

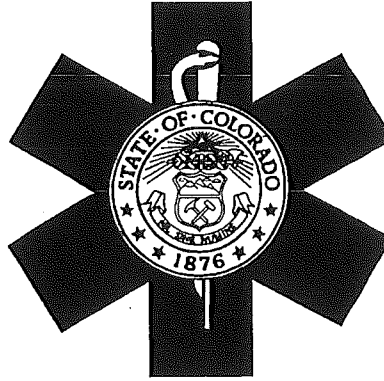
State Of Colorado

Department of Public Health and Environment

Emergency Medical Services and Trauma System

Legislative Report

January 1, 1999



Colorado Department of Public Health and Environment

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Table of Contents

Executive Summary	1
Introduction & Background	4
Part I - Emergency Medical Services and Trauma Programs Funding	6
Part II - Evaluation of the Components of the Trauma System	13
Part III - Future Challenges for Colorado's Emergency Medical Services and Trauma System	16
Advisory Councils and Groups	
Appendices	
A. Fiscal Year 1998-1999 Emergency Medical Services Grant Awards	
B. Maps	
1. Colorado Designated Trauma Centers Overview	
2. Colorado Designated Trauma Centers Detail	
3. Denver Metro Area Designated Trauma Centers Detail	
4. Colorado Area Trauma Advisory Councils Detail	
5. Colorado Emergency Medical Services Regions	
C. Area Trauma Advisory Councils	
D. Colorado Designated Trauma Centers	

EXECUTIVE SUMMARY

Executive Summary

Impact of Emergency Medical Services and Trauma in Colorado

Colorado's emergency medical services (EMS) system and trauma care system, a vital component of EMS, provide immediate care to the sick and injured 24 hours a day, 365 days a year. The outcome of many of these patients is dependent upon several factors, including the availability of appropriately trained individuals as well as properly equipped ambulances and trauma centers.

Trauma is a major contributor to death, disability, and increased medical care costs in Colorado. The number of injury deaths in Colorado has steadily increased, reaching 2,422 deaths in 1996, making trauma the leading cause of death for Coloradans age 1 through 44. Compared to national statistics, death rates for unintentional injury and motor vehicle fatalities are higher in Colorado than the national average. The lifetime earnings lost due to premature deaths from injury in Colorado was estimated at \$1.5 billion in 1997. National experience clearly demonstrates that a coordinated and well-developed EMS and trauma system results in a reduction in preventable deaths and provides a positive impact on patient outcomes.

Colorado Department of Public Health and Environment's Role

The Colorado Department of Public Health and Environment (the Department) shares EMS regulatory responsibilities with the Colorado Medical Board and each of Colorado's 63 counties. Colorado's EMS and trauma system is decentralized. The passing of SB 34 in 1989 and the Trauma Act of 1995 provide incentives for the development of a comprehensive EMS and trauma system for Colorado.

The system is defined by a continuum of services and care consisting of: public awareness of who and how to call for assistance; access to 911 or enhanced 911 telephone service; availability of appropriately trained and equipped response personnel; transportation via ground, air or water ambulance; well equipped and properly staffed healthcare facilities and trauma centers; and medical direction and oversight.

Emergency Medical Services and Prevention Division - Prehospital Care Program

The Department's role for the provision of emergency medical services is limited to: the certification of emergency medical technicians (EMTs); the regulation of institutions providing EMT training; and the administration and management of both the county subsidy and EMS provider grant programs. EMT certification involves: processing applications; administering tests; issuing certificates; and investigating complaints against EMTs. Regulation of the institutions providing EMT training involves: developing curricula; approving courses for content, classroom hours, and documentation; and monitoring quality of instruction. The Prehospital Care Program staff spend considerable time providing support for the development and provision of emergency medical services.

Emergency Medical Services and Prevention Division - Trauma Program

The State Board of Health and the Department are responsible for establishing the trauma system's rules and regulations. In November 1997 standards were adopted for trauma center designation, and a budget and time line were developed based on the 1995 fiscal note that a total of 12 to 17 designation applications would be processed by the Department. In January 1998, however, the Department received 68 applications for designation. Designation of trauma centers began in June 1998, and 29 trauma centers have been designated by the Department since that time. In addition to trauma center designation, the Trauma Program also provides direction and technical assistance to Area Trauma Advisory Councils (ATACs) for the development of: area plans; trauma triage protocols; local plan quality monitoring; and organizational issues critical to local system implementation.

Funding

Funding for the Prehospital Care and Trauma Programs comes primarily from two sources, the EMS Account of the Highway Users Tax Fund (HUTF) and the collection of trauma center designation fees. The EMS Account funds the EMS provider grants program, the county subsidy program, and the direct and indirect expenses of the Prehospital Care Program. The Trauma Program is funded in part by EMS Account funds in addition to fees collected through the trauma center designation process. No General Fund monies are provided for either program at this time. The following table provides an overview of the FY98-99 funding:

Category	HUTF/ EMS Account		Trauma Center Designation Fees
	Prehospital Care Program	Trauma Program	
EMS Provider Grants	\$2,231,393	\$531,583	
County Subsidy	950,817	n/a	
Program Administration	545,224	212,032	
Trauma Center Designation (Administration & Survey Team Costs)	n/a	n/a	\$393,795
Indirect Cost Assessment	176,211	52,634	28,017
TOTAL	\$3,903,645	\$796,249	\$421,812

Table 1: Fiscal Year 1998-1999 Funding.

Challenges

There are two main challenges facing the continued growth of a coordinated EMS and trauma system for Colorado. The first challenge is that further efforts will be required to better coordinate emergency medical services across all 63 counties. The second challenge is that existing resources may limit the trauma program's ability to achieve maximum statewide efficiency. These challenges need to be addressed by the EMS and trauma provider community and the Department, and may require statutory revisions.

The EMS and trauma provider community, in conjunction with the Department, will initiate a planning process for the future direction of the EMS and trauma system in Colorado within the first quarter of 1999. This process will include a thorough review of the system as well as identification of changes needed to carry Colorado into the future.

INTRODUCTION & BACKGROUND

Introduction

Emergency medical services and trauma care are immediate healthcare services needed as a result of injury or sudden illness, particularly when there is a threat to life or long-term functional abilities. These services, provided by prehospital providers and trauma centers, are unique in that they must be immediately available 24 hours a day, 365 days a year. The outcome of many of these patients is dependent upon several factors, including the immediate availability of appropriately trained individuals and properly equipped ambulances and trauma centers. A coordinated EMS and trauma system will offer timely healthcare services for Colorado's residents and visitors regardless of age, socioeconomic status, or special needs.

Injuries are a major cause of death, disability, and increased medical care cost in Colorado. Estimates from state data sources suggest that during 1996 nearly one in ten Coloradans received medical care in a hospital setting for injury (an estimated 300,000 emergency department visits and 30,000 admissions). Additionally, the number of injury deaths in Colorado has steadily increased, reaching 2,422 deaths in 1996. Comparison to national statistics shows that death rates for unintentional injury and motor vehicle fatalities are higher in Colorado than the national average.

The large number of patients, costliness of care, need for ongoing rehabilitation, and loss in productivity are significant contributors to medical and societal costs. Because trauma deaths disproportionately involve younger populations, deaths due to injury significantly contribute to the lifetime earnings lost due to premature death. In 1997 the lifetime earnings lost due to premature deaths from injury in Colorado was estimated at \$1.5 billion.

Studies indicate that 30 to 40% of all trauma deaths occur within one hour of injury, and that 30 to 40% of these deaths are preventable if appropriate care is received in a timely manner. National experience clearly demonstrates that a coordinated and well-developed EMS and trauma system results in a reduction in the number of preventable deaths and a positive impact on patient outcomes.

Background

The Emergency Medical Services Act, passed in 1978, gave limited authority to the Department to assist in the development of a coordinated EMS system. Regulation within the system comes from three sources -- the Department, the Colorado Medical Board, and the 63 Colorado counties. The Department has the responsibility to regulate (certify) Emergency Medical Technicians (EMTs) at three levels -- Basic, Intermediate, and Paramedic. Institutions providing the training for certification are regulated as well. The Colorado Medical Board supervises the physicians who provide medical direction (physician advisors) and defines the scope of practice for prehospital providers (EMTs). All EMTs are required to have a physician advisor in order to practice. The Department has provided six "temporary" physician advisors in the past three years. These individuals help support local EMS providers until the community can locate their own physicians, allowing EMS functions to continue.

PART I

**EMERGENCY MEDICAL SERVICES
AND TRAUMA PROGRAMS FUNDING**

Part I - Emergency Medical Services Prehospital Care and Trauma Programs Funding

Overview of Fiscal Year 1999 Funding

Funding for the Prehospital Care and Trauma Programs comes primarily from two sources, the HUTF EMS Account and the collection of trauma center designation fees. The EMS Account funds the EMS provider grant program, the county subsidy program, and the direct and indirect expenses of the Prehospital Care Program. The Trauma Program is funded in part by EMS Account funds and by fees collected through the trauma center designation process. No General Fund monies are provided to either program at this time. Table 1 outlines the funding for FY98-99.

Category	HUTF/ EMS Account		Trauma Center Designation Fees
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TOTAL	\$3,903,645	\$796,249	\$421,812

Table 1: Fiscal Year 1998-1999 Funding.

Trauma Center Designation

Summary of Legislation

The 1995 Trauma System legislation created a Trauma System Cash Fund and authorized the Board of Health to establish a schedule of fees based on the direct and indirect costs incurred in the designation of trauma centers. The schedule of fees was adopted into rule in January 1998, and collection of fees began in April 1998.

Funding Distribution

An appropriation of \$203,915 was made in FY98 for designation program implementation.

Regulations development and fee levels adoption occurred during the first three quarters of the fiscal year, and designation activities began in the fourth quarter. FY98 expenditures were \$51,243.

The FY99 budget for designation-related costs and utilization of fee revenue is \$421,812: site survey team costs are budgeted at \$262,554; administrative costs, including state observer costs, are budgeted at \$131,241; and the indirect costs assessment is estimated at \$28,017. The largest component of the budget continues to be compensation and travel expenses for the site survey teams. Team participants include trauma surgeons, emergency room physicians, and trauma nurse coordinators. The composition of each team and the number of out-of-state team members is based on standards developed by the American College of Surgeons and can vary depending on the level of designation the facility is seeking. Additionally, a state observer participates in each site survey visit, and the observer's time and travel costs comprise a large component of the administrative budget.

Prehospital Care and Trauma Data Collection

Summary of Legislation

Each licensed facility, clinic, and prehospital provider that offers service or care to trauma patients is required to submit patient information to the Department, as required by the Trauma System Act of 1995. As is true of most states, Colorado had been collecting neither the data from prehospital providers nor the specific clinical information needed on trauma patients from the facilities and clinics. A project was initiated this year to begin development of a prehospital care and trauma data collection system.

Funding Distribution

To supplement our internal resources, the Department has contracted for database development, management, and analysis through a \$150,000 grant awarded to the University of Colorado Health Sciences Center. The expertise and experience of the contractor will assist the Department in evaluating the EMS and trauma system in Colorado. This grant was awarded for a three-year period. Expected outcomes include: a defined minimum prehospital care data set; support for creating a statewide prehospital care data collection system; completion of a pilot project in which prehospital care data from one ATAC is combined with the in-hospital information on trauma patients; an evaluation of data quality, accuracy, and timeliness; and an assessment of the trauma system and compliance with established rules and regulations.

This component of the trauma system does not have sufficient funding to develop, implement, and manage these databases. The original fiscal note anticipated collecting data from a total of 12 to 17 facilities. To date we have received 68 requests for designation. Continuation of these activities is contingent upon finding a funding source.

Area Trauma Advisory Council Development

Summary of Legislation

The Trauma System Act of 1995 mandates the creation of Area Trauma Advisory Councils, which have the responsibility to develop plans for the implementation of a local area trauma system. During FY98, 16 ATACs were established through cooperation of the state's 63 sets of county commissioners. (See Appendix B.4 and Appendix C.) Each ATAC was to conduct a needs assessment and produce a plan for system implementation by July of 1998. In subsequent years, the ATACs are to implement the plans and monitor the efficacy of the plans.

Funding Distribution

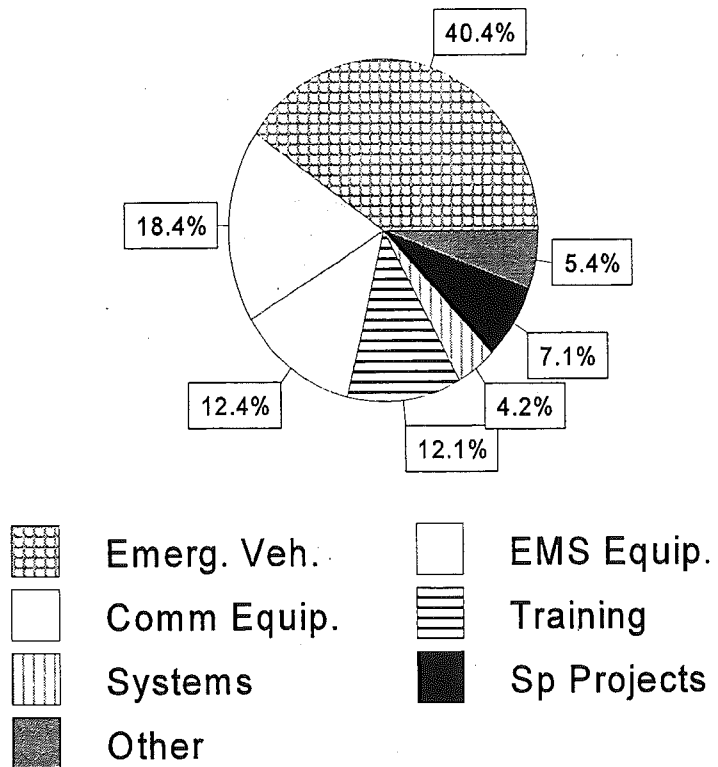
An FY97-98 Decision Item provided ATAC development funds in the amount of \$522,841 from the EMS Account. The funding is distributed based on the number of counties in the ATAC. Each ATAC is required to submit an annual application that includes information about how they expect to utilize the funds to complete the ATAC trauma plan and then implement it. The ATACs will receive funds from this source through FY99-2000. Continued funding for these activities from this source is not expected beyond this time frame.

EMS Provider Grants Program

Summary of Legislation

A minimum of 60% of the annual appropriation from the EMS Account must be used for the upgrade of emergency medical services throughout the state through a grants program. Of that 60%, a minimum of \$150,000 shall be used for the training of EMTs and \$100,000 shall be reserved for emergencies. The first priority for the grant monies is updating underdeveloped EMS systems and replacing aged equipment. Additional grant monies will be distributed based on substantiated need.

EMS Grant Funding 1998-1999



Funding Distribution

The legislature appropriated \$2,762,976 for FY99. This figure includes the allocation of \$150,000 for training and \$100,000 for the emergency fund. The grants appropriation also includes the funding for ATAC development.

A total of 153 applications were received requesting \$3.7 million in funding. Total project costs, including matching funds, amounted to \$9 million. Emergency vehicles, the most requested and expensive equipment, topped the list of funded items. A complete list of the specific grant awards can be found in Appendix A. Table 2 shows the anticipated distribution of funds.

EMS Grant Funding 1998-1999		
Emergency Vehicles	\$ 850,071	40.4%
EMS Equipment	\$ 386,213	18.4%
Communications Equipment and Systems	\$ 262,379	12.4%
Training	\$ 254,048	12.1%
Special Projects	\$ 149,465	7.1%
Other (EMS Research & Development)	\$ 114,690	5.4%
Systems Development Grants	\$ 87,362	4.2%
Total	\$2,104,228	100.0%

Table 2: Anticipated grant funding for Fiscal Year 1998-99

Emergency Fund

The Emergency Fund was established to provide immediate financial assistance to EMS provider agencies that experienced unexpected problems which caused the degradation or potential elimination of EMS. This fund is used to solve immediate problems where the regular grant funding process was not practical. As of December 15, 1998, there have been no emergency grants awarded for FY98-99.

County Subsidy Program

Summary of Legislation

A minimum of 20% of the annual appropriation from the EMS Account is assigned to provide financial assistance to counties. The funding is intended for the development and maintenance of emergency medical service provisions, and it is divided equally among the counties that qualify. A

county which does not qualify cannot receive funding until the following year, and only under the condition that the identified problem has been corrected. To receive a subsidy each county must:

- provide evidence that it is enforcing the provisions of Part 3 of the EMS Act. This part establishes minimum requirements for licensing and inspecting ambulances.
- require all licensed ambulance services within the county to participate in the statewide data collection program administered by the Emergency Medical Services and Prevention (EMSP) Division.
- provide a report by October 1 of each year showing funds expenditure, ambulance licensure and inspection information, and county EMS plans updates. The report must be reviewed and approved by the EMS Advisory Council in order to receive funding.

Funding Distribution

Of the 63 Colorado counties, 61 submitted plans for county subsidy funding which were approved. The total appropriation for the county subsidy is \$950,817, with \$15,092 distributed to each of the 61 counties.

Statewide Funding Projects

Summary of Legislation

Legislation allows the EMSP Division to establish statewide projects that improve EMS services and impact all EMS providers in Colorado. The legislation also requires that the EMSP Division identify these projects in the annual report. The following is a list of projects implemented in FY99:

Funding Distribution - Statewide Projects for Fiscal Year 1998-1999

- Pediatric Equipment Coordination Loaner Program - \$8,800

This project funds the second year of the coordination of the Pediatric Equipment Grant. The EMSP Division has committed to the coordination and distribution of a statewide pediatric training equipment loaner program. The program addresses the scarcity of this expensive equipment for both rural and urban training programs that might not be able to purchase it.

- Retention and Recruitment - \$23,900

This project funds the second stage of the "Needs Assessment for Retention and Recruitment of EMS Volunteers in the Rural and Frontier Areas of Colorado". The next phase of this project will be to provide technical assistance and funding to agencies.

- Management Training Courses - \$25,000

This project funds high-quality management training for EMS agency administrators to assist EMS system development. The contract includes the delivery of basic management courses and advanced courses concerning issues current to EMS system development in Colorado.

- Instructor Development - \$35,000

This project funds both parts of the fourth phase of instructor development. Part one subsidizes access to instructor training courses for local training center staff who teach EMS providers. Part two funds additional curricula development for instructor training courses.

- Public/Private Partnership for Research in EMS - \$5,985

This is the second year of funding for a research project being done by the University of Colorado Health Sciences Center. Throughout the United States EMS agencies carry numerous medications stored under a variety of conditions. Extreme temperatures, humidity, light, and radiation affect the stability and potency of these medications. Medications carried on ambulances are subject to these environmental extremes and have shown chemical degradation caused by long-term exposure. No data, however, exist about the biological viability of these drugs. One such medication, epinephrine, is a critically important, life-saving drug. Epinephrine is administered to approximately 13,000 people annually in Colorado for such conditions as severe asthma, cardiac arrest, and anaphylaxis. Although epinephrine is known to lose its chemical potency with extreme temperature exposures, there was no data addressing whether biologically important drug degradation occurs in ambulances in Colorado. Preliminary results of this research show that both chemical and biological degradation does occur. This research will have international implications regarding the storage and shelf life of this drug.

- Digital Written Certification Feasibility Study - \$25,000

This project funds a feasibility study on the use of the Internet to provide the public with on-line certification testing and information regarding certified EMTs. This project will seek to: increase access by rural EMS providers to the certification process; decrease the amount of time for applicants to receive results; allow employers of EMTs immediate information on certification status; and reduce program staff involvement in certification activities.

- State EMS Planning - \$25,000

This project will initiate efforts to develop a statewide EMS plan. Based on the National Highway Traffic Safety Association (NHTSA) reassessment and the 1992 legislative audit, periodic statewide planning is a priority.

Funding Distribution - Statewide Projects Proposed for Fiscal Year 1999-2000

The following is a list of statewide projects that have been reviewed by the EMS Advisory Council and recommended for funding based on fund availability:

- Management Training Courses - \$25,000

This project will fund high-quality management training for EMS agency administrators to assist EMS system development. The contract will include the delivery of basic management courses and advanced courses concerning issues current to EMS system development in Colorado.

- Instructor Development - \$35,000

This project will subsidize access to instructor training courses for local training center staff who teach EMS providers. A specific objective will be to implement the new EMT-Intermediate and EMT-Paramedic national curriculum at appropriate training centers.

- Digital Certification Pilot Study - \$25,000

This project will fund the design and evaluate the use of the Internet to provide the public with on-line certification testing and information regarding certified EMTs.

- State EMS Planning - \$25,000

This project will fund efforts to write a statewide EMS plan.

- CPR Directive Continuing Education - \$20,000

This project will fund the development of training materials used by local EMS agencies to update their providers on changes to the CPR Directive Program, as recommended by the Colorado Board of Health.

PART II

**EVALUATION OF THE COMPONENTS
OF THE TRAUMA SYSTEM**

Part II - Evaluation of the Components of the Trauma System

The components of the trauma system were defined in statute as: minimum service standards in rendering patient care; trauma transport protocols; Area Trauma Advisory Councils (ATACs); designation of facilities; a communication system; a statewide trauma registry; public information, education, and injury prevention; continuing quality improvement; and trauma care for pediatric patients.

All rules adopted over the past two years have taken into consideration recognized national standards for trauma care, such as those defined by the American College of Surgeons Committee on Trauma and guidelines for trauma systems adopted by the American College of Emergency Physicians.

Minimum Service Standards

The Department established minimum service standards of trauma patient care for prehospital, hospital, and other healthcare facilities. Prehospital standards were adopted for: minimum ambulance and first response unit staffing levels; response and scene times; and triage and transport destination algorithms. Similarly, requirements for hospitals and the clinics that submitted applications for trauma center designation were adopted for: staffing; staff experience or training; equipment; and response times. These requirements were defined in rule for Level I through Level IV trauma centers. Level I and Level II trauma centers provide the comprehensive clinical services required by patients with major injuries. Level III and Level IV trauma centers provide the community-based facilities which triage, stabilize, and transfer those patients needing specialty services. Injury prevention, education, and research are requirements of the higher-level trauma centers.

Trauma Transport Protocols

Trauma transport protocols are a fundamental component of any trauma system, providing disposition direction to prehospital providers based on the patient's needs and injuries. Due to local community and geographic variances in the state, these protocols must be developed at the local level using a minimum standard defined by the state. The minimum standard has been adopted in rule, and each ATAC is currently developing protocols utilizing this state minimum standard.

Area Trauma Advisory Councils

Sixteen ATACs were established, and each submitted a plan for local trauma system implementation. As of December 1998 these plans were reviewed by the State Trauma Advisory Council. Five plans are being returned to the ATACs for additional clarifying information. Each ATAC has begun to implement components of these plans. Implementation tasks for the next two years include completion of trauma transport protocols and development of monitoring systems to assess area trauma plans. The Department is able to provide limited technical assistance to the ATACs.

Designation of Facilities

A budget and time line were developed based on the 1995 fiscal note that the Department would be processing a total of 12 to 17 trauma center designation applications. In January 1998 the Department received 68 designation applications. The Department began designation in June 1998 and has designated 29 trauma centers since that time. Appendices B.1-4 and D provide a list and maps depicting the geographic distribution of current designated trauma centers, including the 16 trauma centers designated prior to 1995 by the Colorado Trauma Institute.

Communications

The Department requires that each area trauma plan address communications to ensure public access to trauma services. The plans must address: public access to the 911 system or a local equivalent; provisions for ambulance service dispatch; and communications between ambulance and ambulance, ambulance and facility, and trauma center and non-designated facility. Finally, the plans should identify the level of commitment of the subject counties and cities to develop and implement a statewide communications system. The ATACs' communication system needs assessments and implementation strategies are being completed with the support of a liaison from the Department of Telecommunications Services.

EMS and Trauma Registry

The Department is required to establish and oversee a statewide trauma registry. Each licensed facility, clinic, or prehospital provider that provides service or care to trauma patients is required to submit patient information to the Department. Current rules define the information required from hospitals and clinics. However, a statewide system for the collection of prehospital care information does not exist. Prehospital care data provide essential information concerning the injury event, EMS response time, and prehospital care administered. This information is necessary for understanding EMS and trauma care in Colorado. A special grant provides funds for a pilot project linking prehospital care data from one region of the state with inpatient information currently in the trauma registry. This combined data set will be used to evaluate the trauma system's effectiveness in providing appropriate and timely trauma care.

Public Information, Education, and Injury Prevention

Some ATACs plan to implement public information, education, and injury prevention programs utilizing existing local funding or through coordination of activities. Two ATACs have joined with local health departments to obtain preventive block grants for FY99. The Department's efforts to coordinate statewide injury prevention activities are ongoing.

Quality Improvement

Continuing quality improvement system models are included in rule for the Department, trauma centers, and ATACs. Trauma registry data, death records, and the Colorado Hospital Association database are used by the Department to evaluate the statewide trauma system. Each trauma center is required to evaluate their trauma service clinically and systemically using their facility-based trauma registry. Although referred to in rule, the ATAC assessment model is not completely defined. Confidentiality has yet to be secured for materials used and specific findings of ATAC assessments.

Trauma Care for Pediatric Patients

Specific requirements for facilities providing pediatric trauma care ensure a minimum level of care for pediatric trauma patients, and should result in improved pediatric trauma care. The need for a specific level of designation for pediatric patients was identified, and legislative action is required to ensure its enforcement. Facilities that care for pediatric patients and a Regional Pediatric Trauma Center were defined in rule as necessary components of the Colorado trauma system.

PART III

**FUTURE CHALLENGES FOR COLORADO'S
EMERGENCY MEDICAL SERVICES
AND TRAUMA SYSTEM**

Part III Future Challenges for Colorado's Emergency Medical Services and Trauma System

System Development

The Department has continued to improve the EMS and trauma system since the inception of the EMS Act 20 years ago. Assessments by NHTSA and the Legislative Auditor's Office of the General Assembly have identified issues for improved EMS and trauma system coordination. The Department, together with local EMS and trauma providers, will address these issues.

Trauma Program Funding

As previously stated, the Trauma Program is currently funded in part by the EMS Account and by fees collected through the trauma center designation process. The Department continues to analyze resource requirements and funding opportunities for the Trauma Program.

EMS and Trauma Communications

Based on the 1997 EMS reassessment from NHTSA, there is need for an improved, reliable communications system for EMS. Needs assessments and implementation strategies are being developed at the local level with the Department's support. Colorado's emergency medical services continue to work on improving a coordinated system for statewide EMS and trauma communications.

Merger of EMS and Trauma Advisory Councils

The Trauma Act of 1995 requires the EMS and Trauma Advisory Councils to merge. The Department is investigating statutory modifications reflecting membership and responsibilities that may be necessary prior to this merger.

ADVISORY COUNCILS AND GROUPS

**COLORADO STATE ADVISORY COUNCIL ON EMERGENCY MEDICAL SERVICES
December 1998**

APPOINTED MEMBER	CITY	REPRESENTING
JERRY RHODES	DENVER	FIRE CHIEFS INVOLVED IN EMS
KARL GILLS	GREELEY	HOSPITAL ADMINISTRATORS
DR. ARTHUR KANOWITZ	WHEAT RIDGE	MEDICAL DOCTORS INVOLVED IN EMS
PHYLLIS GERTGE	FORT MORGAN	PLANNING AND MANAGEMENT REGION 1
MARK JOHNSON	GREELEY	PLANNING AND MANAGEMENT REGION 2
DAVID SULLIVAN	DENVER	PLANNING AND MANAGEMENT REGION 3
BILL MAYFIELD	COLORADO SPRINGS	PLANNING AND MANAGEMENT REGION 4 REGISTERED PROFESSIONAL NURSES INVOLVED IN EMS
MARK MORRISON	LIMON	PLANNING AND MANAGEMENT REGION 5
RICK HARTLEY	SPRINGFIELD	PLANNING AND MANAGEMENT REGION 6
D. RANDY KUYKENDALL	PUEBLO	PLANNING AND MANAGEMENT REGION 7
RODNEY KING	MANASSA	PLANNING AND MANAGEMENT REGION 8
DAN NOONAN	DURANGO	PLANNING AND MANAGEMENT REGION 9 RESCUE UNITS
MARK YOUNG	MONTROSE	PLANNING AND MANAGEMENT REGION 10
F. CHANNING CLYMER	GRAND JUNCTION	PLANNING AND MANAGEMENT REGION 11 AMBULANCE SERVICES WITH FULL-TIME PAID PERSONNEL
ROBERTA VETTER	YAMPA	PLANNING AND MANAGEMENT REGION 12 VOLUNTEER AMBULANCE SERVICES
WILLIAM BURNS	TEXAS CREEK	PLANNING AND MANAGEMENT REGION 13
LON LOWRY	WALSENBURG	PLANNING AND MANAGEMENT REGION 14
EX OFFICIO MEMBER	CITY	REPRESENTING
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MIKE REDDY	GOLDEN	OFFICE OF EMERGENCY MANAGEMENT
GEORGE ATENCIO II	DENVER	OFFICE OF TRANSPORTATION SAFETY
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MEDICAL DIRECTOR	CITY	REPRESENTING
DR. BENJAMIN HONIGMAN	DENVER	COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
COMMITTEE		CHAIRPERSON
COMMUNICATIONS/TRANSPORTATION		MARK YOUNG
DISASTER/MULTI CASUALTY		MIKE REDDY
PERSONNEL/PUBLIC INFORMATION/STAFFING		MARK JOHNSON
PUBLIC INFORMATION/TRAUMA EDUCATION/RESOURCES		BILL MAYFIELD
REGULATION/TRAUMA/FACILITIES		DAVID SULLIVAN
RESOURCE MANAGEMENT/EVALUATION		JERRY RHODES

ADVISORY COUNCILS AND GROUPS

COLORADO STATE TRAUMA ADVISORY COUNCIL
December 1998

APPOINTED MEMBER	CITY	REPRESENTING
DAN ELLISON	STEAMBOAT SPRINGS	COUNTY GOVERNMENT
DR. F. KEITH BATTAN	DENVER	EMERGENCY MEDICAL PHYSICIANS INVOLVED IN PREHOSPITAL CARE EMERGENCY MEDICAL PHYSICIANS BOARD- CERTIFIED IN PEDIATRICS
DR. JACK DILLON	COLORADO SPRINGS	EMERGENCY MEDICAL PHYSICIANS INVOLVED IN PREHOSPITAL CARE
DR. FRANCIS RALEY	GRAND JUNCTION	EMERGENCY MEDICAL PHYSICIANS INVOLVED IN PREHOSPITAL CARE
VACANT		HOSPITAL ADMINISTRATORS - RURAL
PATRICIA TRITT	ENGLEWOOD	HOSPITAL ADMINISTRATORS - URBAN
JULIE COOLEY	DURANGO	THE PUBLIC
DR. ERNEST MOORE	DENVER	SURGEONS INVOLVED IN TRAUMA CARE SURGEONS PROVIDING TRAUMA CARE AT A LEVEL I FACILITY
DR. JOHN NICHOLS	DENVER	SURGEONS INVOLVED IN TRAUMA CARE
DOROTHY CRUMP	PUEBLO	TRAUMA NURSE COORDINATORS
LORI MCDONALD	FORT COLLINS	TRAUMA NURSES
EX OFFICIO MEMBER	CITY	REPRESENTING
GAIL FINLEY RAREY	DENVER	COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
LARRY BROOKS	DENVER	DIVISION OF TELECOMMUNICATIONS
DAVID SULLIVAN	DENVER	EMS COUNCIL
DR. AMY MARTIN	DENVER	STATE CORONER'S ASSOCIATION
MEDICAL DIRECTOR	CITY	REPRESENTING
DR. BENJAMIN HONIGMAN	DENVER	COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
COMMITTEE		CHAIRPERSON
FACILITIES		DR. ERNEST MOORE
DATA		LORI MCDONALD
ATAC		PATRICIA TRITT

ADVISORY COUNCILS AND GROUPS

**JOINT COUNCIL OF THE
 COLORADO STATE ADVISORY COUNCIL ON EMERGENCY MEDICAL SERVICES
 AND THE COLORADO STATE TRAUMA ADVISORY COUNCIL**

December 1998

APPOINTED MEMBER	CITY	REPRESENTING
DR. ARTHUR KANOWITZ	WHEAT RIDGE	EMS COUNCIL
DAVID SULLIVAN	DENVER	EMS COUNCIL
ROBERTA VETTER	YAMPA	EMS COUNCIL
DR. ERNEST MOORE	DENVER	TRAUMA COUNCIL
DR. JACK DILLON	COLORADO SPRINGS	TRAUMA COUNCIL
JULIE COOLEY	DURANGO	TRAUMA COUNCIL
EX OFFICIO MEMBER	CITY	REPRESENTING
MICHAEL ARMACOST	DENVER	EMS COUNCIL
GAIL FINLEY RAREY	DENVER	TRAUMA COUNCIL
MEDICAL DIRECTOR	CITY	REPRESENTING
DR. BENJAMIN HONIGMAN	DENVER	EMS COUNCIL TRAUMA COUNCIL

ADVISORY COUNCILS AND GROUPS

MEDICAL ADVISORY GROUP
December 1998

MEDICAL ADVISOR	CITY
JEFFERY ANDERSON	LAMAR
DR. DAVID CIONNI	STEAMBOAT SPRINGS
DR. JOHN COLLINS	FORT COLLINS
DR. EUGENE EBY	AURORA
DR. RANDALL RODAK	SALIDA
DR. MARILYN GIFFORD	COLORADO SPRINGS
DR. PETER PONS	DENVER
TIMOTHY ZIMMERMAN	DENVER

APPENDICES

FISCAL YEAR 1998-1999 EMERGENCY MEDICAL SERVICES GRANT AWARDS

APPLICANT	COUNTY	FUNDS AWARDED	TYPE OF AWARD
Gilpin Co Amb.	Gilpin	35,000	Emerg. Veh
Colo Sierra Vol FD	Gilpin	19,742	EMS Equip
Grand County	Grand	78,150	Emerg. Veh.
Grand Co. S&R	Grand	2,517	EMS Equip
Gunnison County	Gunnison	8,190	Disaster Trailer
Crested Butte FPD	Gunnison	37,768	Emerg. Veh
Lake City Area Med. Ctr.	Hinsdale	4,283	EMS Equip
Gardner Ambulance	Huerfano	1,887	EMS Equip
Huerfano Ambulance	Huerfano	1,708	EMS Equip
Jeff. CO Board of Co Comm	Jefferson	82,032	Communications
Kit Carson Amb.	Kit Carson	21,272	EMS Equip
LaPlata-Upper Pine	LaPlata	62,649	Emerg. Veh
Livermore FPD	Larimer	3,200	Train., Comm
Front Range CC	Larimer	5,240	Training
St. Mary's Hosp.	Mesa	12,489	Training
Grand Junction FD	Mesa	16,266	EMS Equip
Lands End First Respons Team	Mesa	9,600	Med Equip, Comm
Lower Valley FPD	Mesa	1,283	EMS Equip
Volunteer EMS of Gateway	Mesa	3,319	EMS Equip
Cortez FPD	Montezuma	15,000	Emerg. Veh
Montez.-Pleasant View FD	Montezuma	1,990	EMS Equip
Ambulance Serv of Montrose	Montrose	25,798	Emerg. Veh
Paradox FPD	Montrose	14,400	Emerg. Veh.
Morgan Comm Coll	Morgan	10,900	Training
Rocky Ford Emerg	Otero	40,000	Emerg Veh
Ouray County	Ouray	25,798	Emerg. Veh
Jefferson-Como FPD	Park	4,185	Training
Platte Canyon Rescue	Park	6,811	EMS Equip, Train
Granda Bristol QRT	Prowers	14,763	EMS Equip, Comm
Holly Amb Serv	Prowers	34,805	Emerg Veh
Lamar Amb Serv	Prowers	39,587	Emerg Veh
Beulah Vol First Aid	Pueblo	15,338	Communications
SWEMS	Regional	28,737	Train, EMS Equip
High Plains Regional Council	Regional	24,264	EMS Equip
Rangley Dist Hosp	Rio Blanco	12,066	Training
West Routt Fire	Routt	3,945	EMS Equip
Steamboat Springs Rural FD	Routt	4,973	EMS Equip
NW Comm College	Routt	7,720	Training
Routt County S&R	Routt	10,474	Emerg. Veh.
Silverton San Juan Amb	San Juan	2,750	EMS Equip
Silverton VFD	San Juan	12,008	Emerg. Veh, EMS Eq

APPENDIX A

FISCAL YEAR 1998-1999 EMERGENCY MEDICAL SERVICES GRANT AWARDS

APPLICANT	COUNTY	FUNDS AWARDED	TYPE OF AWARD
Strausburg Vol FD	Adams	8,066	EMS Equip
Trinidad St. JC-Alamosa	Alamosa	42,975	Training
Alamosa County Amb.	Alamosa	67,902	Emerg. Veh
Sheridan FD	Arapahoe	34,805	Emerg. Veh
Cunningham FPD	Arapahoe	9,250	EMS Equip
Littleton FD	Arapahoe	6,050	EMS Equip, Train
Columbia Health One	Arapahoe	18,000	Training
Deer Trail FPD	Arapahoe	31,080	Emerg. Veh
Colo State Fire Chief's Assoc	Arapahoe	63,000	Triage Proj.
City of Glendale	Arapahoe	4,550	EMS Equip
Skyline FPD	Arapahoe	1,967	EMS Equip
Upper San Juan Hosp Dist	Archuleta	35,000	Emerg. Veh
Springfield EMS FF Assoc.	Baca	46,974	Emerg Veh, Train
Walsh Amb Serv	Baca	35,905	Emerg Veh
Springfield EMS Assoc.	Baca	10,000	Training
Springfield EMS-Pritchett QRT	Baca	7,575	EMS Equip
Bent County Amb.	Bent	34,409	Emerg Veh
Longmont Emerg Unit	Boulder	2,400	Train, Comm
Lefthand FPD	Boulder	1,263	EMS Equip, Comm
Longmont United Hosp	Boulder	475	Training
Sugar Loaf FPD	Boulder	450	EMS Equip
Town of Jamestown	Boulder	1,268	EMS Equip
Big Elk Meadows Vol FD	Boulder	2,136	EMS Equip
Alpine Rescue Team	Clear Creek	3,225	Training
Conejos County EMS	Conejos	47,000	Emerg. Veh
Costilla County Amb.	Costilla	6,500	EMS Equip
Crowley County	Crowley	5,000	EMS Equip
W. Custer Co Hosp Dist	Custer	14,447	EMS Equip, Train
The Children's Hospital EMSAC	Denver	5,000	Injury Prev.
The Children's Hospital	Denver	15,000	Training
Douglas County	Denver	32,500	Injury Prev.
Palmer Lake VFD	Douglas	79,547	Communications
Donald Wescott FD	El Paso	1,350	EMS Equip
Hanover VFD	El Paso	19,000	Emerg Veh, Comm
Calhan Fire	El Paso	2,731	EMS Equip, Comm
Elizabeth FD	El Paso	8,000	EMS Equip
Rattlesnake FPD	Elbert	37,162	Emerg Veh
Florence VFD	Elbert	7,000	Emerg Veh
Silt VFD	Fremont	21,299	Emerg Veh, EMS Eq
Central City Vol FD	Garfield	56,790	Emerg. Veh, Training
	Gilpin	36,827	Emerg. Veh

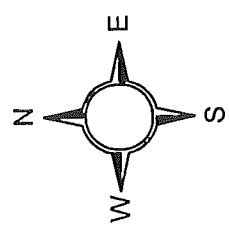
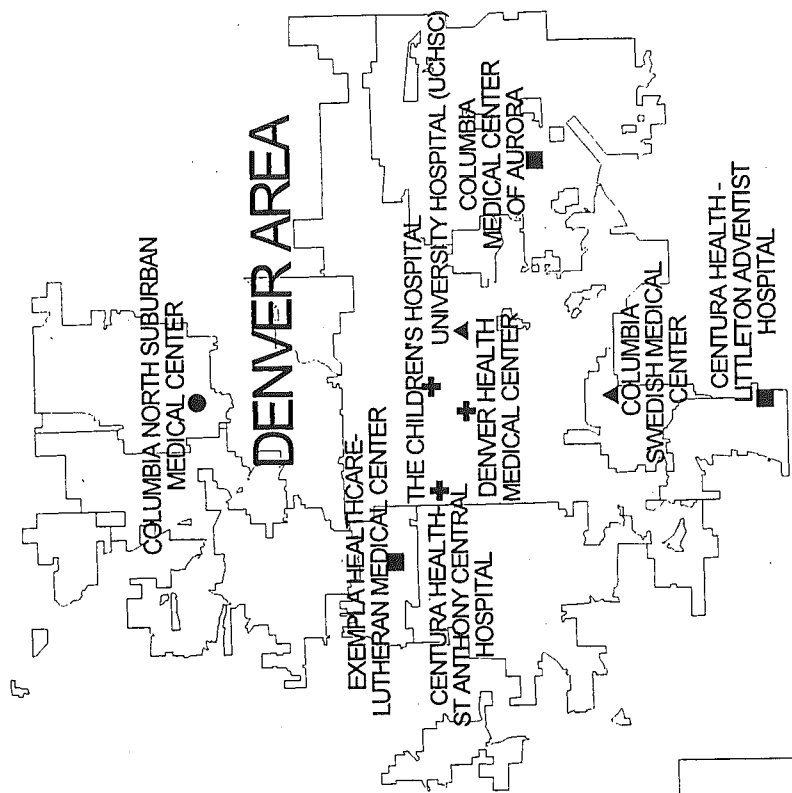
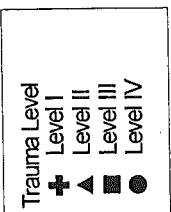
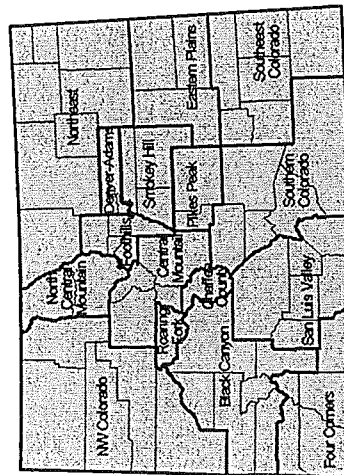
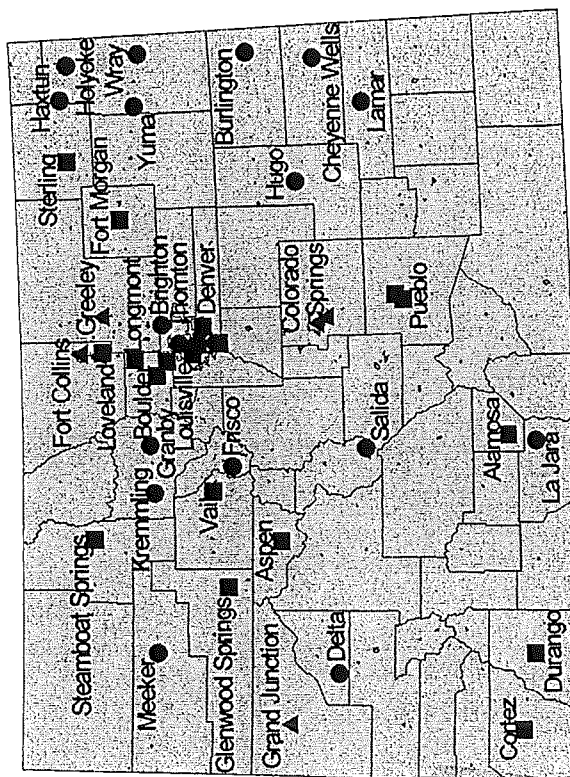
APPENDIX A

FISCAL YEAR 1998-1999 EMERGENCY MEDICAL SERVICES GRANT AWARDS

APPLICANT	COUNTY	FUNDS AWARDED	TYPE OF AWARD
Norwood/Redvale FPD	San Miguel	11,730	EMS Equip
San Miguel County	San Miguel	9,175	Training
Sedgwick County Amb.	Sedgwick	3,100	EMS Equip
Fire Safety Educ.	Statewide	6,000	Injury Prev.
Red White & Blue FD	Summit	1,750	EMS Equip
NE Teller FD	Teller	3,000	EMS Equip
SW Teller Co. EMS	Teller	1,500	EMS Equip
Mountain Comm. FPD	Teller	1,060	EMS Equip
Florissant Fire	Teller	8,482	Comm Train
Four Mile EMS	Teller	41,780	EMS Equip
Woodland Park Amb.	Teller	32,500	Emerg Veh
Washington Co Amb.	Washington	62,160	Emerg. Veh
Evans FD	Weld	1,750	EMS Equip
Union Colony Fire/Res. Author	Weld	20,348	EMS Equip
Ault FPD	Weld	3,850	Training
Weld County Amb	Weld	21,500	EMS Equip
Yuma EMS-Wray FD	Yuma	5,000	EMS Equip
Yuma EMS-Yuma Amb	Yuma	5,661	EMS Equip
Yuma EMS-South Y-W	Yuma	2,750	EMS Equip
SWEMS	Regional	21,790	EMS Systems Dev.
High Plains Regional Council	Regional	40,572	EMS Systems Dev.
San Luis Valley Med. Ctr.	Regional	15,000	EMS Systems Dev.
Springfield EMS Council	Regional	5,000	EMS Systems Dev.
Western Regional Council	Regional	5,000	EMS Systems Dev.

APPENDIX A

Colorado Designated Trauma Centers



APPENDIX B.1

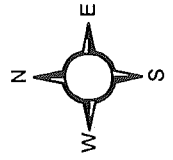
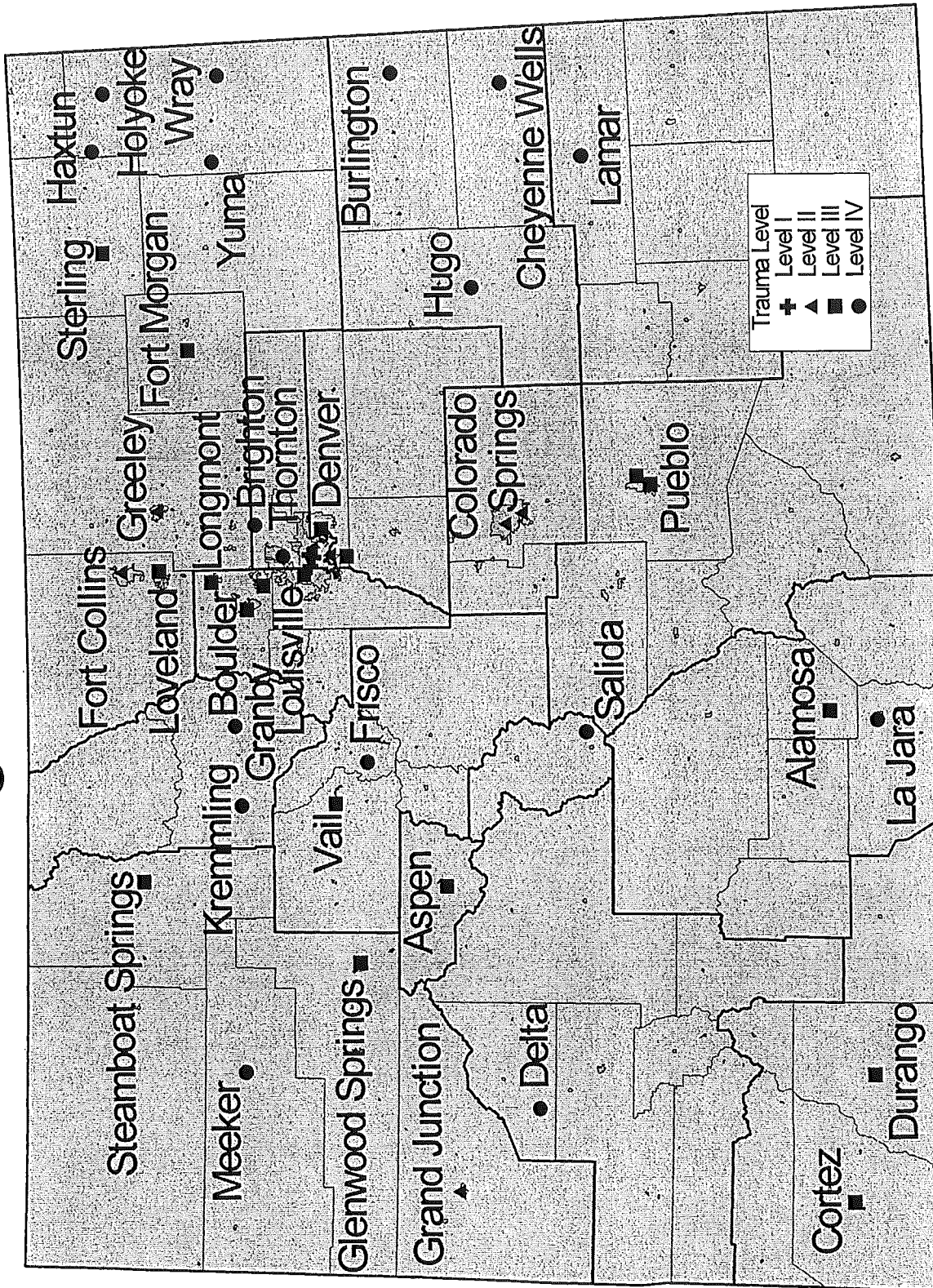
Area Trauma Advisory Councils



Center for Health and Environmental Information and Statistics
 GIS Analyst: Troy A. Wineiland
 map compiled 12.28.98

Colorado Department
 of Public Health
 and Environment

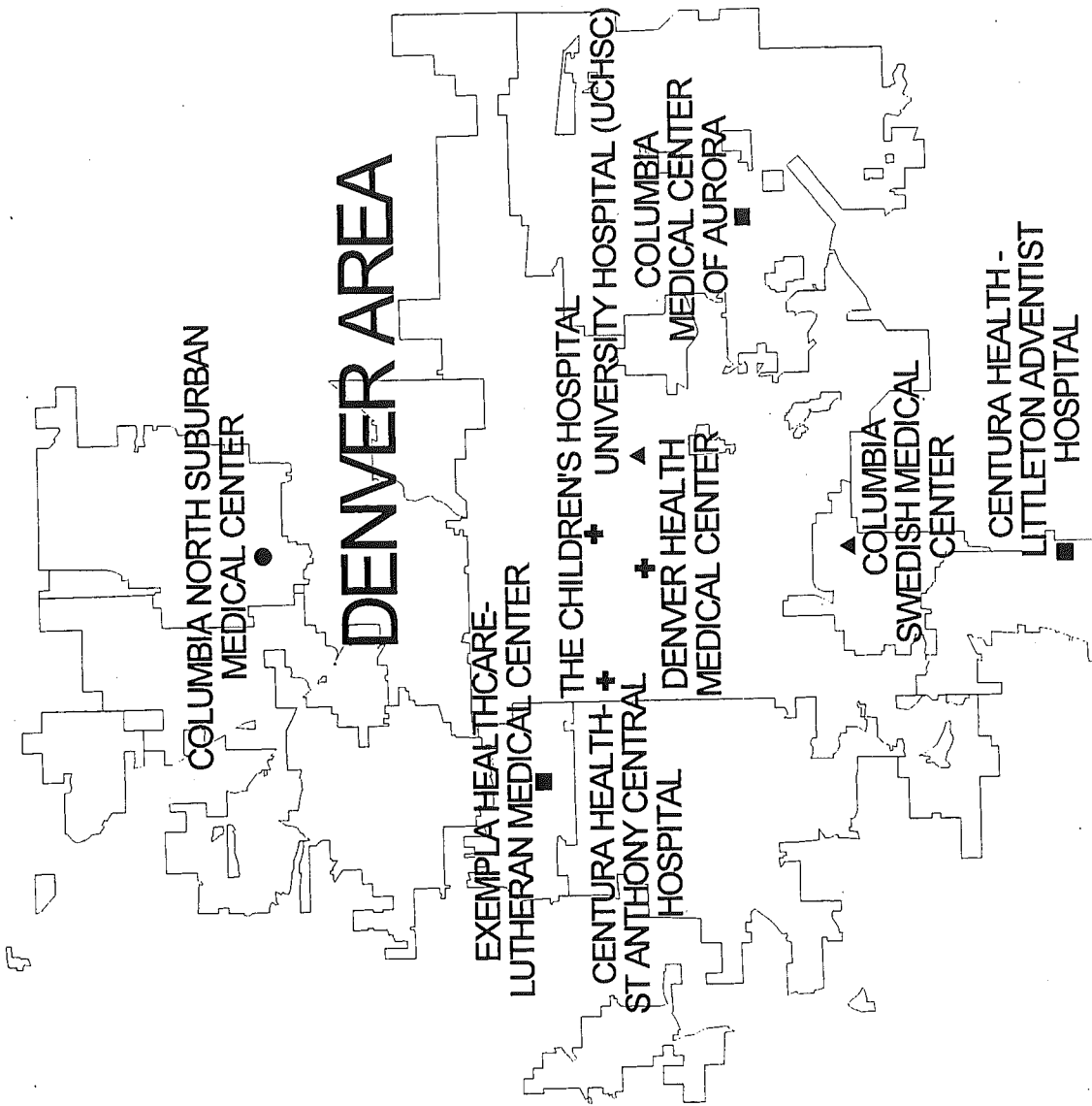
Colorado Designated Trauma Centers



Center for Health and Environmental Information and Statistics
 GIS Analyst: Troy A. Wineland
 map compiled 12.28.98

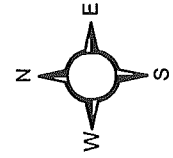


Denver Metro Area Designated Trauma Centers



Trauma Level

- + Level I
- ▲ Level II
- Level III
- Level IV



APPENDIX B.3



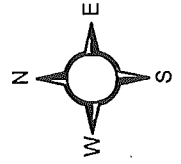
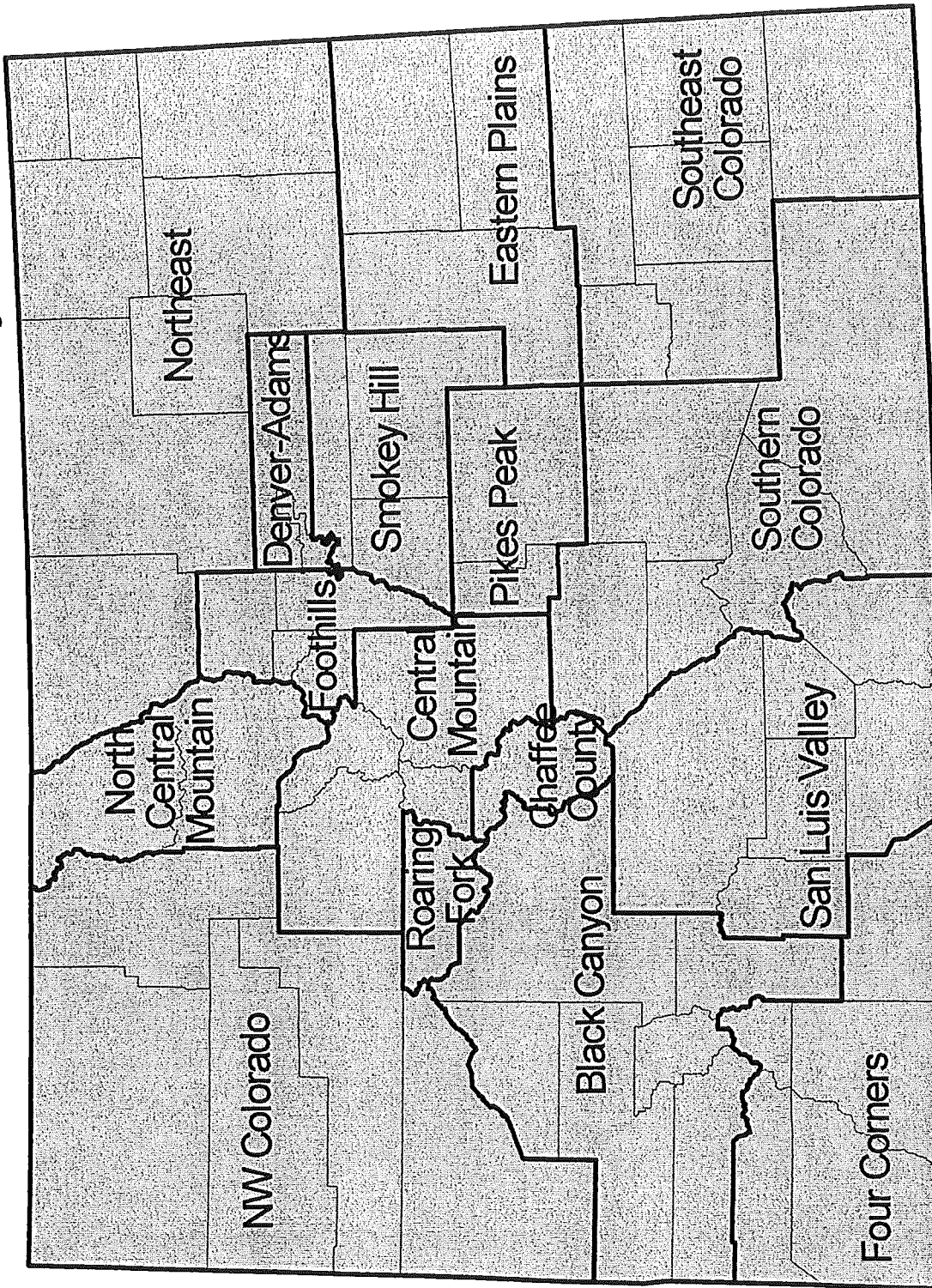
Colorado Department
of Public Health
and Environment

Center for Health and Environmental Information and Statistics

GIS Analyst: Troy A. Winegard

map compiled 12.29.98

Colorado Area Trauma Advisory Councils



APPENDIX B.4



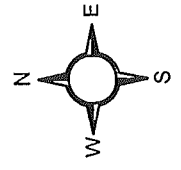
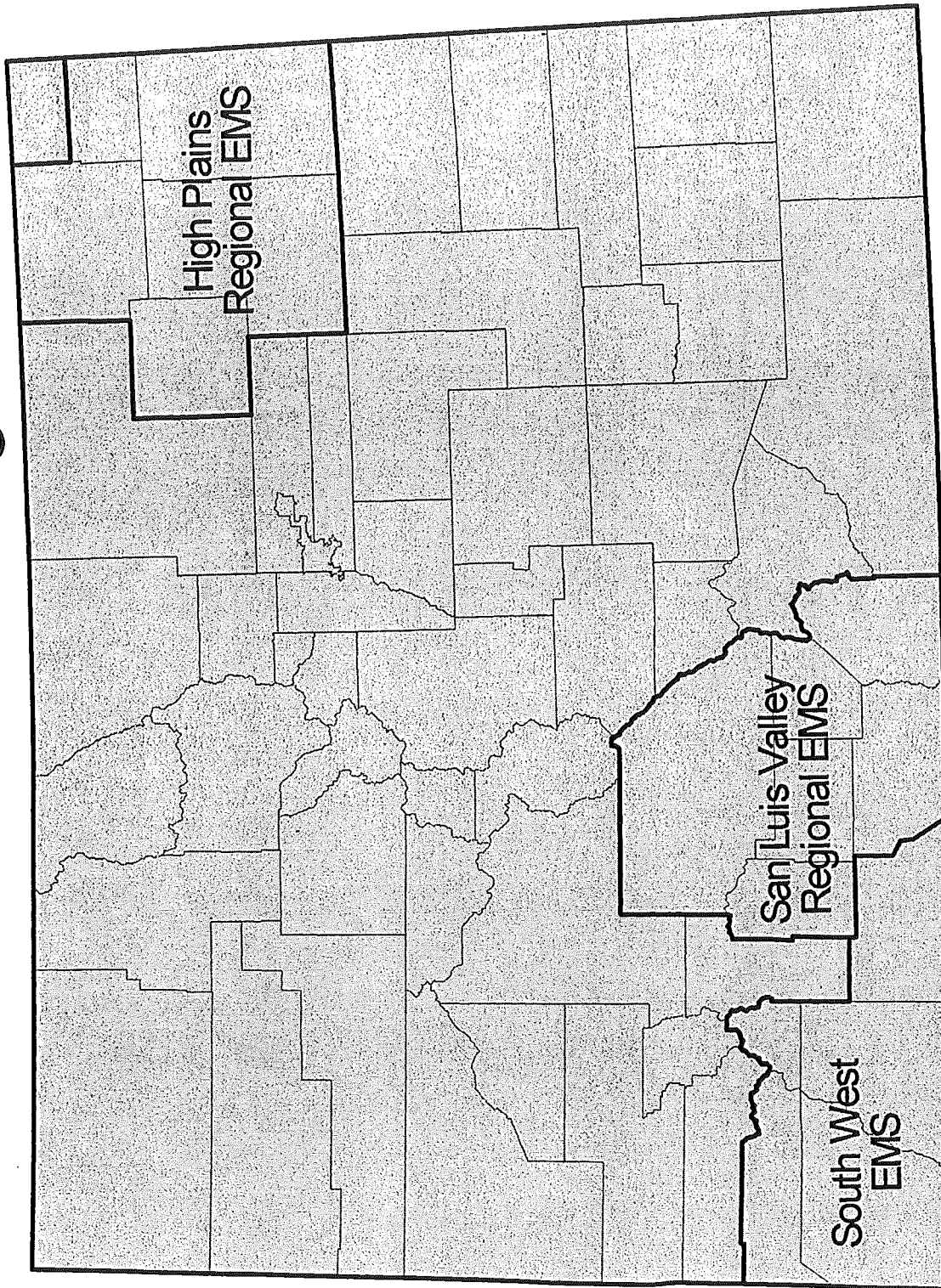
Colorado Department
of Public Health
and Environment

Center for Health and Environmental Information and Statistics

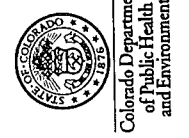
GIS Analyst: Troy A. Wineford

map compiled 12.28.98

Colorado EMS Regions



Center for Health and Environmental Information and Statistics
GIS Analyst: Troy A. Wineland
map compiled 12.28.98



AREA TRAUMA ADVISORY COUNCILS

December 1998

AREA TRAUMA ADVISORY COUNCIL	CHAIRPERSON
BLACK CANYON	LYNDA WALLIN
CENTRAL MOUNTAIN	DR. JOHN WOODLAND
CHAFFEE COUNTY	RICK SWEDHIN
DENVER-ADAMS	DR. JON BURCH
EASTERN PLAINS	SUSAN DORMAN
FOOTHILLS	DR. ART KANOWITZ
FOUR CORNERS	DR. DAVID DEEVER
NORTH CENTRAL MOUNTAIN	DR. LINDA UNDERBRINK
NORTHEAST AREA	DOUGLAS SMITH
NORTHWEST COLORADO	RANDY PHELPS
PIKES PEAK	GORDON HILDEBRANT
ROARING FORK VALLEY	DR. WILLIAM RODMAN
SAN LUIS VALLEY	BILL BINNIAN
SMOKY HILL	PHYLLIS URIBE
SOUTHEAST COLORADO	JASON ABNEY
SOUTHERN COLORADO	DEE CRUMP

APPENDIX C

COLORADO DESIGNATED TRAUMA CENTERS
December 1998

LEVEL	FACILITY NAME	LOCATION	ATAC
I	Centura Health - Saint Anthony Central Hospital	Denver	Denver-Adams
I/P	Denver Health Medical Center	Denver	Denver-Adams
II	Centura Health - Penrose St. Francis Health Services	Colorado Springs	Pikes Peak
II	Memorial Hospital	Colorado Springs	Pikes Peak
II	North Colorado Medical Center	Greeley	Northeast
II	Poudre Valley Hospital	Fort Collins	Northeast
II	Saint Mary's Hospital & Medical Center	Grand Junction	Northwest Colorado
II	University Hospital (UCHSC)	Denver	Denver-Adams
II/P	Columbia Swedish Medical Center	Englewood	Smoky Hill
III	Aspen Valley Hospital	Aspen	Roaring Fork Valley
III	Boulder Community Hospital	Boulder	Foothills
III	Centura Health - Avista Adventist Hospital	Louisville	Foothills
III	Centura Health - Littleton Adventist Hospital	Littleton	Smoky Hill
III	Centura Health - St. Mary Corwin Medical Center	Pueblo	Southern Colorado
III	Colorado Plains Medical Center	Fort Morgan	Northeast
III	Columbia Medical Center of Aurora	Aurora	Smoky Hill
III	Exempla Healthcare/Lutheran Medical Center	Wheat Ridge	Foothills
III	Longmont United Hospital	Longmont	Foothills
III	McKee Medical Center	Loveland	Northeast
III	Mercy Medical Center of Durango	Durango	Four Corners
III	Parkview Episcopal Medical Center	Pueblo	Southern Colorado
III	Routt Memorial Hospital	Steamboat Springs	Northwest Colorado
III	San Luis Valley Regional Medical Center	Alamosa	San Luis Valley
III	Southwest Health System	Cortez	Four Corners
III	Sterling Regional MedCenter	Sterling	Northeast
III	Vail Valley Medical Center	Vail	Central Mountain
III	Valley View Hospital	Glenwood Springs	Northwest Colorado
IV	Centura Health - Summit Medical Center	Frisco	Central Mountain
IV	Centura Health - Granby Medical Center	Granby	North Central Mountain
IV	Columbia North Suburban Medical Center	Thornton	Denver-Adams
IV	Conejos County Hospital	La Jara	San Luis Valley
IV	Delta County Memorial Hospital	Delta	Black Canyon
IV	Haxtun Hospital District	Haxtun	Northeast
IV	Heart of the Rockies Regional Medical Center	Salida	Chaffee County
IV	Keefe Memorial Hospital	Cheyenne Wells	Eastern Plains
IV	Kit Carson County Memorial Hospital	Burlington	Eastern Plains
IV	Kremmling Memorial Hospital District	Kremmling	North Central Mountain
IV	Lincoln Community Hospital	Hugo	Eastern Plains
IV	Melissa Memorial Hospital	Holyoke	Northeast
IV	Pioneers Hospital of Rio Blanco	Meeker	Northwest Colorado
IV	Platte Valley Medical Center	Brighton	Denver-Adams
IV	Prowers Medical Center	Lamar	Southeast Colorado
IV	Wray Community District Hospital	Wray	Northeast
IV	Yuma District Hospital	Yuma	Northeast
RPTC	The Children's Hospital	Denver	Denver-Adams

APPENDIX D

