyards; Row Crops; Irr.Past.;Irr.Past 10A up to 40A	1
66	Orachards; Vineyards; Row Crops; Irr.Past.; 40A and over	2
67	Dry Farming, Grazing & Pasturing 10A up to 40A	1
68	Dry Farming, Grazing and Pasturing, 40A and over	2
69	Agricultural Preserves	1

INSTITUTIONAL:

70	Convalescent Hospitals & Rest Homes	50
71	Churches	1
72	Schools, public or private, with or without improvements	1
73	Hospitals with or without improvements	100
74	Cemeteries; Mortuaries	1
75	Fraternal and Service Organizations	1
76	Retirement Housing Complex	25
77	Cultural Uses (Libraries)	1
78	Parks and Playgrounds	8
79	Government-owned, with or w/out bldgs (Fed, State, City, BART, etc.)	X 0*

MISCELLANEOUS:

80	Mineral Rights (Productive/Non-Productive)	0
81	Private Roads	Ø/.5 0*
82	Pipelines and Canals	4
83	State Board Assessed Pcls.	X 0*
84	Utilities with or w/out bldgs. (not assessed by state Bd.)	1
85	Public and Private Parking	1
86	Taxable Municipally-Owned Property	1
87	Common Areas pcls. in PUD's; e.g., Open Spaces, Rec. Facilities	X 0*
88	Mobilehome	1
89	Other; Split Pcls. in diff. Tax Code Areas	X 0*
99	Awaiting Assignment	1

* Adjustments 7/89

Exhibit B

Contra Costa Emergency Medical Care Committee
Resolution of Endorsement and
Recommended EMS System Priorities

EMERGENCY MEDICAL CARE COMMITTEE
OF CONTRA COSTA COUNTY
EMERGENCY MEDICAL SERVICES

50 Glacier Drive
Martinez, California 94553-4822
(415) 646-4690

CONTRA COSTA COUNTY EMERGENCY MEDICAL CARE COMMITTEE

RESOLUTION SUPPORTING THE ESTABLISHMENT OF A
COUNTYWIDE COUNTY SERVICE AREA FOR
EMERGENCY MEDICAL SERVICES

WHEREAS the Emergency Medical Care Committee (EMCC) has been established by the Board of Supervisors as an advisory committee to the Board and to the County Emergency Medical Services (EMS) Agency on matters relating to emergency medical services;

WHEREAS the voters of Contra Costa County passed by 71.6 percent Measure "H", an advisory measure on the November 1988 countywide ballot, calling for the establishment of a benefit assessment to finance improvements in the emergency medical and trauma care system including expanded countywide paramedic coverage, improved medical communications and medical dispatcher training, and medical equipment, supplies, and training for firefighter first responders, including training and equipment for a first responder defibrillation program;

WHEREAS the EMCC has developed and approved a plan of "Recommended EMS System Priorities" to improve the level of emergency medical services, including improved paramedic ambulance service, emergency medical dispatch and communications, first responder training and defibrillation, and overall EMS system organization and management including support of the county trauma system; and

WHEREAS the County Health Services Department, which is the Board designated Local EMS Agency, has developed plans and proposals to form a County Service Area for Emergency Medical Services;

BE IT THEREFORE RESOLVED that the EMCC endorses the formation of a countywide County Service Area for the purpose of establishing a benefit assessment for emergency medical services as proposed in Measure "H" and that the Board of Supervisors and each city council take the appropriate actions to form the proposed County Service Area.

Passed July 12, 1989 AYES 16 NO 0 ABSTAIN 0

Attest: Michael E. Mickelberry
Michael E. Mickelberry
EMCC Chair

Approved by EMCC 4/12/89 EXHIBIT B

4/3/89

CONTRA COSTA COUNTY EMERGENCY MEDICAL CARE COMMITTEE
EMS Priorities Subcommittee

Recommended EMS System Priorities

A. SYSTEM ORGANIZATION AND MANAGEMENT

1. Implement a countywide EMS service area as approved by the voters with the passage of Measure "H" in the November 1988 election.

Comment: In November 1988 the voters of Contra Costa County approved by 71.6 percent Measure "H", an advisory measure calling for the establishment of an countywide service area to assess annual fees on real property for the purpose of financing improvements in the County's emergency medical service system, including:

- increased paramedic ambulance coverage;
- upgrading the EMS communication system;
- providing specialized medical training and equipment to first responders, including an early defibrillation program; and
- assuring the continued viability of the trauma system.

It is estimated that a fee of $5.50 per benefit unit would raise about $2.5 million in the first year.

2. Expand existing EMS data systems to establish a general prehospital data system including ambulance response and prehospital care for trauma and nontrauma patients.

Comment: The existing EMS data systems do not provide data necessary to evaluate overall system response to 9-1-1 calls or details of prehospital care necessary to evaluate patient treatment protocols. An EMS data system should be capable of tracking ambulance response from the time a call is received until the patient is at the hospital and should record pertinent details of prehospital care.

B. COMMUNICATIONS AND DISPATCH

1. Improve the paramedic-to-hospital communication system to handle the existing call volume and the anticipated increases resulting from expanded paramedic service.

   Comment: The existing L-19 radio channel is insufficient to handle present call volumes and does not provide countywide coverage. While the use of cellular telephones by paramedics has alleviated some of the problems that have existed, there needs to be established a system for medical communication between paramedics and base hospitals which will support multiple simultaneous transmissions, provides coverage to all parts of the county, and is available on a priority basis to provide medical direction to paramedics.

2. Establish a system for direct communication between ambulance and first responder units responding to medical emergencies.

   Comment: In most areas of the County, responding ambulance units and first responders do not share a common radio channel. A common radio channel would enable a first responder on the scene of a medical emergency to provide updated patient information to the responding ambulance unit as well as provide directions for difficult to find locations.

3. Implement systemwide priority dispatching to include pre-arrival instructions.

   Comment: The EMCC has adopted standards for priority dispatching which, where adopted, help assure the availability of resources to handle life-threatening emergencies. Under a system of priority dispatching, dispatchers are trained to identify certain situations in which a basic life support (EMT-I staffed) ambulance may be safely responded in lieu of a full fire first response and paramedic ambulance response. Medical dispatchers may be further trained to give simple pre-arrival instructions which may enable a caller to control bleeding or open an airway in a non-breathing patient while help is en route.

4. Improve the efficiency of the existing ambulance dispatch system by providing direct computer linkages between the 9-1-1 answering points and the ambulance dispatching agency.

   Comment: In most areas of the County, emergency ambulance requests must be relayed by voice telephone from the 9-1-1 answering point to the private ambulance service which dispatches the call. This adds time to the ambulance dispatch process and allows for the introduction of errors in reporting locations.

Direct computer linkages would enable the ambulance dispatch center(s) to receive information on the call simultaneously with the first responder and without introduction of errors.

5. Establish the capability at Sheriff's dispatch to monitor ambulance status and response times and to serve as a backup ambulance dispatch facility countywide.

   Comment: Currently, ambulance service is provided throughout most of the County by a private ambulance company. Regional Ambulance dispatches emergency medical calls received from 9-1-1 answering points and county communications centers in Contra Costa and Alameda Counties through a state of the art dispatch center in Fremont. While this system works well, the County should should have the capability of on-line monitoring of the status of the ambulance system and the capability of taking over ambulance dispatch in the event of an emergency or other situation in which the private provider could not perform this service.

C. AMBULANCE SERVICE

1. Provide paramedic-staffed ambulance response to all 9-1-1 requests involving life-threatening or potentially life-threatening medical emergencies.

   Comment: Paramedic-staffed ambulance units, operating under base hospital medical control, bring most of the lifesaving capabilities of a hospital emergency room directly to the scene of medical emergencies. Basic life support (EMT-I staffed) ambulance units, on the other hand, are capable only of providing first aid. Advanced life support treatment may be delayed 15 to 30 minutes until the patient can be transported to a hospital emergency department. Currently, paramedics are able to handle only about 70 percent of all 9-1-1 medical emergency requests.

2. Establish an 8 minute ambulance response standard for urban areas of the county and reasonable response standards for rural areas.

   Comment: The existing County standard for ambulance response in urban areas is 10 minutes. Ambulance contractors are currently required to respond to 95 percent of Code 3 emergency calls in the designated urban areas within 10 minutes of dispatch. However, the time required for dispatch, including relay of the request from the 9-1-1 answering point, adds an additional minute or two under normal circumstances to overall response time. Reducing the ambulance response time response time to 8 minutes, would result in achieving overall response times within 10 minutes for most calls.

C. FIRE SERVICE

1. Establish first responder standards specifying first responder responsibilities to help assure a standardized system-wide response to medical emergencies.

   Comment: First responders standards, including a first responder patient form, should be developed with the cooperation of fire services in order assure coordinated response of all agencies and to provide consistent documentation of prehospital patient care.

2. Train and certify first responders to the EMT-I level.

   Comment: EMT-I is recognized as the optimal level of training for first responders in California.

3. Implement early defibrillation countywide.

   Comment: The benefits of early defibrillation in reducing mortality and morbidity due to cardiac failure have been well established. With the development of automatic defibrillators and the adoption of State standards permitting use of these devices by EMT-I's and other public safety personnel, it is appropriate to begin equipping and training first responders to perform defibrillation.

4. Recognize the need to provide flexible first responder training opportunities to accommodate the needs of volunteer fire personnel.

   Comment: Volunteer fire services face a particularly difficult problem in meeting training standards established for professional fire personnel. It may be unrealistic, for example, for a volunteer fire service to require EMT-I training. Flexible training opportunities need to be made available to areas which must rely on volunteer first responders.

D. HOSPITALS

1. Assure continued operation of the trauma system.

   Comment: Since its beginning in June 1986, the County's trauma system has demonstrated its success in reducing trauma deaths. In many areas of California, however, trauma systems are struggling against mounting costs and loss due to uncompensated care, and several trauma centers have, in fact, closed as a result of financial loses. While this has not been been a problem for Contra Costa County, it is important that the status of the trauma

system be monitored and that the County be prepared to take appropriate steps to assure the continuation of the trauma system should such steps become necessary.

2. Continue to monitor and evaluate base hospital performance.

   Comment: Base hospitals play a key role in the operation of the prehospital care system - directing patient care and triage, monitoring the performance of paramedics in providing patient care, and in providing continuing education for prehospital care personnel. Maintaining high base hospital standards is key to maintaining a high overall standard for patient care within the County's EMS system.

3. Continue oversight of interfacility transfers in accordance with the County Transfer Guidelines.

   Comment: Under Transfer Guidelines adopted by the Board of Supervisors in December 1987, the EMS Agency has established a process to review interhospital patient transfers. This process is designed to assure that patients are not transferred for nonmedical reason without being appropriately stabilized and that all transfers follow an approved process to assure that the receiving hospital is able to accept the patient, that necessary patient records are sent, and that the mode of transport is appropriate to the patient's condition. While many of the requirements of the County's Transfer Guidelines have subsequently been incorporated into State and federal legislation, the review process established by the County continues to serve an important function in assuring that standards are routinely met.

E. DISASTER RESPONSE

1. Assure that new personnel are oriented to the County's Multi-Casualty Response Plan.

   Comment: Because multicasualty incidents are infrequent events, new personnel may not become familiar with relevant policies and procedures unless special steps are taken to assure that all personnel are appropriately oriented.

2. Undertake a program to conduct periodic multi-casualty exercises.

   Comment: Because multicasualty incidents are infrequent events, it is unrealistic to expect personnel to be familiar with the roles they may be expected to play in a multicasualty incident if they have not at least been exposed to simulated incidents as a part of periodic exercises.

Exhibit C

Contra Costa Fire Chiefs' Association
Resolution of Endorsement and
Recommendations on the Emergency Medical Services Benefit Assessment

CONTRA COSTA COUNTY FIRE CHIEFS ASSOCIATION

RESOLUTION 89-02

WHEREAS the fire service in Contra Costa County is a primary provider of Emergency Medical and Rescue Services to the citizens of Contra Costa County; and

WHEREAS the County Fire Chiefs Association recognizes the need to improve emergency medical services by development of an organized and coordinated EMS system in Contra Costa County; and

WHEREAS Contra Costa County has developed plans and proposals to form an Emergency Medical Services District to mitigate deficiencies in delivery of emergency medical services by improving ambulance response, first responder training and equipment, communications and other needed EMS programs; and

WHEREAS the voters have overwhelmingly approved formation of an independent Emergency Medical Services District in Contra Costa County;

BE IT THEREFORE RESOLVED that the Contra Costa County Fire Chiefs Association endorses the formation of an Emergency Medical Services District as defined in Ballot Measure H and encourages all City Councils in Contra Costa County to adopt resolutions to include their city in the Contra Costa County Emergency Medical Services District.

I hereby certify that the foregoing is a true and correct copy of a resolution entered on the minutes of the Contra Costa County Fire Chiefs Association on this date.

7/12/89

By: Floyd J. Cormier Jr.
Secretary of the Contra Costa County Fire Chiefs Association

EXHIBIT C

(Approved by County Fire Chiefs, Association 5/3/89

TO: Members--Contra Costa County Fire Chief's Association

FROM: Fire Chief's Emergency Medical Service Committee

SUBJECT: Emergency Medical Services Benefit Assessment

DATE: April 25, 1989

* *

A. Background

On November 29, 1988, the Board of Supervisors approved the development of an Emergency Medical Services Program to upgrade paramedic, communications and other emergency medical services countywide and requested that the County Administrator report back with a time table for implementation. This was in response to Measure "H", an advisory measure passed by the voters in the November 1988 election by 71.6 percent countywide. Placing this on the ballot as an advisory measure was a means to provide an indication of countywide support to the Board of Supervisors and each City Council. The measure calls for the formation of a countywide service area for the purpose of assessing fees on real property to finance improvements in the County's emergency medical service system. The funds will be used principally for:

- increasing the number of paramedic units available to respond to emergency calls;
- upgrading the communications system used for dispatching paramedics and for paramedics to receive medical direction from their base hospitals;
- providing specialized medical training and equipment to firefighters who are first responders on medical emergencies, such training and equipment to include early defibrillation; and
- assuring the continued viability of the County's trauma system.

B. Implementation:

Implementation of the proposed EMS district requires that the Board of Supervisors make application to LAFCO to approve formation of a county service area. The following activities need to occur prior to submission of this application:

- appoint implementation task force
- develop service plan and budget
  --for increased paramedic ambulance coverage
  --for first responder services (training and equipment including defibrillation)
  --for emergency medical services communications

- review of service plan by Fire Chief's Association, Police Chief's Association and other relevant organizations
- review of service plan by Emergency Medical Care Committee
- public hearing on draft service plan
- presentation to Public Managers Association
- presentation to Mayors' Conference
- Board approval of service plan
- resolution of intent to from county service area
- invitation to cities to join county service area
- city councils pass resolutions to join county service area

If funding obtained through the proposed Emergency Medical Services assessment is to be used to fund activities of county-wide benefit, it is necessary that the cities consent to inclusion. Inclusions of the cities requires a resolution from each city council requesting that its territory be joined in the county service area. The timing of Measure "H" implementation is further affected by statutory provision which require that the county service area be established by January 1st of the year for which an assessment is levied.

C. Recommendations

The Fire Chief's Emergency Medical Service Committee reviewed the action taken by the County Board of Supervisors to establish a countywide Emergency Medical System Benefit Assessment as presented to the voters as an advisory measure in the November 8, 1988 election.

It is the consensus of the Committee that funds received from a benefit assessment for use in the County Emergency Medical System are needed to assist in the improvement of the total system. Funding could also be used to off-set the increased costs to fire departments for providing emergency medical services.

The Committee submits for your consideration the following recommendations:

1. Formally endorse the proposed EMS benefit assessment and urge the cities to join the County Service Area.

2. Request the Health Services Director to establish 1) a multi-discipline planning/funding committee; and 2) a procedure that would provide for a yearly process of evaluating the on-going and changing needs of the emergency medical service system and how assessment funds would be utilized.

3. Request the Health Services Director to allow representation from the Fire Chief's Association to serve on the Planning/Budget Committee.

4. Request the Local EMS Agency (EMS Office) to establish the minimal service level including knowledge, skills and treatment protocols considered necessary for fire departments to function as first-in responder within the County Emergency Medical Service System.

D. Funding Considerations

The Emergency Medical Service Committee recognized that voter approval of Proposition "H" was based on a limited number of items for which funding would principally be used. Considering that the assessment would be a continuous yearly source of funding, the Committee identifed the following items for funding. Items are ranked in priority of selection and may duplicate some of the items listed in Proposition H.

1. Plan, develop and purchase the necessary equipment to provide for an improved County Medical Communication System (ambulance-hospital).

2. Reimbursement (equipment and personnel costs) for any county first responder training required by the County Emergency Medical Service System.

3. Reimbursement for defibrillators and training costs required to implement and operate a first responder defibrillator program for fire departments interested in providing this service.

4. Subsidizing to the ambulance provider under contract to the County so that:

   a. all areas of the county will be guaranteed an ALS ambulance response to incidents 95% of the time
   b. ALS ambulance staff will be increased to eliminate the need for firefighters in ambulances for transportation when the fire department is an area remote from the Trauma Center and reduce the need for firefighters in ambulances in high response areas

5. Subsidize any additional pre-hospital emergency medical training (equipment and personnel costs) undertaken by a fire department that exceeds what is required by State Code for the service level of EMS provided.

6a. Develop and implement a countywide priority dispatch system including the use of pre-arrival instructions.

6b. Develop and administer training to all pre-hospital care providers on procedure care of casualties exposed to hazardous materials.

6c. Develop a system of two-way communications to allow paramedic ambulances under County contract to talk with responding or on-scene fire units.

6d. Provide for contingency funding available to all departments for communicable disease prevention through equipment, immunization, etc.

7. Develop and place throughout the County emergency care supplies and equipment caches for use during multi-casualty or disaster type incidents.

8a. Develop and administer a coordinated and continuous public education program for the citizens that will emphasize:

a. what is an emergency
b. immediate first aid
c. how to utilize the EMS system

8b. Full or partial reimbursement of non-reusable emergency care supplies that are not compensated for through patient or insurance billing and for damaged or lost reusable emergency care equipment

9. Develop and administer training to law enforcement agencies on EMS operations.

E. Needs/Concerns

In the process of surveying County fire departments, the Committee also identified other EMS concerns or needs that may not require funding. They are listed in priority of concern:

1. A standardized method to assure the return of fire department emergency care equipment from hospital emergency departments.

2. The need to bring first responders into the ALS or base station educational process.

3. Improved procedures and coordination of advanced life support helicopter use within County.

4a. Establishment of fire department co-operative purchasing of emergency care supplies and equipment to reduce costs.

4b. Development of a method of stabilizing firefighters in ambulances who administer chest compression on cardiac arrest patients during transportation.

5. Recognition of testing by County EMS, training with ambulance companies and training by or with local hospitals for satisfying continuing education requirements.

6. Development of equipment standards where applicable to allow for an equipment exchange between the private ambulance contractor and fire departments.

7. The development of foreign and sign language quick reference cards for all response units.

Exhibit D

Budget Illustration

FIRST YEAR BUDGET ILLUSTRATION

PARAMEDIC SERVICE	$ 1,600,000	
Additional paramedic ambulance coverage		1,500,000
Additional base hospital coverage (4 zones)		100,000
MEDICAL FIRST RESPONDER SERVICE (Fire)	330,000	
Early defibrillation program:		
Purchase of automatic defibrillators and related equipment		100,000
Defibrillation program training/coordination		90,000
EMT-I and related training/equipment/supplies		140,000
MEDICAL DISPATCH AND COMMUNICATIONS	210,000	
Emergency medical dispatcher program training/coordination		60,000
Enhancements at 9-1-1 medical dispatch centers (6 PSAP's)		100,000
EMS Communications Plan development		50,000
OPERATING BUDGET	$ 2,140,000	
Administrative costs (10%)	214,000	
Contingency reserve (10%)	214,000	
TOTAL APPROPRIATION	$ 2,568,000	

ASSESSMENT RATE CALCULATION:

$2,568,000 / 480,349 benefit units = $5.35 per benefit unit

Comments on Budget Items

Subsidy for additional paramedic ambulance service. Estimated annual subsidy cost for additional paramedic ambulance coverage. Actual subsidies will be established following a competitive selection process conducted by the Health Services Department and using a performance based Request for Proposal.

Base hospital services. Payments to base hospitals for additional cost incurred for providing medical direction and quality assurance for an expanded paramedic program.

Purchase of automatic defibrillators and related equipment. The total equipment cost for implementing first responder defibrillation countywide is estimated at $505,560 including 60 defibrillator units at $6,850 each, 5 training mannequins at $1,400 each, and 3 transcribers at $1,100 each. Amortized at 8 percent over five years, this represents an annual cost of approximately $100,000.

Defibrillation program training and coordination. Cost for a quarter-time physician medical director and a full-time nurse trainer/coordinator to develop and carry out first responder defibrillation training and required ongoing monitoring.

Other medical training, equipment, and supplies. Funds budgeted under this category will be used to reimburse fire services according to priorities established only up to the amount budgeted. Priority will be for training necessary for first responder personnel to qualify for EMT-I certification or other EMS approved first responder certification and for purchase of first aid supplies for multicasualty/disaster caches.

Emergency medical dispatcher program training and coordination. Cost of a full-time coordinator/trainer to develop and carry out medical dispatcher training and conduct appropriate monitoring.

Enhancements at 9-1-1 medical dispatch centers. Funds will be available to existing fire/medical dispatch centers (Richmond, West Bay, Consolidated Fire, Sheriff's Dispatch, DRCC, and San Ramon Valley) for improvements in ambulance dispatching.

EMS Communications Plan. Estimated cost for development of a long range EMS communications plan including ambulance-to-hospital communications and ambulance dispatch.

Administrative costs. Ten percent of the operating budget will be allocated for additional administrative costs including overhead and collection of fees.

Contingency reserve. A ten percent reserve will be maintained for unanticipated program costs.

CONTRA COSTA COUNTY HEALTH SERVICES DEPARTMENT
Emergency Medical Services Agency

January 30, 1991

Report on Implementation of Measure H to Provide Enhanced Emergency Medical Services (CSA EM-1)

In November 1988, the voters of Contra Costa County passed Measure H calling for establishment of a countywide benefit assessment to fund enhanced emergency medical services. As a result of passage of Measure H and direction from the Board of Supervisors, the County and all 18 cities joined in establishing County Service Area (CSA) EM-1 as a countywide benefit assessment district to fund emergency medical services. The District, which which became operational in FY 1990-91, is comprised of two zones:

> Zone A is the San Ramon Valley area and coincides with Emergency Response Area #4, which is the ambulance response area for San Ramon Valley Fire. The current assessment rate in Zone A or $1.64 will generate approximately $67,000 for EMS system enhancements exclusive of expanded paramedic service, which is not required within Zone A.
>
> Zone B is the remainder of the county and includes Emergency Response Areas #1, #2, and #5 served by Regional Ambulance and Emergency Response Area #3 served by Moraga Fire. The current assessment rate in Zone B of $5.48 will generate approximately $2,366,000 for expanded paramedic service and other EMS system enhancements.

The purpose of this report is to provide an update on Measure H program implementation including information on the ambulance selection process and the proposed contract with Regional Ambulance. The report is divided into the following sections:

- Implementation of EMS System Enhancements
- Oversight Committee
- Review of System Issues
- Ambulance Selection Process
- Proposed Ambulance Contracts

Implementation of EMS System Enhancements

The Measure H Service Plan provided for enhancements of paramedic ambulance coverage, medical dispatch and communications, and first responder programs. Implementation activities to date have included:

(1) Paramedic Ambulance Service. Developed Request for Proposal and conducted proposal review and selection process resulting in recommendations for selection of Regional Ambulance and San Ramon Valley Fire to continue providing ambulance service within their respective service areas under the Measure H standards. (Moraga Fire will also continue providing ambulance service under the new Measure H standards, but is exempt from the competitive selection process.) Contracts have been negotiated with Regional Ambulance and with San Ramon Valley Fire, subject to Board of Supervisors approval. A similar agreement will be negotiated with Moraga Fire.

(2) MEDARS Radio System. The County's 2-channel MEDARS system used for ambulance-to-hospital communication and for communication between ambulances and Sheriff's dispatch is being upgraded to a 4-channel system. This will accommodate increased ambulance-to-hospital communication and will provide additional capacity for communications with hospitals in the event of a disaster.

(3) Dispatch. A link has been between Sheriff's dispatch and Regional Ambulance dispatch by providing a dispatch terminal off the Sheriff's CAD system at Regional Ambulance. Additionally, proposals have been received from County Fire, West Bay Dispatch (Pinole), and San Ramon Valley Fire for funding improved medical dispatching conducted by those agencies.

(4) Disaster Medical Caches. A plan has been developed with the County Fire Chiefs to establish 15 to 20 caches of first aid supplies to be maintained by the fire service in various locations throughout the County for use in multicasualty or disaster situations. The stocking of the caches has been agreed upon and supplies are being purchased. County Fire has agreed to assemble and distribute the caches to participating agencies. Each participating agency will agree to maintain supplies in its caches and to transport caches to any location in the county if requested. All supplies are standard items familiar to fire and ambulance personnel from day-to-day operations.

(5) First Responder Defibrillation. The services of a part-time medical director for the defibrillation program have been and all fire agencies have been contacted regarding their interest in undertaking a defibrillation program. Results of these contacts were extremely positive. Currently, an RFP is being developed to obtain bids on defibrillation equipment and a

staff position is being developed to provide training and monitoring.

(6) Quality Assurance. Ambulance service providers are being required to submit detailed quality assurance programs that are subject to approval and monitoring by the County.

(7) Ambulance Data System. A comprehensive data system for monitoring ambulance response has been established by Regional Ambulance and reporting requirements have been incorporated into the ambulance service agreements.

Oversight Committee

The Measure H Service Plan provided for the establishment of an Oversight Committee advisory to the Health Services Director to provide budgetary review and to review ambulance deployment. Membership on the Oversight Committee was established by the Service Plan to include the following:

- Public Managers' Association (1 representative)
- Emergency Medical Care Committee (2 consumer representatives)
- East Bay Hospital Conference (1 representative)
- Fire Chiefs' Association (1 representative)
- Police Chiefs' Association (1 representative)

This committee has been appointed and has met three times for an orientation, to review the current year's budget, and to review the terms of the proposed Regional Ambulance contract. Members of the Oversight Committee also were invited to participate on the ambulance proposal review process discussed below.

Review of System Issues

At the time LAFCO was making its final review of the CSA EM-1 application, an issue was raised at the Mayors' Conference regarding the cost efficiency of the existing private ambulance model vis-a-vis a proposed model in which existing firefighter personnel would be trained as paramedics and emergency ambulance service provided by the various fire agencies. A committee of the Mayors' Conference was formed to review this issue and the Health Services Department agreed to work with the Mayors' Conference committee regarding this issue.

A preliminary meeting has been held with the Mayors' Conference committee, the chair of the EMCC, and staff of the Health Services Department and County Fire. It was agreed that the Health Services Department would undertake an independent review of the proposed model to evaluate the potential for cost savings. To

accomplish this task, an independent consultant has been retained and is currently conducting an analysis.

Ambulance Selection Process

The ambulance provider selection process included development of a request for proposal (RFP) and review of proposals by Health Services Department staff and by an independent Ambulance Proposal Review Panel. An RFP incorporating enhanced standards for ambulance service was developed and approved by the Board of Supervisors on April 17, 1990. The RFP also specified a process for proposal evaluation including a review panel comprised of individuals from within and outside the county to be appointed by the Health Services Director.

Although the RFP was widely distributed and active interest was shown by one major ambulance company outside the county, actual proposals were received only from the incumbent providers and for their existing service areas. (Hartson's Ambulance of San Diego had submitted an intent to bid and did attend the bidders' conference. Before the proposal due date, however, Hartson's was selected as the new emergency ambulance provider in San Mateo County and notified Contra Costa that they would not be submitting a proposal for this county.)

A Proposal Review Panel was selected included medical, consumer, fire, city and county government, and hospital representatives both from within and outside Contra Costa County. That Panel rated both the Regional and the San Ramon Valley Fire proposals quite highly. The report of the Panel and a recommendation from the Health Services Department was submitted to the Board of Supervisors. On September 11, 1990, the Board approved selection of the recommended providers and authorized the Health Services Department to negotiate contracts.

As a result of its April 17 and September 11, 1990, actions, the Board of Supervisors has approved selection of the following emergency ambulance providers:

- Moraga Fire Protection District to serve Emergency Response Area (ERA) 3 covering the area of the Moraga Fire Protection District;

- San Ramon Valley Fire Protection District to serve ERA 4 covering the area of the San Ramon Valley Fire Protection District and that area of the City of San Ramon lying outside the District; and

- Regional Ambulance, Inc., to serve ERA's 1, 2, and 5 covering all remaining areas of the county.

The following section discusses the key provision of the proposed Regional Ambulance contract. Contracts with similar standards will be proposed for San Ramon Valley Fire and Moraga Fire.

Proposed Regional Ambulance Contract

The proposed contract with Regional Ambulance, Inc., is for a two year period (renewable for an additional two year period) and provides for emergency ambulance service covering Emergency Response Areas 1, 2, and 4. These areas comprise all Contra Costa County except San Ramon Valley and Moraga and are comprise Regional Ambulance's existing service area. Key provisions of the proposed contract are as follows:

(1) Provision of a County subsidy of up to $1,312,207 during calendar year 1991 and $2,502,389 during 1992 to cover the costs of additional paramedic ambulance units and other service enhancements.

(2) Requirement for Advanced Life Support (paramedic) response within 10 minutes of notification (20 minutes for rural areas) for all potentially life-threatening (Code 3) medical responses.

(3) Recognition of goal to achieve 10 minute response standard within each community and commitment to deploy ambulances accordingly.

(4) Provision for renegotiation of subsidy following significant MediCal or MediCare rate changes.

(5) Changes in the permitted patient charges permitting paramedic charges for all patient transports by paramedic unit.

(6) All Advanced Life Support ambulances staffed with a minimum of two paramedics.

(7) Basic Life Support (EMT-I) ambulances normally limited to non-life-threatening (Code 2) emergencies.

(8) Second patient attendant for transports of critical patients over 15 minutes, to relieve fire of the need to send personnel to accompany the patient.

(9) A formal physician or nurse directed quality assurance program subject to approval by the County and to be maintained on file with the County.

(10) A rigorous data reporting system for contract monitoring including monetary penalties for failure to comply with

reporting requirements.

(11) Audit or review by the County of financial and other records related to performance of services.

(12) Participation in a formal annual performance review including a report to the Board of Supervisors.

To meet the performance criteria of the proposed contract, Regional has proposed the addition of six 24-hour paramedic units and related supervisory staff, one quality assurance nurse, administrative staff necessary to implement the data reporting system. A gradual phase-in of the six paramedic units will be accomplished over first year with all units scheduled to be in place by October 1991. This phase-in is necessary to assure that high caliber paramedic personnel can be obtained and provided appropriate orientation to the Contra Costa County EMS system.

Basic Life Support (EMT-I) ambulance coverage will be retained at a slightly reduced level to respond to non-life-threatening emergencies. These include 9-1-1 calls that have been screened by a trained Emergency Medical Dispatch and determined not to require a fire first response or paramedic level ambulance response. Use of call prioritization by Emergency Medical Dispatchers and BLS ambulance response will help to assure the availability of fire and paramedic units to respond to more critical emergencies.

The Health Services Department intends to conduct a full scale financial review of Regional Ambulance's emergency operations in Contra Costa County following the first year of services. The results of this review will be used as a basis for negotiating future ambulance contracts. Additionally, the Health Services Department and the contractor will participate in a formal annual performance review that will result in a report to the Board of Supervisors.

THE BOARD OF SUPERVISORS OF CONTRA COSTA COUNTY, CALIFORNIA

Adopted this Order on November 28, 1989, by the following vote:

AYES: Supervisors Powers, Fahden, Schroder, McPeak, Torlakson
NOES: None
ABSENT: None
ABSTAIN: None

BOOK 15505PG 627

SUBJECT: Resolution Establishing County Service Area No. EM-1 to provide emergency medical services (LAFC 89-41)

RESOLUTION No. 89/742
(Gov. C. §§ 25210.8, 25210.18 & 57200)

The Board of Supervisors of Contra Costa County Resolves that:

1. The Board of Supervisors of Contra Costa County by Resolution No. 89/692, dated October 17, 1989, proposed the establishment of County Service Area No. EM-1 (CSA EM-1), the boundaries of which are coterminous with the exterior boundaries of Contra Costa County including as its territory all of the unincorporated and incorporated territory contained within Contra Costa County. The type of extended county services proposed to be provided in the Service Area are emergency medical services, including ambulance, paramedic, trauma, disaster, and related training and equipment needed for these services on a countywide basis both within and without cities. Concurrent with the formation of County Service Area EM-1, the Board proposed the formation of Zones A and B as improvement districts within County Service Area EM-1 to serve the territories described as follows:

Zone A: All of the territory within the San Ramon Valley Fire Protection District, all of the territory within Tassajara Fire Protection District, and all of the territory within the City of San Ramon.

Zone B: All of the remaining territory within Contra Costa County not within Zone A as described above.

2. On October 11, 1989, the Local Agency Formation Commission approved the proposed formation subject to the condition that Zones A and B be concurrently formed as improvement districts within County Service Area EM-1 to serve the territories described in Paragraph 1, above.

3. After public hearing on this proposal, held on Tuesday, November 28, 1989, in the Board of Supervisors Chambers, this Board hereby finds and determines that the services proposed in the aforesaid Board Resolution and specified hereinabove are extended county services. Further, this Board finds that no protest has been filed against the proposed formation and hereby declares the area to be established, without an election, having the powers to perform the aforenoted services. The boundaries of said territory shall be as described hereinabove (Paragraph 1) and the name of the Service Area shall be County Service Area EM-1.

4. Zones A and B (as described in Paragraph 1, above) are hereby formed an established as improvement districts within CSA EM-1.

5. Funding for the Service Area is to be from benefit assessment charges obtained from those benefiting from the facilities and services and from user fees in accordance with Government Code sections 25210.66a and 25210.77a. Except where funds are otherwise available from such benefit

assessment (service) charges, a tax sufficient to pay for all such services will be annually levied upon all taxable property within the area as limited by Section 6 of this Resolution.

6. No appropriation limit is proposed to be established for this area since it is not presently anticipated that any proceeds of taxes will be expended in support of it.

7. Pursuant to Government Code section 57200, the Clerk of this Board shall transmit a certified copy of this resolution along with a remittance to cover the fees required by Government Code section 54902.5 to the Contra Costa County LAFCO Executive Officer.

I hereby certify that this is a true and correct copy of an action taken and entered on the minutes of the Board of Supervisors on the date shown.
ATTESTED: November 28, 1989
PHIL BATCHELOR, Clerk of the Board of Supervisors and County Administrator
By _____, Deputy

BOOK 15505PG 628

Orig. Dept:
cc: LAFCO (6 certified copies)
County Administrator
County Auditor-Controller
County Treasurer-Tax Collector
Community Development (CSA Coordinator)
County Assessor
Health Services Department (EMS Division)
County Counsel

END OF DOCUMENT

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