National Emergency Training Center
16825 S. Seton Avenue
Emmitsburg, MD 21727-8998

N0150

Dear National Fire Academy Student:

Congratulations on your acceptance to the U.S. Fire Administration (USFA), National Fire Academy (NFA) "Management of Emergency Medical Services" (MEMS) course.

This course offers you the opportunity to explore, in depth, many management issues facing first-line managers of today's Emergency Medical Services (EMS) organizations. This course uses readings from research in the field and is designed to engage students directly in EMS management problem solving supported by detailed individual feedback on the approach taken. The course will provide ample opportunity for practicing effective, first-line supervisory EMS management skills.

This course is very intense. In order to maximize your learning experience, some preparation is necessary. Please bring the following materials:

- A performance appraisal form currently used in your department or service to evaluate and provide feedback on employee's job performance, if you have one;
- A copy of your system's customer service policy or customer service model, if you have one;
- A copy of your system's orientation program, if you have one.

The MEMS course contains simulation-based activities that focus on the management of a fictional county known as Green County Fire and EMS, and its fire and EMS organization. Throughout these activities, you will assume a particular role in that organization. To enhance your learning experience, you are encouraged to **review the following materials before you arrive at the Academy.** It is critical for you to be familiar with the organizational charts, policies, and procedures of Green County in order to effectively use the allotted class time for the activities.

- *Green County Simulation Training Activity* – familiarize yourself with background materials and answer study questions that are included.
- Review course goal and course introduction.

Feel free to bring any written materials (e.g., procedures, protocols) to share with other students. We ask these items be in Microsoft Word electronic format. There may not be an opportunity to photocopy these items.

The Student Manual (SM) for this course is now available in a Bring Your Own Device (BYOD) format which will function on any electronic device. Please see the page following this letter for complete instructions on successfully downloading your SM. Please note: If you plan to bring/use an iPad, you may experience issues saving/storing/printing course assignments since there is no USB/thumb drive capacity for these devices.

If you need additional information related to your course's content or requirements, please contact Mr. Michael Stern, Emergency Medical Services Training Specialist, at (301) 447-1253, or by email at michael.stern@fema.dhs.gov.

Sincerely,

Eriks J. Gabliks, Superintendent
National Fire Academy
U.S. Fire Administration

Enclosures

National Fire Academy Bring Your Own Device (BYOD)
Course Materials/Download Instructions

If you own an electronic device (laptop computer, tablet, etc.) and are familiar with its document reader functions, we are asking you to download the Student Manual (SM) before you travel to class and bring the preloaded device with you.

The **first step** is to download ADOBE Reader to your device. This will enable you to read and manipulate the course materials. ADOBE Reader can be used to comment and highlight text in Portable Document Format (PDF) documents. It is an excellent tool for note-taking purposes.

For Laptops and Computers

ADOBE Reader can be downloaded from www.adobe.com/downloads/. It is a free download. Please note that depending on your settings, you may have to temporarily disable your antivirus software.

For Tablets and Other Similar Hand-Held Devices

ADOBE Reader can be downloaded onto devices such as iPads, android tablets, and other hand-held devices. ADOBE Reader for these types of devices can be found in the device's Application Store using the search function and typing in "ADOBE Reader." Follow the instructions given. **It is a free application.** Note: In order to have the editing capabilities/toolbar, the document needs to be "opened with ADOBE Reader." There should be a function on your device to do this.

After you have successfully downloaded the ADOBE Reader, please use the following Web link to download your N0150, "Management of Emergency Medical Services" (MEMS) SM. (You may copy/paste this link into your Web browser.)

https://nfa.usfa.fema.gov/ax/sm/sm_n0150.pdf

Note: Please make sure you download the ADOBE Reader first. To open the SM, you will need to open the ADOBE Reader and then open the SM through the ADOBE Reader in order for the note-taking tools to work properly.

If you need assistance, please contact nfaonlinetier2@fema.dhs.gov.

Green County Simulation Training Exercises

Background Materials

An emergency medical services (EMS) system provides for an arrangement of personnel, facilities, and equipment for the effective and coordinated delivery of prehospital and other health care services under emergency conditions for a specific geographic region. The system may be administered by either a public or private entity that has the authority and resources to effectively administer the system.

Throughout the Green County Simulation Training Exercise, you will assume the role of Chris Fleming, acting Battalion Chief, EMS, in Green County Fire and EMS. While the Green County EMS organizational structure may not be exactly like your own system, it is a viable organization that will enable you to experience issues representative of those you may encounter in your own organization. All of the geographic locations and personalities you will encounter during the simulations are fictional. Any similarity to actual locations or personalities is purely coincidental and should not be considered relevant to the simulations.

Each simulation exercise focuses on the management of EMS for a fictional county government, Green County, located in the southwestern corner of East State. The county is bordered on the west by West State, on the east by Bluefield County, East State, on the north by Reds County, East State, and on the south by the State River which is also the border with New State (figure 1). Green County covers 100 square miles and is home to 100,000 people. The population is largely concentrated in Greentowne (60,000 people), which is also the county seat, and the only major city in Green County. The remainder of the county is mostly rural farm area but several industrial parks are located around Greentowne. Although most of the parks support only light manufacturing plants or truck distribution centers, Hazardton Center, located west of Fire Station 2, is the site of a large gaseous products distribution plant as well as a major industrial waste storage and transfer station. The Green County Airpark is located in the northeastern corner of the county and is used primarily by private aircraft. Green County is traversed by several major highways that are heavily utilized by interstate truckers. A major intersection of these highways occurs in the center of Greentowne leading to Bailey's Bridge that crosses the State River to Capital City, NS. Capital City is a large metropolitan area, population 500,000, and is the work site of many Green County residents. The Capital City International Airport is approximately 12 miles from Greentowne, across the State River, and is served by a number of major airlines. Capital City Memorial Hospital is a large teaching hospital with a major trauma center.

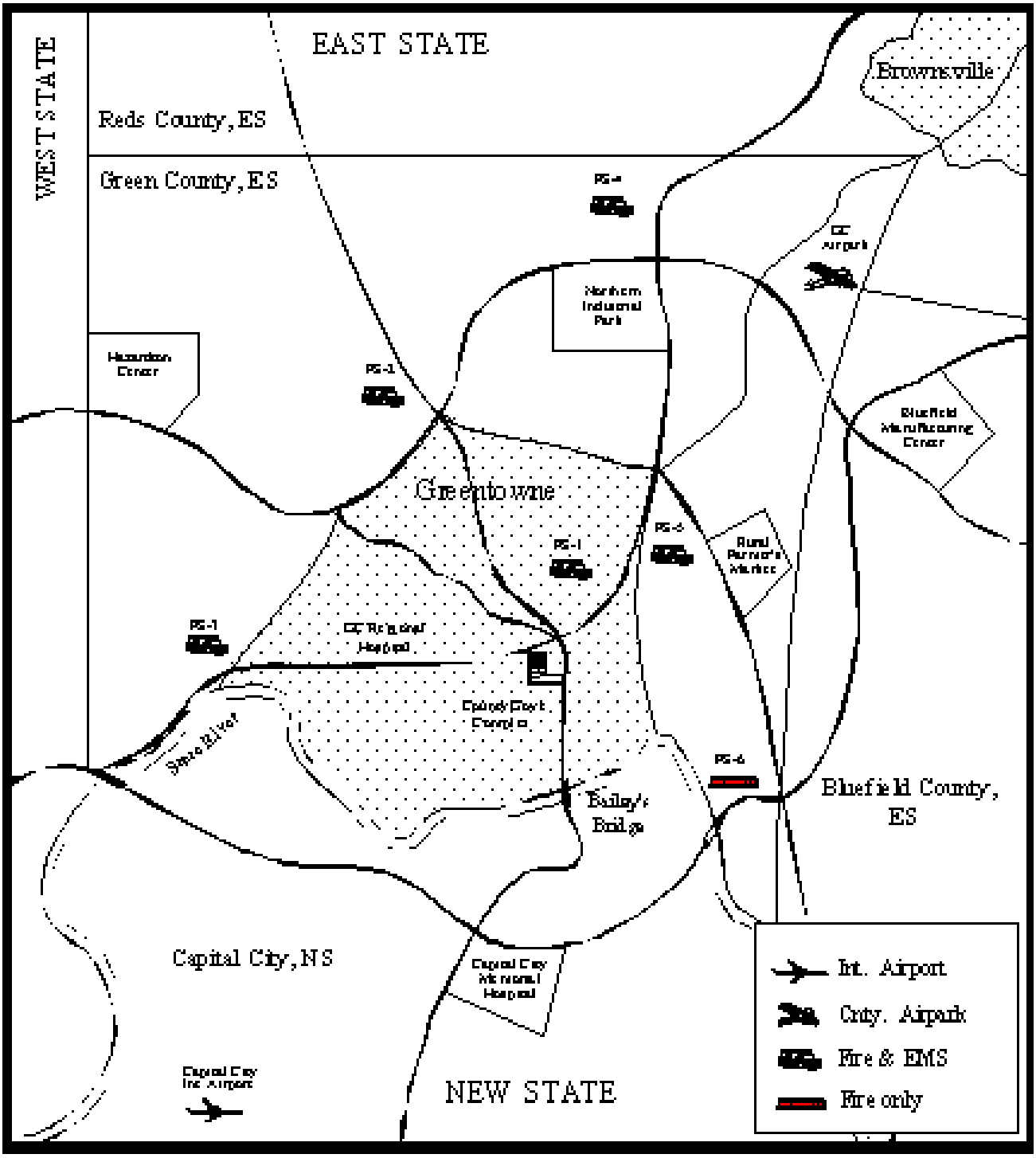

Figure 1. Map of Green County and Surrounding Area

The Headquarters of Green County Fire and EMS and the office of the Chief of Fire & EMS are in the County Public Safety Complex adjacent to the County Municipal Building. The county mayor's office, county commissioners, and county administration are in the Municipal Building. Both buildings are located in the Green County Government Complex in Greentowne. The Chief of Fire & EMS reports directly to the county mayor and commissioners (figure 2). The Chief of Fire & EMS is supported by a Deputy Chief, Operations, and a Deputy Chief, Administration.

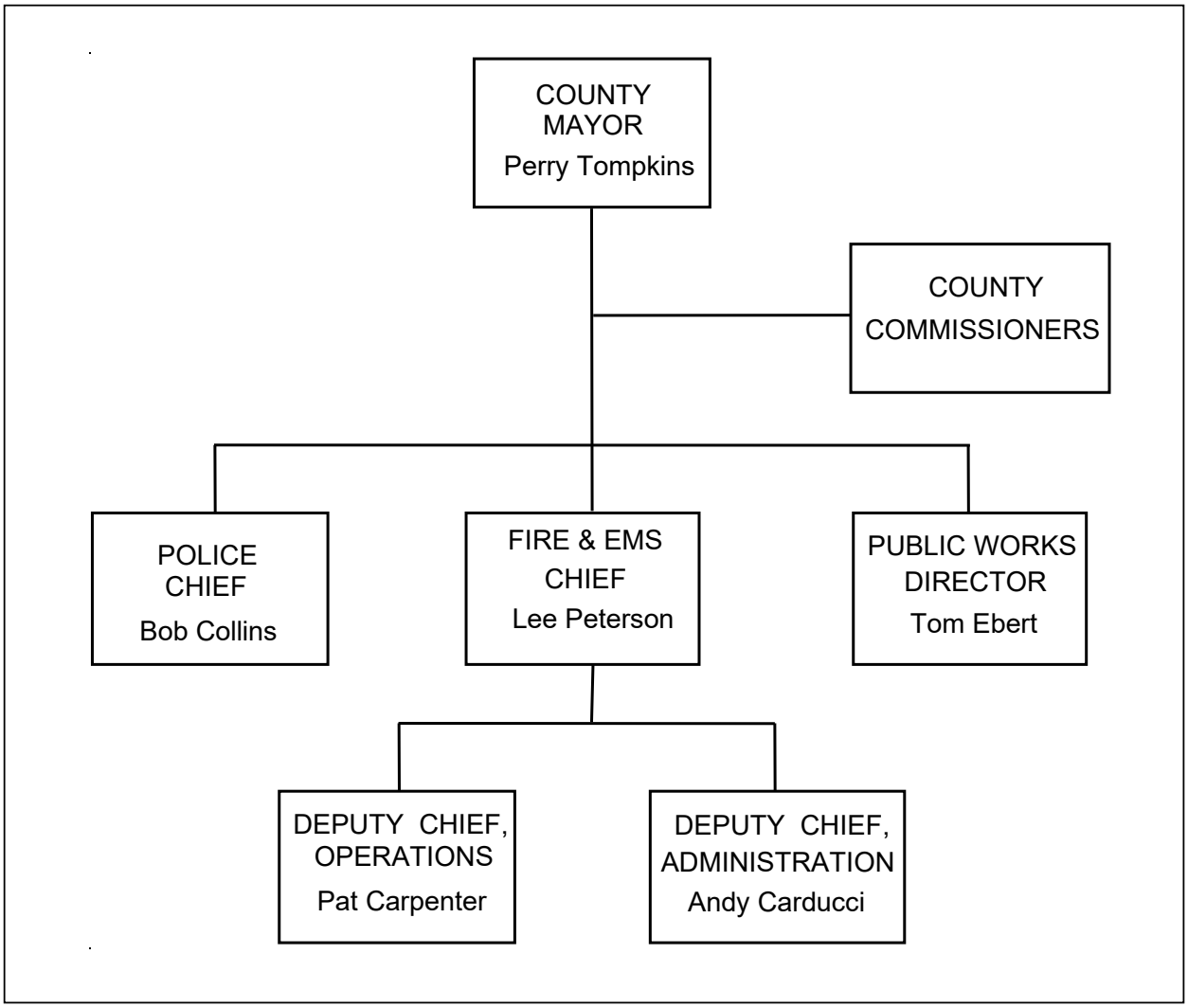

Figure 2. Green County Organization for Public Safety

Each duty shift is headed by an Assistant Chief and two Battalion Chiefs under the Deputy Chief, Operations (figure 3).

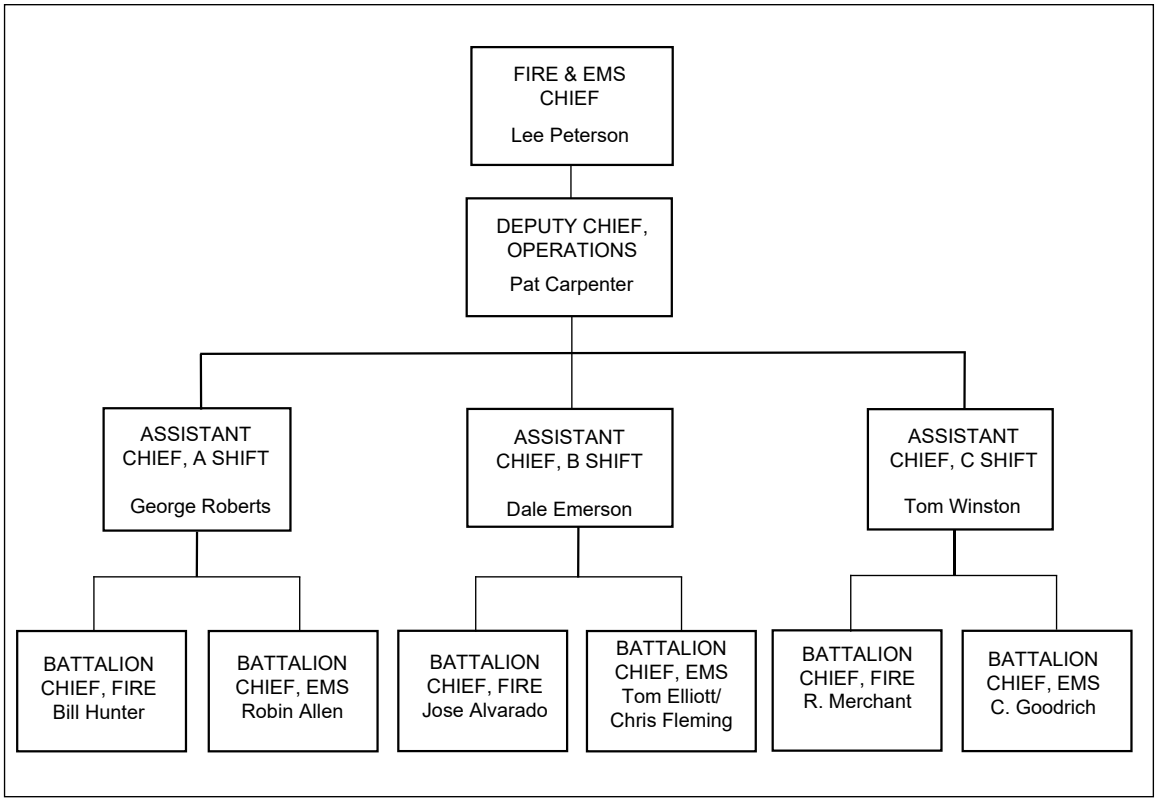

Figure 3. Organization Chart,
Green County Fire & EMS Operations Division

The Deputy Chief, Administration, is responsible for the Fire Marshal; Fiscal Officer; Assistant Chief, Communications; Assistant Chief, Training; and Public Information Officer (figure 4).

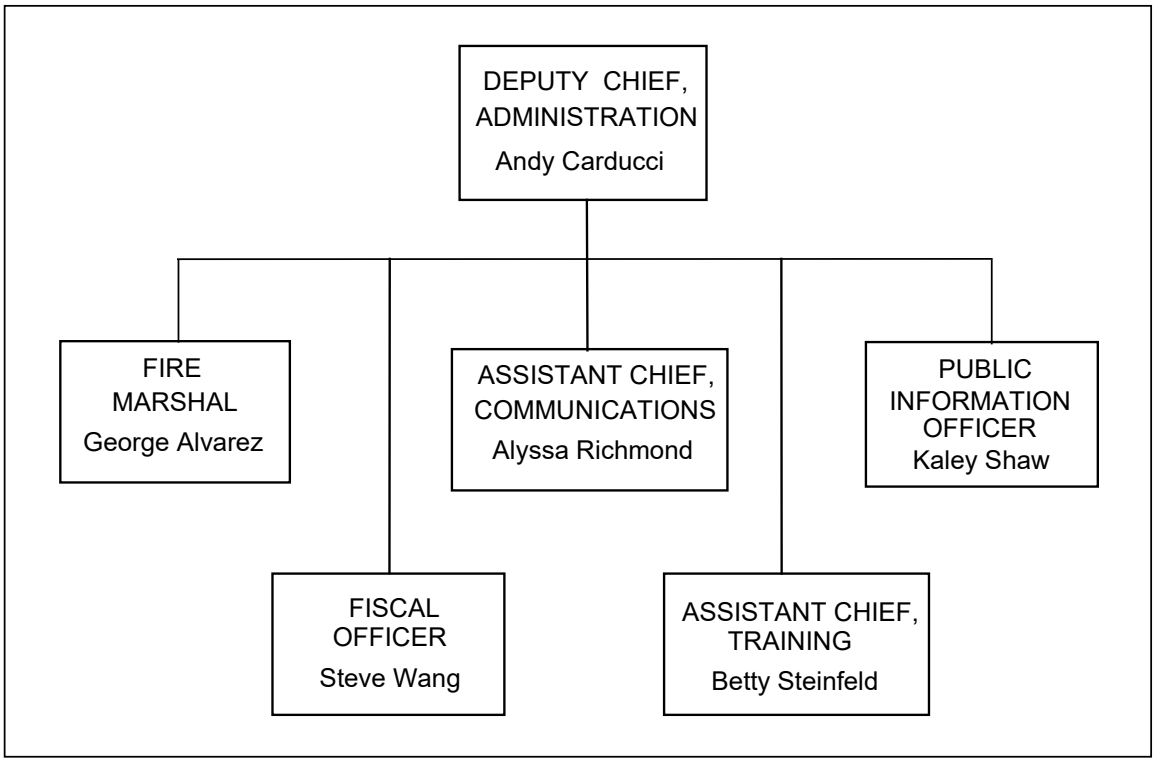

Figure 4. Organization Chart,
Green County Fire & EMS Administration Division

Green County Fire and EMS provides fire/EMS service to Greentowne and the remainder of the county through six fire stations (see figure 1). Fire stations 1-5 are staffed on all shifts by career firefighters and EMS providers. Because of its rural location, Fire Station 6 is staffed by two career firefighters per shift supplemented by volunteer firefighters for each response. There is a cadre of reserve personnel on call in Green County to fill in for and assist EMS members.

Green County Fire and EMS shares responsibility with the County EMS Medical Director for operation of the county ambulance service as a division of Fire and EMS. The Medical Director works with the Assistant Chiefs to provide support to the Green County EMS providers. The County EMS Medical Director is a part-time position, currently held by the head of the emergency department at Green County Regional Hospital in Greentowne. Green County Regional is a small, 180-bed, general hospital.

You are acting as Battalion Chief, EMS, for the B shift, responsible directly to the B shift Assistant Chief, Dale Emerson (figure 5). The offices of the Assistant Chiefs and your office are located in Fire Station 1 in the center of Greentowne. Each shift operates five ambulances, one each at Fire Stations 1-5. EMS shift staffing includes eight paramedics (EMT-Ps) and two emergency medical technicians (EMTs), in addition to yourself.

To enhance the response capability of Green County EMS, mutual aid agreements are in effect with Capital City, New State, EMS and Brownsville, East State, EMS. Brownsville is a small community (population 25,000) located in Reds County, northeast of Greentowne.

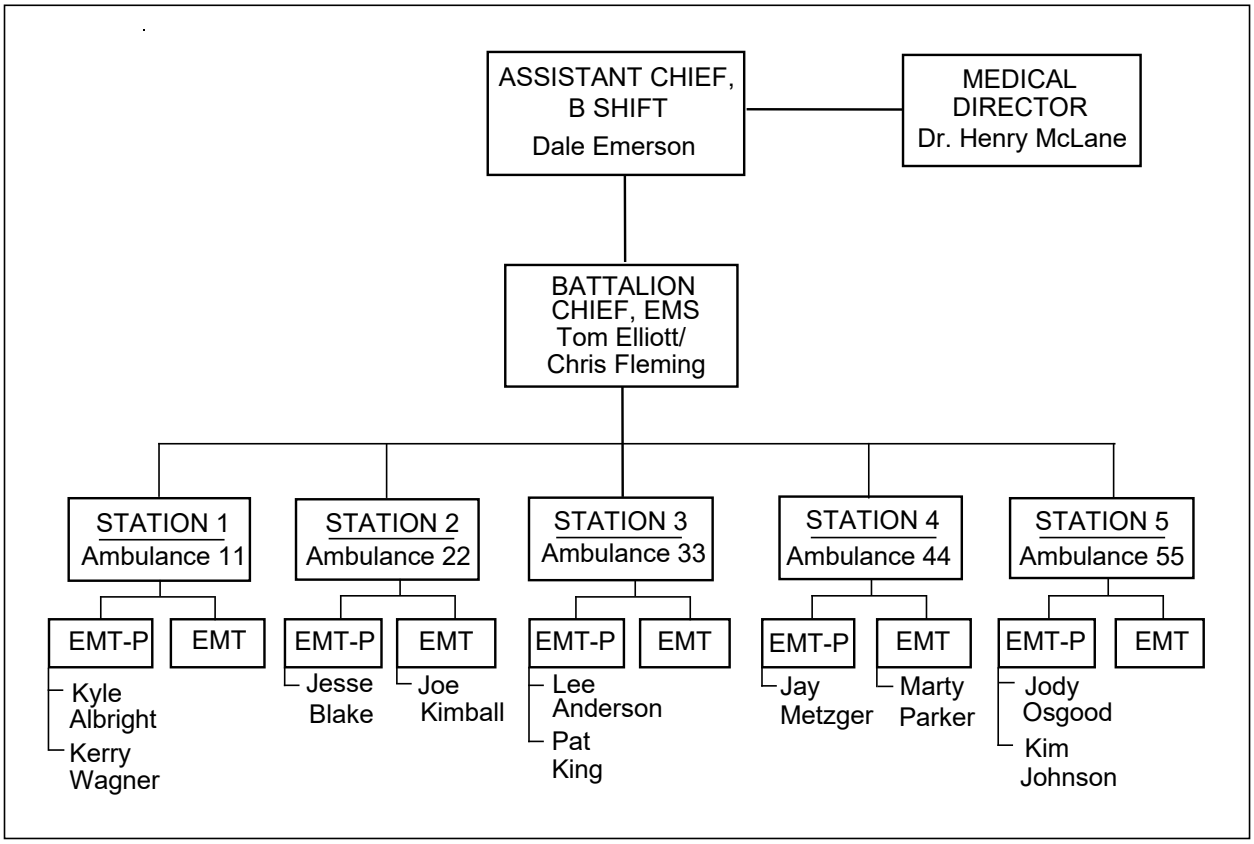

Figure 5. Organization Chart, Green County Fire & EMS, EMS B Shift

A Battalion Chief, EMS, is responsible for supervising and coordinating the activities of all EMS members on a designated shift under all types of emergency and non-emergency conditions. Under emergency conditions, a Battalion Chief, EMS, is expected to respond to calls for pre-hospital EMS (as required) to augment the shift EMS members. Under non-emergency conditions, a Battalion Chief, EMS, is expected to:

- Understand, appreciate, and apply the principles of discipline, human relations, and leadership, and to evaluate the quality and results of these factors.

- Conduct post-response debriefs with shift EMS members.

- Inform all shift EMS members of any changes in fire department policies or procedures, or any EMS Medical Director changes to clinical protocols, standard operating procedures (SOPs), or standing orders.

- Coordinate EMS shift staffing with shift members and the shift Assistant Chief.

- Inspect EMS equipment and vehicles for safety and readiness on each shift.

- Perform periodic field audits during each shift to observe performance of EMS members.

- Determine training shortfalls for EMS members.

- Conduct formal and informal training of EMS members as required or directed by the Assistant Chief.

- Evaluate physical fitness and wellness of EMS members to perform all tasks assigned.

- Maintain shift records, file reports, and prepare reports:

    - Record personnel information concerning vacations, sick leave, shift substitutions, and days off on Daily Personnel Record.

    - Perform personnel performance evaluations and promotion potential evaluations.

    - File department bulletins, newsletters, and training bulletins.

    - Maintain vacation schedule, training schedule, and daily activity schedule.

    - Maintain and/or prepare inspection reports, maintenance reports, progress reports, monthly activity reports, fuel expenditure reports, and work orders.

    - Review all quality management reports; analyze and use quality management data to enhance vehicle and equipment performance and readiness.

- Attend shift meetings with Assistant Chief and fire suppression Battalion Chiefs.

- Work on committee assignments or as requested by Assistant Chief to develop department plans and procedures, gather information, or enhance department image.

- Coordinate work activities with other shift Battalion Chiefs to maintain continuity and exchange pertinent operational and administrative information.
- Assist Assistant Chief with internal investigations.
- Assist Assistant Chief with department public information, education, and relations (PIER) program.
- Substitute for Assistant Chief, as required.
- Ensure all goals of the department are being met.

Summary of Green County Fire and EMS Policies and Procedures

Shift Rotation occurs in a simple A, B, C, A, B, C, pattern.

Overtime is permissible at the request of the member, and will be calculated as time and a half. Overtime is never compulsory. At no time is any member's service to exceed 48 consecutive hours.

Vacation Time may be taken at the supervisor's discretion. All vacation requests must be submitted at least one week in advance. Employees may not take vacation time which has not yet been accrued.

Sick/Personal Time may be taken when necessary, and must be used in the year in which it is earned.

Shift Substitutions must be approved by both members' supervisors. The requesting member is responsible for ensuring reliable coverage, and for promptly working the agreeing member's shift in trade. Shift substitutions are not tracked by the department and do not result in a change in pay for either member.

Reserve Emergency Personnel may be used to cover shifts consistent with rank and availability. Reserve personnel are qualified EMTs and EMT-Ps who work for the department on a part-time, as-needed basis. Most reserve personnel are former full-time members who maintain their licensure and continue to work shifts when their current positions or commitments allow. All reserve members are positively available if notified at least 48 hours prior to shift.

Personnel in Training are to serve with a Field Training Supervisor for their first 288 hours. For the first 144 hours, personnel in training are to observe only, and should not be considered as shift coverage.

Member Training courses at Green County Fire Academy are available on a first-come, first-serve basis. Use of the Academy is unlimited for members with their supervisor's approval. Members in training at the Academy will be paid as if working. All other training is compensated at the discretion of the supervisor.

Representing Fire and EMS through lecture, demonstration, etc., requires permission from the Chief, Green County Fire & EMS.

Discipline is to be delivered in a timely manner by the member's direct supervisor. Whenever possible, this should occur during the same shift in which the incident occurred, or during the shift immediately following. Properly administered counseling by superiors is intended to prevent the necessity for later and more severe corrective measures.

Commendations by citizens for outstanding service are to be maintained in the office of the Chief, Green County Fire & EMS, with copies forwarded to the Mayor and the Civil Service Board. Should a member receive such a letter directly from a citizen, he/she shall forward same to the Chief, Green County Fire & EMS, through the chain of command.

Performance Appraisals are the responsibility of the direct supervisor. Appraisals include feedback concerning performance and recommendations for activities which will enhance skills and improve performance. Authority for completing the form shall not be delegated.

Merit Pay Raises will be awarded automatically on the member's anniversary-of-hire date. The amount of the increase is based on the individual's tenure. The supervisor can recommend that the raise not be awarded if performance is considered inadequate. Recommendations for awarding or denying pay increases must be received by the Human Resources Department no later than 14 days prior to the anniversary-of-hire date. If a recommendation to deny a merit increase is not received by that time, the pay increase will be automatic. If the supervisor denies a merit increase, the increase can be reconsidered at 90-day intervals following the denial.

Neatness and Personal Hygiene shall be maintained as befits a member of Fire and EMS. Members shall keep their bodies as clean and free of offensive odors as circumstances will permit. Particular attention shall be paid to oral hygiene and the hands and fingernails.

Regulation Issue Uniforms shall be the responsibility of the member. Members shall report for duty in clean, neatly pressed, fully buttoned and snapped uniforms with name tag and insignia properly secured. All uniforms shall be kept as free of rips, tears, and soiling as possible. When damage or soiling exists, the member shall restore the uniform to acceptable appearance, subject to the approval of the supervisor. If the damage is beyond the member's ability to rectify, the garment of issue shall be turned in to the company officer for review. Spare uniforms shall be kept in an immediately accessible location when on duty. T-shirts may be worn while in quarters after 1800 hours (6:00 PM) only.

Equipment Failures/Absences of a serious nature are to be reported immediately to the shift supervisor. Incident reports regarding a failure or equipment absence to any degree require that an incident report be completed and turned in prior to completion of shift.

Vehicle Accidents are to be immediately reported to the supervisor. Incident reports must be completed prior to the end of the shift. Accidents resulting in serious damage and/or involving private vehicles or property must be reported to GCPD immediately. Drivers involved in such accidents will have driving privileges suspended until completion of the investigation, at which time disciplinary action will be determined by the supervisors.

Apparatus and Equipment Checks are to be performed within 45 minutes of beginning the shift. All checks are to be made with the aid of the appropriate checklist which should be completed at that time. Inadequacies of any kind are to be rectified immediately. Inadequacies of a serious (i.e., life-threatening) nature are to be reported to both the oncoming and off-going battalion chiefs.

Weekly Inventory Control shall be completed each Sunday afternoon to determine that the proper quantity is on hand, that the items are in good operating order or repair, and that the items belong to the assigned unit. The Weekly Inventory Control Sheet is to be completed as the checks are made. Discrepancies should be brought to the attention of the Battalion Chief, who will complete an Inventory Control Discrepancy Sheet to initiate an investigation. Discrepancies that require immediate action may be telephoned in via the chain-of-command to initiate the correction process without delay.

Mutual Aid to Other Departments may be granted by Green County to Capital City, NS, or Brownsville, ES, upon request by the Fire Chief or, in his/her absence, the Duty Chief of the city in need of assistance. Request for assistance shall be initiated through the city's fire and EMS dispatch in accordance with written procedures.

Mutual Aid from Other Departments may be granted to Green County by Capital City, NS, or Brownsville, ES, upon request by the Chief, Green County Fire & EMS or, in his/her absence, the Assistant Chief or Battalion Chief on duty. Request for assistance shall be initiated through Green County Fire and EMS Dispatch in accordance with written procedures.

Prehospital Care Reports shall be considered part of the patient's medical records and are to be considered confidential and not under the domain of public record.

Prehospital Care Report Abbreviations and Codes

CALL:

- A Emergency
- B Non-emergency

DISP OF CALL (Disposition of Call):

- A Transport
- B Nontransport

PT TAKEN TO:

- GCR Green County Regional Hospital
- CCM Capital City Memorial Hospital

NATURE OF RUN:

- A Person down
- B Diabetic emergency
- C Cardiac arrest
- D Auto accident
- E Drowning victim
- F Cardiac emergency
- G Downed aircraft

PROTOCOL USED:

- A O_2
- B Cardiac Arrest
- C ETT
- D Defibrillation
- E Diabetic emergency
- F IV
- G Medications
- Q Spine and neck immobilization
- ZZ Unknown illness

ATT:

Attendant A, B, or other provider

ANATOMY OF INJURY:

- A 2°/3° Burns > 15% BSA
- B Paralysis
- C Amputation prox. to wrist or ankle
- D Vehicle in excess of 40 m.p.h.
- E Penetrating injury to head, neck, chest, abdomen, or groin
- F Ejection from auto

GLASGOW COMA SCALE

Motor Response:	
Obeys Command	6
Localizes pain	5
Withdraw (Pain)	4
Flexion (Pain)	3
Extension (Pain)	2
None	1

Eyes Opening:	
Spontaneous	4
To voice	3
To pain	2
None	1

Level of Consciousness/Verbal Response:	
Oriented	5
Confused	4
Inappropriate words	3
Incomprehensible words	2
None	1

IF TOTAL IS LESS THAN 13, TRANSPORT TO LEVEL 1 TRAUMA CENTER

Management of Emergency Medical Services
Green County Background Materials Study Questions

1) Describe Chris Fleming's chain of command to the mayor.

_____

_____

2) Total number of assistant chiefs for A, B, and C shifts. _____

3) Is the medical director a full time position? Yes No

4) How many ambulances operate on B shift? _____

5) Which of Chris Fleming's specific nonemergency responsibilities do you feel is most important?

_____

_____

_____

6) Shift meetings include what chief levels?

7) Do shift substitutions result in a pay change for either member? Yes No

8) A vacation request must be approved at least 10 days in advance. True False

9) What are the maximum number of hours that a member can work continuously as defined in the overtime policy? _____

10) If a merit increase is denied by a supervisor, in what periods of time is a reconsideration allowed? _____

11) In what period of time must an incident report be filed after an equipment failure has occurred? _____

12) Who should inadequacies of apparatus and equipment be reported? _____

13) Are patient records in Green County a matter of public record? Yes No

COURSE GOAL AND COURSE INTRODUCTION

Course Goal

Provide training on the knowledge, skills, and abilities required for effective first line management of an Emergency Medical Services (EMS) organization, including day to day operations, time management, human resources, financial budgeting, and equipment/ fleet management. In addition, provide a forum for students to exchange ideas and individual viewpoints regarding current and future issues relating to the management of EMS.

Course Introduction

The original MEMS course in the 1970's was designed to assist students in planning, developing, and implementing an EMS program. Course content addressed those subject areas pertinent to any agency starting up an EMS program. As a greater number of EMS programs came on line around the country, the MEMS student population began to attract greater numbers from those organizations, with new and different management issues. Accordingly, the MEMS course began to change to meet the needs of the changing student population. By 1984, most of the original MEMS course content had been changed completely or dropped from the course.

In 1986, the MEMS course underwent a major review and update. The resulting course keyed upon students representing established EMS programs and the management issues likely to be encountered in those programs. Because a significant percentage of the new EMS organizations were under a fire service umbrella, the revised MEMS course fit nicely into the National Fire Academy (NFA) curriculum structure.

Like the original course, the 1986 version of MEMS continued to change and reflect new issues and trends in EMS management. The course review process also benefited from student input and critiques. In October 1992, a Curriculum Advisory Committee (CAC) was convened at NFA to conduct an in-depth review of the Academy's EMS curriculum offerings with the objective of projecting course requirements into the 21st century. The EMS experts from around the country, who represented a diversity in geography, system configurations, system designs, and areas of responsibility comprised the CAC. The Committee identified EMS content areas that would support future course development. One of the areas, *Introduction to EMS Management*, closely corresponded to the existing MEMS course structure and was assigned the highest priority for development.

The current MEMS course structure was designed during the fall of 1993 and piloted in April 1994 to meet that need. Content and format were developed from recommendations provided in the report of the 1992 Curriculum Advisory Committee, an extensive review and extrapolation of material and issues from current EMS literature, input from EMS subject matter experts (SME's), and design guidance from the U.S. Fire Administration (USFA) and NFA.

It was one of the first "hands-on" management courses at NFA, and stood as a model for numerous NFA course development and revision efforts. MEMS has been updated twice to meet the changing needs and issues of the EMS community. The first update came in the fall of 1998 and piloted in February 1999 and the second update came in the fall of 2007 and piloted in June of 2008. The successful format remained unchanged.

The goal of the current MEMS course is to provide the student with an inventory of management skills that can be taken back to the work environment and demonstrated on the job. MEMS uses an innovative teaching method that requires students to demonstrate effective management skills rather than just indicating a knowledge of management skills through rote testing.

Because many adults learn by observing someone else and then practicing that behavior themselves, a significant feature of the instructional process in this course is the use of models both paper and peer. In many of the exercises, students will be given the opportunity to observe classmates to see how they handle an issue. In several of the exercises, students will be given the opportunity to "observe" someone else manage the exercise by reviewing a paper model of how that "person" completed the exercise. The model is not meant to represent the only right or correct answers; it is just one effective way to handle the exercise, as judged by your peers and supervisors.

Teaching management skills is not effective unless there is ample opportunity for students to practice the appropriate behaviors in a job-relevant context, followed by feedback on their ability to demonstrate the appropriate behaviors effectively. Only if students actively practice these skills will they leave the course with improved management skills.

MEMS consists of eight modules of instruction that, taken together, progress through EMS activities that might confront a first-line EMS manager in a hypothetical community. Day One of the course provides coverage of NFA administrative material, student/instructor introductions, a discussion of basic leadership and management concepts, and an introduction to the exercise scenario that will unfold during the course. The course will provide students with realistic simulations that can be related back to their job. The remainder of the 2-week course expands upon basic leadership and management issues, effective management of human resources, EMS system resources, interactions with external organizations, and discussions of current and future management issues in EMS. Most of the requisite technical data (knowledge) is presented through outside reading requirements. Students are evaluated through reinforcing activities, exercises/or simulations and written examinations.

The scope of MEMS is, by design, very broad and affords students ample opportunity to explore many EMS areas and issues. You are encouraged to facilitate and expand the scope of any discussion to include specific problem areas or issues that the students have encountered. Instructors have a responsibility to keep the course on track, but also have the leeway to meet the needs of individual classes. However, coverage of an unplanned topic may require after-hours discussion to complete.

It is important to point out that MEMS does not deal with any clinical problems, protocols, or specific patient care procedures. Neither does it cover startup procedures for a new EMS service, or

initial EMT/paramedic training requirements or qualifications. The course also avoids putting the EMS first-line manager on the street.

Finally, MEMS stresses the application of effective leadership and management principles by a first-line EMS manager in the unique environment of out-of-hospital emergency medical services. However, while dealing with the unique challenges of providing responsive emergency medical services, EMS managers must view their system concurrently as an operational business entity. This theme is addressed in many of the courses taught at the NFA in an effort to break down older, more traditional concepts. These more rigid concepts keep many departments from moving forward in a competitive business sense with other agencies. In areas such as personnel management, financial management, quality management, and executive development, EMS agencies face problems similar to other businesses. Therefore, it is imperative that EMS managers use current, effective business practices when managing their service agencies. Although students are given the special problems and emergency situations of "the street," their management role places them in the position of running a business for their community. Community leaders and the general public expect them to be effective managers and hold them accountable for their performance.