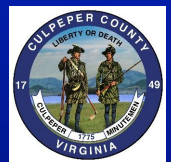


A Fire & EMS Study for Culpeper County, Virginia



Submitted by:

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Public Safety Management Consultants
Fire/EMS Division
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November 24, 2015

Board of County Supervisors
Culpeper County
101 S. West Street, Suite 300
Culpeper, Virginia 22701

Dear County Supervisors:

I am pleased to submit with this letter our Report on the Fire and EMS Study for Culpeper County, VA.

The Study Team would like to acknowledge the excellent cooperation we received from County officials, staff and members of the County's fire and EMS services. If you have any questions relative to this Study Report, please contact my office.

Sincerely,



Leslie D. Adams
President

EXECUTIVE SUMMARY

THE SETTING

Culpeper County is located in Northern Virginia west of the confluence of the Rappahannock and Rapidan rivers and encompasses 379.23 square miles. The Town of Culpeper is anchored near the center of the County and is equidistant northeast of Charlottesville and southwest of the District of Columbia.

Culpeper County is just west of the city of Fredericksburg, and several U.S. and State highways cross within the area. A railroad runs through the center of the Town of Culpeper, and a small airport is located in the northeast side of Culpeper County.

Culpeper County is adjacent to the following counties:

- Stafford County
- Orange County
- Madison County
- Rappahannock County
- Spotsylvania County
- Fauquier County

RISKS

Transportation along several major roadways not only creates potential fatal collisions, but also brings the risk of a hazardous material spill from an incident involving a tractor trailer. A hazardous material release risk is also increased by freight rail traffic within the County limits. Being at the confluence of two rivers, the chance of severe weather and snow melt makes flooding a high probability in some areas of the County.

Aside from severe winter weather, the County also experiences summer storms that can produce tornadoes. The worst tornado was experience in 2001; it measured an F5 on the Fujita scale and caused over \$2 million in damages. Fortunately no fatalities were reported and only two people were injured. Culpeper County is also near a zone that can and has experienced an earthquake, most notably in 2011 with a magnitude 5.8.

FUTURE TRENDS

Culpeper County is expected to maintain a modest population growth pattern. The County, like most communities, plans for improvements to the airport facility, County offices, courts, schools and parks. A new connector between Route 729 and Route 522 is also planned. Connectivity such as this assists first responders reach incidents faster.

An established area around the current town limits of Culpeper serves as an urban service boundary where additional development is foreseen along with isolated spots in the rest of the County. Land use can create risk by bringing in more residents or by having a land use that increases the risk of fire.

CULPEPER COUNTY GOVERNMENT

Culpeper County is administered and managed by a Board of Supervisors and a County Administrator.

The powers and duties of the local **Board of Supervisors** include:

- Preparing the County budget and appropriating funds; levying County taxes; appointing members of various boards and committees;
- Pre-auditing claims against the County and issuing warrants for their settlement; constructing and maintaining County buildings and other property; adopting the County's Comprehensive Land Use Plan, approving and enforcing zoning and other land use ordinances; and
- Adopting and enforcing ordinances for police, sanitation, health, and other purposes as permitted by State law.

The **County Administrator** is the highest level management office of the Culpeper County government, he or she is a full-time official appointed by the Board of Supervisors. The County Administrator directs and supervises the day-to-day operations of all County departments and agencies, which are under the direct control of the Board of Supervisors pursuant to county ordinances and regulations.

CULPEPER COUNTY VOLUNTEER FIRE AND RESCUE ASSOCIATION

The Culpeper County Volunteer Fire & Rescue Association (CCVFRA) exists to assist in the coordination and provision of emergency services between Culpeper County, Virginia, and its eight member companies: Brandy Station Volunteer Fire Department, Inc.; Culpeper County Volunteer Fire Department, Inc.; Culpeper County Rescue Squad, Inc.; Little Fork Volunteer Fire and Rescue Company, Inc.; Reva Volunteer Fire and Rescue Company, Inc.; Rapidan Volunteer Fire Department, Inc.; Richardsville Volunteer Fire Department and Rescue Squad, Inc.; and Salem Volunteer Fire Department, Inc.

The CCVFRA provides essential services for the member companies, including (but certainly not limited to):

- Coordinating training of emergency services personnel
- Assisting in the development of uniform dispatch protocols
- Developing standard operating guidelines for approval by the member companies
- Receiving budget allocations from the county and distributing them to its member companies
- Providing a forum where all the member companies can work together to create consistent delivery of emergency services to the citizens

VOLUNTEER FIRE AND EMS COMPANIES

Each of the eight volunteer fire and EMS companies is incorporated under the laws of the State of Virginia; operates under a set of adopted authorizations including a constitution, bylaws and other rules and guidelines; and elects and/or appoints a set of administrative and operational officers pursuant to their bylaws.

The volunteer fire and EMS companies that are part of the Culpeper County Fire and EMS Service include:

<p>Culpeper Volunteer Fire Department 151 - 153 West Davis Street Culpeper VA 22701 (540) 825-8777</p>	<p>Brandy Station Volunteer Fire Department 19601 Church Road Brandy Station VA 22714 (540) 825-1555 or (540) 825-7678</p>
<p>Amissville Volunteer Fire and Rescue 14711 Lee Highway Amissville VA 20106 (540) 937-5125</p>	<p>Richardsville Volunteer Fire and Rescue 29361 Eley's Ford Road Richardsville VA 22736 (540) 399-1890</p>
<p>Salem Volunteer Fire and Rescue 13428 Scotts Mill Road Culpeper VA 22701 (540) 825-9112</p>	<p>Little Fork Volunteer Fire and Rescue 6011 Rixeyville Road Rixeyville VA 22737 (540) 937-7717</p>
<p>Rapidan Volunteer Fire and Rescue 9729 Locust Dale Road Rapidan VA 22733 (540) 672-5744</p>	<p>Culpeper Volunteer Rescue 1121 North Main Street Culpeper VA 22701 (540) 825-2247</p>
<p>Reva Volunteer Fire and Rescue 18230 Birmingham Road Culpeper VA 22701 (540) 547-3747</p>	

Funding

The County provided \$2,041,783 for the operation of the Culpeper fire and rescue companies for FY2016.

CULPEPER COUNTY FIRE AND RESCUE COMPANIES FY2016 BUDGET

	FY13 Actual	FY14 Actual	FY15 Adopted	FY16 Adopted	% of Change from FY15
Personnel	75,510	70,206	87,153	96,753	11.02%
Operating	1,716,299	1,742,270	1,831,418	1,942,530	6.07%
Capital	401,930	560	22,100	2,500	-88.69%
Total	2,193,739	1,813,036	1,940,671	2,041,783	5.21%

The County provided \$2,121,047 for the operation of the Culpeper Emergency Services Department for FY2016.

CULPEPER COUNTY EMERGENCY SERVICES FY2016 BUDGET

	FY13 Actual	FY14 Actual	FY15 Adopted	FY16 Adopted	% of Change from FY15
Personnel	1,492,562	1,529,600	1,698,497	1,720,996	1.33%
Operating	250,009	298,666	447,759	400,051	-10.66%
Capital	336,401	30,243	0	0	0%
Total	2,078,972	1,858,509	2,146,256	2,121,047	-1.18%

In addition, the County provided \$400,000 in FY2016 CIP funding to the volunteer companies.

CULPEPER COUNTY VOLUNTEER COMPANIES 2016 CIP

PS – Fire & Rescue Association	The Association has compiled a five-year C.I.P. which can be funded through a combination of sources. A flat County contribution of \$400,000 per year will support Companies 1,2,6,8,9,10,11 and 16 (\$50,000 per company). See Accompanying Fire & Rescue detail sheets.	Funds will assist all County VFD's with various capital projects. County funds combined with VFD fundraising and grants funds will provide primarily for equipment, but also for facilities improvements.	400,000
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Over the years, the County has assumed an increasing role in the financial support of the fire and EMS operations, administration and capital requirements of the volunteer fire and EMS companies. This approach is justified, as increased support has been necessary to maintain the volunteer nature of the services. In today’s fiscal environment, it would be practically impossible for the Culpeper County fire and EMS companies to be financially self-supporting.

Each of the companies reportedly conducts various fundraising efforts that, to a greater or lesser extent, are successful in providing support funding. However, depending on the area served and the fundraising efforts undertaken, the revenue from these efforts may be relatively limited when compared to the funds needed for the operations and administration of each of the companies.

A central theme noted by the Study Team was the current process in which the County allocates County funds to the volunteer companies. Volunteer leadership across-the-board

felt that both the operational and CIP allocations were insufficient to keep their operations viable. Several examples were given to the Study Team. The Study Team's opinion is funding was lacking.

ORGANIZATIONAL OBSERVATIONS

The following sections are general observations regarding the organization of the Culpeper volunteer fire, rescue and EMS services from both a company and countywide perspectives.

Individual Company Perspective — Member Perceptions

The companies are organized under state chartered certificates of incorporation, as are many volunteer fire companies across the nation. They are governed internally by constitution and/or bylaws the membership adopted and modified. The fire and rescue companies also operate under policies and/or procedures approved by either their chief, president and/or governing board. These policies vary significantly in terms of quality, detail and currency.

The charter, bylaws and policies of each of the fire and rescue company organizations generally focus internally on their organization, structure and operation. They do not generally relate to the other companies or the overall countywide fire and EMS service.

Operationally, the fire and EMS companies appear to generally focus many of their service needs assessments, decision-making and strategies for staffing, apparatus and equipment in their first-due response area in an effort to attempt to provide all services.

Organizational Strengths

In considering their own fire and EMS companies, many firefighters, EMTs, paramedics and officers discussed a number of strong points from a company perspective. Many positive aspects of the fire and EMS companies discussed/mentioned by members of the various companies include the following:

1. Well-organized;
2. Years of experienced volunteers;
3. Commitment to community;

4. Reputation in community;
5. Level of commitment of members;
6. Fiscal responsibility;
7. Fire prevention at community events;
8. Good equipment;
9. Progressive website;
10. Level of call response activity;
11. Depth of members experience;
12. Participation by paid fire/EMS crews;
13. Age diversity of membership;
14. Positive attitude of members;
15. Few complaints from public;
16. Good relations with other companies;
17. Training participation;
18. Family orientation of company;
19. More senior members serving as mentors;
20. Community event involvement;
21. Improvements in fire station funded by County;
22. Members proud of company;
23. Excellent facility;
24. Strong training program;
25. Teamwork;
26. Perseverance in tough times;
27. Call volume;
28. Combination system;
29. Company succession planning; and
30. Sense of tradition.

This is a small sampling of the many positive points relating to their own fire and EMS company discussed by members interviewed by the Study Team. In the view of the members, the fire and EMS companies in Culpeper County have much to be proud of. The Study Team is of the opinion that, **as volunteers of fire and EMS companies, they have a proud history and tradition of volunteerism, which has been serving the County and its residents and businesses well for decades.**

Improvement Opportunities

The Study Team was impressed with the fact that many volunteer members and leaders, while proud of their fire and EMS companies, knew there were substantial improvements needed, both in their own companies as well as countywide. Members mentioned the following primary areas in their own companies where there is a need for improvement:

1. Improved benefits and incentives for volunteer members;
2. In-station training drills need improvement;
3. Need more volunteers in station;
4. Better facilities to attract and house volunteers;
5. Reduce volunteer turnover rate;
6. Number of slow unit responses;
7. Consistency in operations;
8. Improve career volunteer relations;
9. Limited county funding
10. More training, consistent training;
11. Company difficulty meeting workload demand;
12. Limited and outdated policies and procedures;
13. Daytime staffing problem;
14. Number of failures to responds on calls;
15. Association out of touch with members;
16. Phantom staffing;
17. Improvement in deployment of volunteer staffing;
18. Long response times;
19. No organized recruitment effort; and
20. Need for new apparatus.

These, as well as other areas of potential opportunities for improvement mentioned by members or observed by the Study Team, will be discussed in various chapters of this report.

Countywide Perspective

Possibly, the most difficult issue that hinders progress and teamwork in the Culpeper County fire and EMS services is the lack of consistency and central leadership on a countywide basis. A dangerous safety situation will develop if there are limited consistent

operational procedures in place. Many procedures are in need of revision. Important fire and EMS strategies and tactics must be addressed.

General Comments Received Regarding the Overall System

1. Too few volunteers for such a large county and population;
2. Some companies doing their own thing;
3. There is no individual responsible for countywide for fire/EMS issues;
4. Lack of County financial support;
5. Need for a fire and rescue grant person;
6. There needs to be a single person responsible for overall operations;
7. There needs to be stricter leadership in the fire and EMS companies;
8. There needs to be a fire “official,” to solve dispatch issues, fire/EMS budget allotments, approve/disapprove specifications and funding for apparatus, gear or operations items;
9. The Fire/EMS Association needs to be more inclusive;
10. A County Fire Administrator is needed;
11. More career fire/EMS/rescue people to support/supplement the volunteers;
12. Either replace the Association or fix it;
13. The County fire service needs to be more unified;
14. Need to stop “egos” from getting in the way improvement;
15. Need for an administrator to oversee training for all companies;
16. Eliminate the power and personal bias of the Association;
17. Need County support for volunteer recruitment and retention program;
18. A fire administrator with authority to enforce standards and rules is needed;
19. Need for someone to oversee operations with authority to crack down on mismanaged companies;
20. Need a full-time county volunteer recruiter;
21. There is nothing in place to hold the companies accountable;
22. There is no accountability and oversight of the fire and EMS service by the County;
23. County should maintain fleet and provide reserve apparatus;
24. Appoint a County Fire Marshal to enforce codes;
25. Too many expectations of volunteers, County should fund, no fundraising;
26. Need to stop home staffing, need in-station duty crews;
27. Safe fire houses;

28. Handle purchasing the same for all;
29. Accountability to follow procedures;
30. Better dispatch system;
31. Use of new technologies;
32. More specialized training; and
33. Training officer should not report to the Association.

Study Team Observations

From a countywide point of view, Culpeper County is being served by a number of volunteer fire and EMS companies generally operating at emergency scenes in concert with one another. However, the makeup of the current system allows for various autonomous approaches to the following important aspects of the fire and EMS service delivery and management:

1. Chain of command;
2. Budgeting and accounting for tax funds;
3. Operational policies, procedures and SOPs;
4. Apparatus purchases and fleet size;
5. Apparatus deployment dispatch procedures;
6. Apparatus and personnel utilization on emergency incidents;
7. Public fire education;
8. Fire prevention and code enforcement;
9. Personnel training program/s;
10. Officer promotional requirements;
11. Determination of specific goals and objectives;
12. Firefighter supervision and discipline;
13. Tax funding level needed from County;
14. Tactics and strategy on emergency incidents;
15. Station staffing;
16. Apparatus staffing;
17. Apparatus maintenance;
18. Services provided;
19. Volunteer recruitment and retention;
20. Accountability for actions and the quality of services rendered;
21. Maintaining incident response times as short as possible;
22. Compliance with adopted standards and policies;

23. Utilization and supervision of career staff;
24. Service expansion/improvement planning; and
25. Safety of personnel.

There are eight service delivery teams in Culpeper County rather than a one-team approach. Each of the companies, to a greater or lesser extent, seems to focus on its own organization and response area thus creating duplication of effort and apparatus and equipment in a number of areas. Some members mentioned the existence of “fiefdoms” and “egos” on the part of some fire and EMS company leaders and service providers. However, the Study Team noted that the Culpeper County volunteer companies are far more cooperative with one another than in many systems. Furthermore, the Study Team noted that there is a general desire to maintain consistency in all operations.

FRAGILE NATURE OF VOLUNTEER FIRE AND EMS ORGANIZATIONS

It is a known trend, nationally and statewide, that attracting and retaining volunteer members in fire and EMS organizations is a significant problem. Most volunteer fire and EMS companies across the United States are dealing with the loss of volunteers. In some regions, even in the Commonwealth of Virginia, volunteer fire departments are “closing their doors” and disbanding their organizations. This is causing significant issues for many counties. As a result, many studies and assessments locally, regionally and nationally have been conducted to determine the causes and solutions to this problem. Further, many local government and first responder organizations are conducting volunteer recruitment and retention studies and implementing appropriate programs and incentives.

Considering this trend in reduced volunteer participation, Culpeper County is very fortunate to continue to be served by many dedicated volunteers and fire and EMS company organizations. This continued service depends on the recognition on the part of the County of the need to provide important financial resources and coordination and support functions to the volunteers to allow them to concentrate their efforts on service provision related activities.

In developing recommendations for consideration by the County, the Study Team has considered this fragile nature of the volunteer services in an effort to provide constructive suggestions for the future.

The Study Team firmly believes that in the case of volunteer fire and rescue companies there is strength through cooperation and teamwork serving growing counties such as Culpeper County.

The Organization and Administration recommendations include:

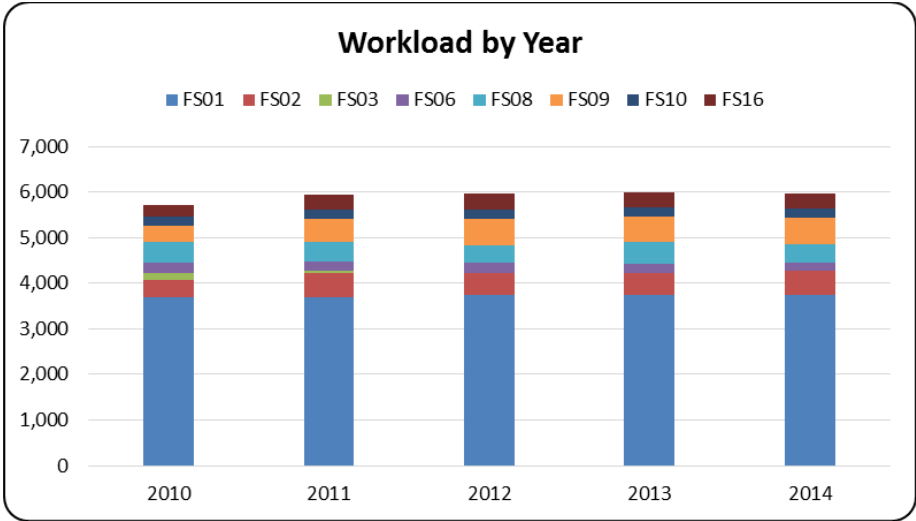
1. Modify the County Code to only allow those individuals 18 years and older to participate fully in all activities of a volunteer fire company.
2. Provide the authority to perform EMS cost recovery services be codified in the County Code.
3. Provide all references and regulations related to the County's authority, provision of fire and EMS and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
4. Codify the position of "Director" to reflect requirements in the State and County Code and the actual operation of the Office of Emergency Management (Emergency Services) in the county.
5. Provide all references and regulations related to the County's emergency management/services office and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
6. Appoint a fire marshal for the purposes of protecting public health, safety and welfare.
7. Provide all references and regulations related to the County's fire marshal and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
8. The CCVFRA form and codify a volunteer recruitment and retention committee as a Standing Committee of the Association.
9. Enhance and strengthen participation of the Culpeper County Volunteer Fire and Rescue Association; create a Fire, Recue and Emergency Services Commission; create a Department of Fire, Rescue and Emergency Services; establish the position of Director to head the Department; establish a Chief Officers Board; employ support staff to provide volunteer recruitment and retention, fire and EMS training, fire code enforcement and planning, fleet and facility maintenance and volunteer staffing coordination.

10. Consider for the long-term implementation of career firefighting staff use the integrated volunteer/career staffing approach.
11. Adopt a fire and EMS organization ordinance that should include primary sections relating to:
 - a. Statement of legislative intent regarding providing adequate public safety, health and welfare through a fire and emergency medical services that is highly competent and efficiently delivered by a combination of volunteer and career personnel;
 - b. Objectives of the combination fire and EMS system;
 - c. Maximum participation of volunteer fire and EMS personnel;
 - d. Fire, Rescue and Emergency Services Commission's authority;
 - e. Culpeper County Volunteer Fire and EMS Association's role and responsibilities;
 - f. Independent volunteer fire and EMS companies' roles and responsibilities;
 - g. Department of Fire, Rescue and Emergency Services, headed by the Director, authority and responsibilities;
 - h. Assets purchased by County funds to be owned by the County;
 - i. Additional Fire and EMS companies;
 - j. Relocation/addition of facilities and apparatus;
 - k. Equitable allocation of funding;
 - l. Annual fire tax levy;
 - m. EMS cost recovery;
 - n. Emergency management;
 - o. Fire prevention and code enforcement; and
 - p. Volunteer recruitment and retention incentives.
12. Allocation of funds provided to the volunteer companies in order to ensure the continued support of the volunteer system in Culpeper County.
13. Funds allocation based on need, justification and company performance activity.
14. Research and consider alternate sources of funding.

WORKLOAD/CALLS

Records of fire and medical incidents within Culpeper County were acquired through an export of the County's emergency communication center's computer-aid dispatch (CAD) system from 2010 through 2014. The following figure shows the growth in service demand of fire-related calls experienced by each fire department zone over the five years of data.

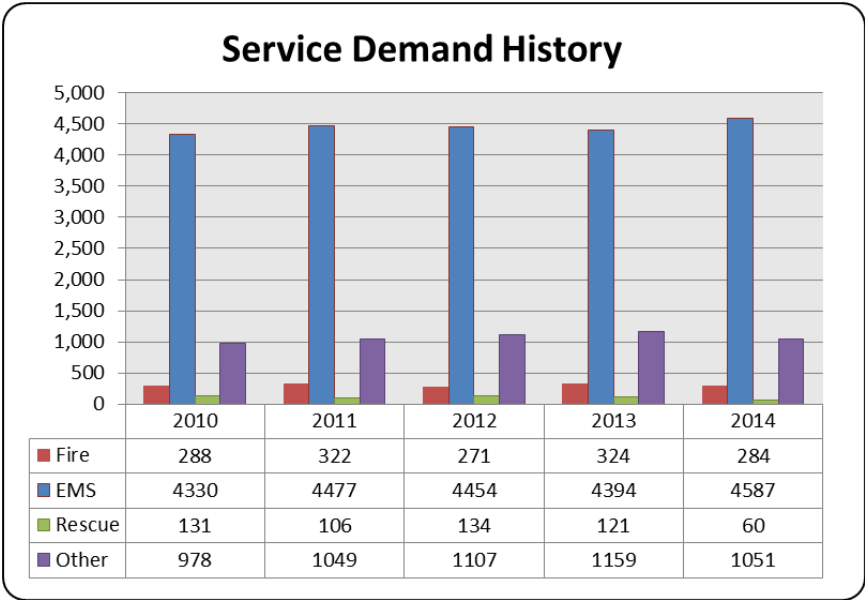
SERVICE DEMAND



The workload within each zone and overall has been stable. Since most of the population is concentrated within the FS01, Station 1 Emergency Service Zone, which encompassing the Town of Culpeper, it is not surprising that this area generates the most service demand.

The following figure illustrates the change in volume for categories of reported fire and all other categories of incidents (alarm, hazard, spill, medical, and all other).

WORKLOAD BY CALL TYPE



Most dispatches for the fire department are for medical responses or rescue types. Many dispatches also result in either a false alarm or a “good intent” where someone might have seen or smelled smoke, but it was something not hazardous.

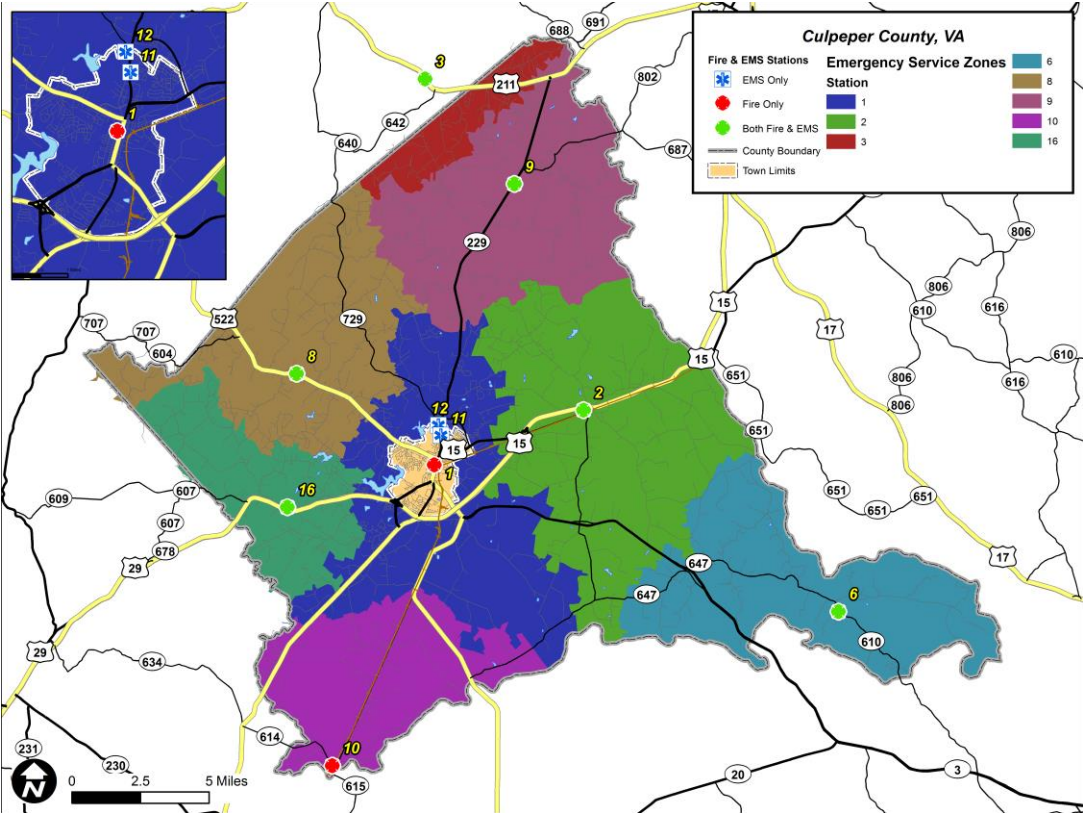
STATION LOCATIONS

Culpeper County receives services from 10 emergency services agencies providing fire suppression, first response medical and emergency medical treatment/ambulance transportation services (EMS) from the following facilities:

- Station 1 – Culpeper Volunteer Fire Department
 - Fire Suppression Only
- Station 2 – Brandy Station Volunteer Fire Department
 - Fire Suppression & First Responder Medical
- Station 3 – Amissville Volunteer Fire & Rescue
 - Fire & EMS located outside of County limits with primary response area within Culpeper County
- Station 6 – Richardsville Volunteer Fire & Rescue
 - Fire & EMS
- Station 8 – Salem Volunteer Fire & Rescue
 - Fire & EMS
- Station 9 – Little Fork Volunteer Fire & Rescue Company
 - Fire & EMS
- Station 10 – Rapidan Volunteer Fire Department.
 - Fire Suppression Only
- Station 11 – Culpeper Volunteer Rescue
 - EMS Only
- Station 12 – Culpeper County Office of Emergency Services
 - EMS Only (24/7 career staff, countywide coverage)
- Station 16 – Reva Volunteer Fire & Rescue Company
 - Fire & EMS

The following figure displays the locations of the stations relative to the County, the fire response zone areas, and roadway network.

FIRE STATION DISTRIBUTION



The fire and EMS station options and recommendations include:

1. Deploy Office of Emergency Management units strategically to provide coverage to zones that do not have a staffed ambulance, but within proximity of the Town of Culpeper, where the most frequent demand exists.
2. Build future fire stations based upon risk, population, and service demand as monitored on a five-year basis.

FIRE AND EMS APPARATUS

There are four basic types of fire and EMS apparatus: pumpers, aerial devices, specialized rescue trucks and ambulance transport units. These basic apparatus types may be combined, e.g., a quint that is a pumper and ladder and a pumper that may also perform rescue functions.

The nine departments/agencies that provide fire, rescue, and EMS services to the citizens of Culpeper County do so using a fleet of more than 75 emergency response vehicles. While there may appear to be some redundancy in vehicle types and uses, the fleet does

not seem askew for the services provided. The fleet is also well maintained given its size. The one troubling area is the continued purchase of used vehicles to serve as front-line response units. Hopefully, the use of used vehicles will soon be replaced by a cooperative County-CCVFRA program that allows for a well-organized approach to County-funded apparatus replacement purchases.

The financial support received through County government will be critical to the successful purchase and operation of emergency response apparatus. Appropriate controls will need to be put into place to ensure responsible use of those finances. The Study Team believes this can occur, as it occurs in many jurisdictions around the United States.

The fire and EMS apparatus recommendations include:

1. The Culpeper County VFD should replace Brush 1 within the next 24 months due to its age and lack of current safety technology.
2. The Brandy Station VFD should replace Brush 1202 within the next 24 months due to its age and lack of current safety technology.
3. The CCVFRA should discontinue the practice of reimbursing for vehicle operating and maintenance expenses based on receipts and move to an annual operating expense budget requirement for each department, whereby the individual departments spend within their operating expense allocations.
4. Departments should stop purchasing used vehicles to serve as front-line emergency response apparatus.
5. The Richardsville VFRC should replace Brush 6-1 within the next 24 months due to its age and lack of current safety technology.
6. The Salem VFD should replace Engine 8 and Brush 8 within the next 24 months due to age and lack of current safety technology.
7. The Little Fork VFRC should replace Attack 9 within the next 24 months due to its age and lack of current safety technology.
8. The Rapidan VFD should replace Pumper 10 within the next 24 months due to its age and lack of current safety technology. Consideration should be given to renaming Tanker 10 as Engine 10 and purchasing a new tanker (2,500 gallons or larger).
9. The Culpeper County VRS should replace Ambulance 11-5 within the next 24 months due to its age and lack of current safety technology.
10. The County OES should replace Medic 12-3 and Medic 12-4 within the next 24 months due to age and lack of current safety technology.

11. The Reva VFRC should replace Ambulance 16-3 within the next 24 months due to its age and lack of current safety technology.
12. The CCVFRA and the County should take the current Capital Improvement Forecast program and continue that planning process and expand it as needed to create more uniform guidelines.
13. The CCVFRA and the County should move the Capital Improvement Forecast into an Apparatus Replacement Program that uses a recognized budget process and includes County funding.
14. The CCVFRA and the County should enact mutually agreed upon performance-based controls for the use of County funding in the Apparatus Replacement Program.
15. The CCVFRA must work with the County to develop baseline replacement cost funding for all of the various apparatus breeds and that funding must be established and distributed using the budgetary process.
16. The CCVFRA/County Apparatus Replacement Program should include minimum design and equipment specifications for each breed of apparatus vehicle. Departments must meet these minimum specifications when planning the purchase of replacement vehicles if County funding is to be used.
17. The CCVFRA/County Apparatus Replacement Program should deter the purchase of used vehicles for any type of front-line emergency response service. All purchases of used vehicles should require additional scrutiny by the County and the CCVFRA and should only be considered in emergent situations such as the sudden unexpected total loss of a critical vehicle.
18. The County should include the purchase of new apparatus when planning for the construction of any new additional fire, rescue, or EMS station.
19. The County and the CCVFRA should implement a reserve apparatus program starting with a reserve engine and one or two reserve ambulances. These reserve units would be owned and maintained by the County and available for loan to all nine departments/agencies on an as need basis to provide coverage
20. The County and CCVFRA should consider the purchase of Culpeper County VFD's Engine 1 as the first engine in the reserve apparatus program.
21. Until such time that County service agreements are needed, the CCVFRA and the local departments should continue to use local and regional service centers for apparatus maintenance and repair.
22. The County and the CCVFRA should continue to fund, schedule, and coordinate the annual hose, pump, and ladder testing for all departments.

TRAINING

The main objective of the fire service is to prevent injury and loss of life and to protect property and the environment. Training is a key element to successful emergency scene operations and organizational effectiveness. Training in the fire, rescue, and EMS disciplines is also a career-long venture starting with recruit and basic training programs and working up to more sophisticated, advanced training and participation in higher education opportunities. In between formal training programs and educational courses, there has to be ongoing reinforcement of knowledge and skills that applies to all ranks.

It is very apparent from speaking with the members and officers of the volunteer fire departments in Culpeper County that the organizations are committed to providing good service to their customers. It is also important for the organizations to remember that their own members and employees are customers as well. Like many other fire departments across the United States, there are training shortfalls in the County, but none so critical that they cannot be overcome in relatively short order and with everyone's cooperation.

The training options and recommendations include:

1. The County and the individual volunteer fire departments that serve within it should continue to utilize DFP as the primary provider for their fire and rescue training needs.
2. The Office of Emergency Services should revise the Training Coordinator position description to require Virginia EMS Education Coordinator certification and assign the Training Coordinator the responsibility for overseeing all fire, rescue, and EMS training course scheduling and delivery throughout the County.
3. The Training Coordinator should report only to the Director at the Office of Emergency Services.
4. The title of Training Coordinator should be changed to Training Officer in order to align with more traditional fire service terminology.
5. The Training Coordinator's office should be relocated to the Office of Emergency Services facility and all associated office technology should be upgraded to facilitate the proposed creation and management of a County-based personnel training record system.
6. The County, in conjunction with the CCVFRA, should evaluate the future training facility needs in terms of classroom and practical skill space and logistical support. This evaluation should be completed by FY2020. At which

- time there should be very clear direction as to the needs of the County and its public safety providers.
7. The County/CCVFRA's fire/rescue training facility evaluation should consider a public safety training center complex shared between fire/rescue and law enforcement agencies.
 8. The County and the CCVFRA should begin now to evaluate potential land parcels for a future public safety training complex.
 9. The County and the CCVFRA should work with the Virginia Fire Services Board and the respective Fire Service Grant program regarding the Burn Building Grant Program and the future construction of a public safety training center in the County.
 10. The County and the CCVFRA should work with Culpeper County Public Schools to establish a relationship whereby school facilities (specifically classrooms and auditoriums) can be used as needed to host fire, rescue, and EMS training courses and programs until such time that department training rooms are upgraded or a training center is constructed.
 11. The CCVFRA Training and Standards Committee (new) should implement the following Officer Training Standards using a two-phase approach.
 12. The CCVFRA should not require Pro-Board certification for fire officers or fire fighters until such time that requisite courses for those certifications are readily available in the County. Otherwise, the candidate pool for officer ranks could be restricted.
 13. The CCVFRA should create a Training Standards and Certification Committee responsible for all of the training and certification related standards. The Committee should report directly to the leadership of the CCVFRA and possess the ability to suspend a department member from emergency scene operational authority if that department member fails to meet the applicable training and certification standard.
 14. The CCVFRA and the newly created Training and Certification Standards Committee should develop a three-year phase-in plan for implementation of the proposed Officer Training Standards. In the first three years, all existing officers and personnel desiring to serve as officers must complete coursework to comply with the Phase I requirements. At the end of Phase I, all officers must comply with the Phase II training and experience requirements or have their emergency scene operational authority removed by the CCVFRA.

15. The CCVFRA should not allow the practice of “grandfathering” existing officers to avoid additional training requirements. Equivalency for “like” training should be permitted using the DFP equivalency and Pro Board process.
16. Both now and in the future, all training standards developed by the Training and Certification Standards Committee should be made applicable to all fire, rescue, and EMS providers in the County of Culpeper regardless of affiliation.
17. The CCVFRA should immediately develop and implement a minimum training standards policy/program that clearly identifies the training requirements for probationary (new) members and that applies equally and equitably to all departments in the County. At a minimum, these standards must address the training requirements needed to ride on emergency apparatus as a crew assistant and as part of the minimum staffing crew.
18. The CCVFRA’s Training and Certifications Standards Committee should establish minimum training standards for the positions of Crew Assistant and Minimum Staffing Crew Member to include:
 - Firefighting/Rescue
 - Crew Assistant
 - Must complete training on the use of personnel protective equipment (PPE);
 - Must be trained to the Hazmat Awareness level;
 - Must be trained in CPR/AED; and
 - Must complete an orientation to the department’s equipment, apparatus, and standard operating procedures.
 - Minimum Staffing Crew Member
 - Must have been trained to the Crew Assistant level;
 - Must be trained to the Fire Fighter I level; and
 - Must be trained to the Hazmat Operations Level.
19. The CCVFRA’s Training and Certifications Standards Committee should develop and implement an emergency vehicle driver training and certification standard that is NFPA 1002 compliant and that is applied equally and equitably to the individual fire departments. The Emergency Vehicle Driver Standard should be phased in over a three- to five-year period in order to allow existing emergency vehicle drivers the opportunity to comply with the new requirements.
20. The CCVFRA should immediately require all chief officers to complete the NIMS ICS 300 incident command training and all captains and lieutenants to complete the NIMS ICS 200 incident command training. The CCVFRA should establish a deadline of no longer than eighteen (18) months for all officers to

- comply with this mandate. At which time the CCVFRA should remove incident command authority from those officers who have not met the requirement.
21. The County and the CCVFRA should examine the nationally recognized Blue Card Command Training Program and consider implementation of the command training program for all chief officers in the County.
 22. The CCVFRA should establish a required, minimum attendance level for active members at company drill training sessions. This requirement should be applied equally and equitably to all departments. Should an active member fail to meet this minimum training standard, then that member should be placed in a “provisional” (non-minimum staffing) status until the training is completed.
 23. The CCVFRA should require the departments to host, deliver, and or participate in meaningful, multi-department drills at least six times a year and have those drills focus on the various emergency response activities that require multiple units to work together in order to mitigate an incident.
 24. The CCVFRA should consider implementing some type of training certification award system that provides an award to the department members who pursue and attain Pro Board certification through completion of DFP training courses. At a minimum, the following certifications should be included in the certification awards program:
 - Fire Fighter I, II
 - Fire Officer I, II, III, and IV
 - Fire Apparatus Driver/Operator (FADO) Pump, and Aerial
 - Rescue Technician – Vehicle Rescue I/II
 - Rescue Technician – Machinery Rescue I/II
 - Rescue Technician – Confined Space Rescue I/II
 - Rescue Technician – Trench Rescue I/I
 - Rescue Technician – Rope Rescue I/II
 - Fire Instructor I, II, and III.
 - Public Fire Educator I/II
 25. The County should provide a training recordkeeping system for use by all of the fire departments. The system should be electronic based and should comply with NFPA 1401: Recommended Practice for Fire Service Training Reports and Records, 2012 Ed. The system should have data entry points at each fire/EMS station so that department Training Officers can enter and retrieve training data directly from the system. The training data entry and recordkeeping program must be able to manage and support the following types of training-related information:

- The entry and retrieval of individual member training course completion documentation – and perhaps even the imaging (scanning) of training certificates;
 - The entry and retrieval of individual member recertification documentation;
 - The entry and retrieval of company drill attendance and topic documentation;
 - The retrieval of individual member training records (training transcript); and
 - The retrieval of training topics and hours of attendance data (e.g. 230 hrs of driver training in 2015).
26. The CCVFRA and the Training Coordinator should begin work immediately to develop a budget to support the implementation of the minimum training standards. During Phase I implementation of the Officer Training Standards, the guaranteed delivery of the following courses should occur: at least one Fire Officer I course, one Fire Fighter II course, and one Vehicle Rescue – Level I course per year in addition to the normal course offerings.

EMERGENCY MEDICAL SERVICES

The majority of pre-hospital emergency care in the United States is provided by the fire service. In Culpeper County, EMS is provided by volunteer fire-rescue departments, volunteer rescue agencies, and career EMS personnel employed by the County working together in an integrated system. There are two fire departments in Culpeper County that do not provide direct EMS services but do respond on vehicular incidents and may be called upon to assist on medical calls.

Culpeper Volunteer Rescue Squad is the only all-volunteer EMS agency in the County and handles the largest call volume of all the volunteer companies. Five of the volunteer fire departments also provide various levels of EMS. Since the early 1990s, a career staff supplements the services provided by the volunteers. Over the past few years, their call volume has increased, necessitating an increase in the career staffing. They currently maintain two ambulance/medic units in service 24/7. When staffing allows and the need arises they can also staff a quick response vehicle.

Because of the rural nature of the County and the long travel times associated with many of the EMS calls, public education, prevention and self-help programs are important to patient outcomes especially in critical situations. The County is in need of a planned collaborative effort to make these types of programs available to the citizens.

EMS training for certifications is much more intense, regulated and time consuming than fire training. This places a greater demand on volunteers desiring to serve their community by providing emergency care. The number of volunteers capable of devoting the amount of time needed for the training, certifications and retention of skills is slowing dwindling. The CCVFRA needs to work with the EMS component of the system to support EMTs and Paramedics, especially in the volunteer ranks, if the system is to continue meeting the needs of the County.

It was obvious when interviewing members of the EMS agencies in Culpeper County that they are very dedicated to providing the best emergency care possible with the resources they have. They are cognizant of EMS standards and various rules and regulations and strive to comply and adapt for their conditions in a rural community. While the volunteer providers work hard to meet the training requirements and provide the service, they are realistic and are open to help from the career service and regional programs in order to continue to serve the community. The Study Team was impressed by measures they developed to ensure they are able to provide care on a timely basis and that it is of the quality needed to support the patient's condition.

The EMS options and recommendations include:

1. The Director of OEMS should perform a salary survey to compare Culpeper County salaries with neighboring jurisdictions and northern Virginia jurisdictions.
2. The CCVFRA, EMS Committee and the supervisors of the OEMS EMS staff should seek partners in the community to develop and deliver citizen CPR classes and public education programs focused on injury prevention for all age groups, healthy living related to cardiovascular diseases (stroke, heart attack, etc.), and knowing when to call 911 versus when to see a primary care physician.
3. CPR training should be required coursework for all high school students in the Culpeper County school system. The CCVFRA and County school board should work together to implement this recommendation.
4. The OEMS in coordination with the CCVFRA develop and implement an aggressive public-access AED program that has a countywide focus and works

- with the local government and business interests to implement public access to AEDs throughout Culpeper County.
5. The Study Team recommends that all front-line fire apparatus be equipped with an AED and personnel be trained to use it. Considering that this equipment is available in public places and used by citizens and law enforcement, it only seems appropriate that fire emergency personnel have the same lifesaving capabilities.
 6. Revise dispatch protocols to make sure that AED-equipped fire units are dispatched when closest to a critical emergency, especially cardiac arrests along with the appropriate ambulance/medic unit when the fire unit is closest to the incident.
 7. OEMS and the Communications Center should research and review programs available for notification of citizens of cardiac arrest situations since there will be more programs coming to the market and some may be better suited for a rural area than currently available systems. The incorporation of this type of program should be included in long-range planning for service improvement.
 8. CCVFRA must develop and implement an EMS unit staffing standard that establishes the minimum staffing for a medic unit as one ALS provider and one EMT-B provider (driver) with the role of a First Responder limited to a third or fourth care provider on the unit.
 9. If personnel are not immediately available in the first-due station to respond that the second due unit should be dispatched within three minutes, if the first-due unit does not respond within that timeframe.
 10. Dispatch and response times should be reviewed semi-annually by the EMS Committee of the CCVFRA to determine if there are additional ways to reduce response times. This may include examining the availability of career staff when there are multiple calls and recommending additional EMS career staff.
 11. Little Fork Volunteer Fire & Rescue Company should continue with its relationship with the Medical Director from Fauquier Hospital where they perform the majority of their transports.
 12. The County should support the CCVFRA in providing education to the community regarding the expansion of the ambulance billing program.

OPERATIONS AND STAFFING

Fire ground operational decisions must be made rapidly and consistently and not by committee after consultation. Even though every fire situation differs, the fire officer must make decisions based on hastily gathered available information.

The organization and operation of special operations functions appears to be adequate for the present call volume relating to hazmat, water and technical rescue incidents in Culpeper County. Establishing program goals and mutual aid partnerships will be important for each type of special operation service provided. In some cases, perhaps the best way to meet the established goals will be to utilize outside, mutual aid or regional resources instead of trying to be the sole-source provider of the service. The Culpeper County fire and rescue companies are to be commended for recognizing their limitations and securing mutual aid resources.

As with any specialty response force, access to good equipment and training are critical to the success of the organization. The County should dedicate funding to any approved special operation function above and beyond normal company funding.

Fire departments improve their effectiveness and the safety of their personnel with the initiation of pre-fire planning, incident command systems, policies and procedures and comprehensive firefighter safety programs. Reportedly, the fire companies do not conduct regular pre-fire planning and have not adopted consistent incident command system procedures or important safety-related SOPs in a number of important areas.

Culpeper County fire and rescue companies are staffed with volunteer personnel and backed up by County emergency services employees. These employees staff two ALS ambulances and many are cross-trained to assist in firefighting operations. County officials, residents and business owners should be very proud of the current fire and EMS services primarily due to existing volunteer staffing and effort.

For the future, there seems to be an opportunity to place more emphasis on volunteer, on-site staffing in some of the stations. Many very successful volunteer organizations place a high priority on taking action to maintain volunteers in the stations, such as stand-by programs, availability of computers and regularly used and well-managed facilities to accommodate overnight staff.

In order for the County to make appropriate staffing decisions in the future, a goal should be set to collect, correlate, and analyze basic service staffing and response time data.

The operations and staffing recommendations include:

1. Implement, as it does not exist, as a priority a central database for pulling countywide data, to include system performance, fire loss, etc.
2. Develop a centralized reporting; data collection and performance management statistics should be required of all fire and rescue providers in the county and should be codified by County Ordinance.
3. The fire and rescue system workload should be monitored and reported monthly and this data should be used in the determination of future needs of the service providers.
4. No change in the present level of heavy-duty extrication (rescue) services should be made.
5. Aggressively promote the installation of automatic sprinklers in all new, residential structures regardless of structure size and non-residential structures that have over 1,500 square feet of enclosed space.
6. Implement more water supply interoperability training between the departments.
7. Implement standard water tanker apparatus specifications be developed to assure maximum effectiveness in rural fire flow (water) delivery.
8. Culpeper County should appoint a Water Supply Coordinator (WSC) with the following responsibilities:
 - Maintain the countywide water supply map book/resource guide that identifies the location and capability of all water supply sites within the County;
 - Recommend additional water supply sites for underground storage tanks and/or dry fire hydrants and manage state grants for such;
 - Possess review sign-off authority on new fire protection water supply development; and
 - Coordinate the implementation of interoperability water supply training with the County Training for the local Fire and Rescue companies.
9. Fully implement the pre-fire planning SOG to strengthen its ability to be prepared for incidents.
10. A Standard Operating Procedure (SOP) relating to post-incident analysis on defined fire, rescue, EMS, HAZMAT incidents and other special issue incidents should be developed and implemented.

11. One Incident Command System (ICS) should be adopted, implemented and utilized countywide.
12. There should be regular and comprehensive training in the ICS and that the ICS must be utilized to the appropriate level on every emergency incident.
13. All organizations should be mandated to participate by joint training exercises involving the use of the ICS.
14. Volunteer officers should operate on a “hand-shake” agreement, which currently allows any qualified command officer to take charge at an incident, irrespective of whose volunteer company jurisdiction the incident may be in.
15. A standard that establishes an integrated chain of command within Culpeper County should be developed and adopted.
16. Establish a standard requiring the establishment of company and countywide duty schedules.
17. Conduct a systematic analysis of operations and activities for the purpose of determining the overall effectiveness of SOPs on an annual basis.
18. Conduct further study regarding the CAD system to determine if the needs of the Culpeper County fire and rescue system are being met and what, if any, changes should be implemented to address concerns.
19. The County adopt Staffing Option C (provide fire protection with an all-volunteer fire system, combination EMS staffing and career support staff) at this time and create “one department,” with the current volunteer companies remaining in-tact and partnering with the new Department, that provides oversight, leadership and career support positions such as those outlined in this report (County Chief of Director, Fire Marshal, Training Officer and personnel, Volunteer Coordinator, Fleet and Facility Maintenance, etc.).
20. Collecting and analyzing specific apparatus and incident scene staffing data should be a priority.
21. Implement an emergency incident response staffing-related records management systems to include the following:
 - Number of personnel responding on each unit;
 - Number of officers responding on each unit;
 - Number and type of personnel responding in personal vehicles, and arrival times; and
 - Number and type of personnel responding to the station during an incident, and remaining in the station to staff other apparatus not responding to the incident.

22. A countywide policy requiring the gathering and periodic analysis of station and apparatus staffing data should be adopted.
23. The County should fund the needed renovations of the fire station to accommodate onsite staffing and the County should consider implementing other programs that encourage personnel to remain in the fire stations on a scheduled basis. Some items for consideration include:
 - Offering a standby food program to supplement the cost of meals for volunteers serving on standby crews;
 - Providing physical fitness equipment in the station;
 - Providing access to computer equipment for study or other productive uses;
 - Establishing library and study areas in the station; and,
 - Providing a living area to accommodate many members in a social setting.
24. Provide dedicated funding to any approved special operation function above and beyond normal company funding.

HEALTH AND SAFETY

The health and safety of firefighters and EMS personnel should be a major concern of those delivering the services, those receiving the services, and those helping to pay for the services. Individuals working in public safety, particularly firefighting and EMS personnel, perform one of the most physically demanding, and mentally stressful, and dangerous occupations in the nation. Quite often, fire and emergency medical personnel are subjected to environments that require rapid, physical and mental response with a minimum of preparation.

Traditionally, at the national level, there has been limited attention paid to the wellness and fitness of firefighters. However, over the past decade, the safety and health of all emergency services providers has come to the forefront of discussion. Fire and EMS departments nationwide are implementing programs that help improve and support the health and wellness of their workforce.

The fire and rescue departments in Culpeper County lack a comprehensive safety and health program and fall short in many areas of compliance with NFPA 1500. Many professionals in the fire service say that safety is an attitude that must be believed in, that must be communicated, and, most importantly, must be enacted. Much work is needed in order for Culpeper County to attain that position. The leadership and members of the

County fire and rescue services and individual departments seem to be committed to the health and safety of personnel. They need to model the behaviors they expect from the membership. Resources, continued work in development of policies, procedures, practices and funds need to be made available to move forward in these efforts.

The health and safety recommendations include:

1. The Study Team recommends that the safety related policies and procedures be in a separate category in the CCVFRA SOGs.
2. The CCVFRA should establish a Health and Safety Committee. Each department, including the career department, should have representation on the committee. Some of the duties and responsibilities of the committee should include:
 - Development of a comprehensive risk management plan that not only addresses operational incident safety but incident reporting (injuries, etc.) and in house safety at the stations. The NFPA 1500 has a template for a risk management plan as Appendix D. It should be used to help develop the Culpeper County Risk Management Plan.
 - Identification and prioritization of policies and procedures that need to be developed in addition to review of current documents.
 - Coordination with the Training Coordinator to develop Safety Officer training program.
 - Identification and development of safety training for operational members of the fire and rescue departments in Culpeper County.
 - Develop a process for monitoring compliance with safety policies and procedures. This includes maintenance of data with quarterly review of incidents.
3. Development of a prevention program to prevent injuries.
4. The Training Coordinator should also be the designated Health and Safety Officer for the County fire and rescue departments in accordance with NFPA 1500 and NFPA 1621 Standard for Fire Department Safety Officer, 2015 Edition. This individual should be responsible for supporting and working with the Health and Safety Committee as it takes on the responsibility for development of a comprehensive health and safety program.
5. The CCVFRA is encouraged to consider adding an additional position to assist the Training Coordinator in support of the fire and EMS agencies in Culpeper County.

6. The CCVFRA should develop and adopt policies and procedures for privately owned vehicle (POV) response.
7. The CCVFRA, with the help of the Health and Safety Committee, should put a high priority on developing and implementing a mandatory seat belt usage policy and a process for ensuring compliance.
8. A comprehensive written vehicle collision reporting policy should be established that addresses all aspects of emergency vehicle collisions: driver training and certification; collision investigation and report writing; post-collision drug and alcohol screening; and driver remedial training.
9. The Health & Safety Committee should provide a report annually to the CCVFRA on any collisions and follow up recommendation for prevention.
10. The Safety and Health Committee should develop a policy regarding care and maintenance of personal protection equipment to ensure standard compliance by all agencies in the Association. The policy should follow the recommendations of NFPA 1851 Standard on Selection, Care and Maintenance of Structural Fire Fighting Protective Ensembles, 2014 Edition.
11. The CCVFRA, through the Health & Safety Committee, should develop and implement a written respiratory protection program that includes the use, maintenance, and repair of SCBA, as well as annual training and recertification for personnel.
12. The Health and Safety Committee is encouraged to look into the lack of hearing protection for response personnel and develop recommendations and a policy on the purchase and use of hearing protection.
13. The CCVFRA should immediately:
 - Develop clear and consistent incident management policies and procedures;
 - Implement consistent command officer training that requires all chief officers to be certified to the Fire Officer I level (and eventually to higher levels of Fire Officer certification as identified in the training chapter of this report) (NFPA 1021), Incident Scene Safety Officer, and ICS 300 and 400 levels (NIMS).
14. The CCVFRA should develop a comprehensive structure fire response procedure that meets the requirements set forth in NFPA 1500. This procedure should address the use of an initial 2-out team, the transition to a RIT operation, and a process by which a MAYDAY situation is managed.

15. The CCVFRA should develop and implement a post-incident analysis policy and procedure that is used for all significant fire/rescue/ EMS incidents in which fire and EMS units respond.
16. The fire and EMS departments should immediately install carbon monoxide detectors in all fire stations.
17. The CCVFRA in conjunction with the newly created Health & Safety Committee is encouraged to develop and implement a Facility Safety Inspection Program that complies with NFPA 1500 and ensures that a comprehensive safety inspection is completed at each of the CCVFRA facility on an annual basis at a minimum.
18. The CCVFRA should consider asking the County for funding for physical examinations as a benefit for those members that do not receive them with their employment.
19. The CCVFRA and Health & Safety Committee are encouraged to develop and implement a medical evaluation program for all active emergency responders who are expected to wear SCBA.
20. The Training Coordinator/Health and Safety Officer should be charged with oversight of an Infection Control program.
21. The County is encouraged to ensure that these types of employee assistance services are available for the employees of the Emergency Services Department, as well as volunteer members.
22. The CCVFRA should develop a written substance abuse policy that addresses aspects of alcohol and substance abuse as related to fire department operations.

VOLUNTEER RECRUITMENT AND RETENTION

Currently, fire and EMS services are provided in Culpeper County largely by volunteer members who respond to emergencies. This staffing approach, utilizing volunteer members of the community, has provided cost-effective fire and EMS services. The viability of this volunteer staffing approach in the future will, to a large extent, be based on the level of effort placed on volunteer recruitment and retention by the fire and rescue companies and the County. It is quite apparent to the Study Team that Culpeper County officials and the volunteers understand the importance of attracting and retaining volunteers. There are a number of potential opportunities to strengthen the current and prior initiatives.

Recruitment of volunteers for the fire and EMS services has been accomplished in a number of ways. Additionally, the volunteer companies have tried implementing a number of retention efforts. These programs appear to be only marginally successful in contributing to the maintenance of the volunteer fire and EMS personnel in Culpeper County.

Nationally, there are a number of very successful volunteer recruitment and retention programs in localities that continue to assist in providing the essential volunteer personnel for the provision of their fire and EMS services. The Study Team has outlined a number of recruitment and retention options for consideration by the County and the fire companies.

The volunteer recruitment and retention options and recommendations include:

1. The County should hire a full-time volunteer recruitment coordinator.
2. The County should formally adopt the recommendations regarding volunteer recruitment and retention outlined in the Virginia VWS report.
3. The high school fire and EMT training (cadet) program should be reconsidered in Culpeper County.
4. The County should seriously consider the volunteer live-in option as a bridge before career firefighter staff are hired for County stations. A group should be appointed to study this option, the need and cost of station upgrade, and develop a cost benefit analysis to be presented to the Board of Supervisors.
5. A comprehensive volunteer recruitment and retention program should be developed and implemented, building on the prior and current initiatives of the CCVFRA and the companies. The program should be appropriately funded and include:
 - The length of service awards program enhancements;
 - Recommendations for volunteer retention programs based on input received from volunteer exit interviews or forms;
 - Implementation of a property tax incentive and utility cost assistance retention initiatives;
 - Initiate recommendations for additional volunteer recruitment programs, such as possible medical and dental care;
 - Develop a volunteer handbook which can be given to prospective members of the fire departments, explaining the benefits and requirements of becoming a volunteer; and

- Focus volunteer programs toward retention of members during their first four years of membership.

FISCAL IMPACTS

Culpeper County is in the process of planning for facilities improvements and a variety of programs are under development. This report recommends a department director to provide the necessary staff coordination and direction to implement a number of the recommendations and to strengthen the volunteer-based fire, rescue and EMS services. It also recommends a fire marshal and volunteer coordinator. The estimated personnel costs are approximately \$300,000, excluding vehicles or computer equipment.

As noted in Chapter Eight, **the citizens of Culpeper County are reaping major substantial benefits from its all-volunteer fire, rescue and EMS system. To provide the same level of service with full-time paid personnel in the fire, rescue and EMS stations would require at least \$14 million each fiscal year for personnel wages.** This estimate is based on the average cost of personnel, including fringe benefits, of \$57,000 on an annual basis. The five-year costs would be more than \$70 million.

In charting a course for the future delivery of fire, rescue and EMS, this estimate of a paid system should be uppermost in considerations when considering funding

Alternate Sources of Funding

The Study Team is aware of a number of potential current and future alternate sources of funding that should be considered by the County. These sources include:

1. United States Fire Administration (USFA) Assistance to Firefighters Grant Program for grants and funding;
2. U.S. Department of Homeland Security Commercial Equipment Direct Assistance Program for equipment for first responders;
3. USFA Staffing for Adequate Fire and Emergency Response (SAFER) program;
4. Federal Office of Hazardous Materials, Hazardous Materials Emergency Preparedness (HMEP) grant program;
5. Various Virginia State grants and low interest loans;
6. Fire inspection and plans review fees;
7. Patient billing for EMS transports;

8. False alarm registration and enforcement charges; and
9. National Fire Academy Training Assistance funding.

Some of these funding opportunities have the potential for substantial ongoing sources of revenue and others may be one-time project specific grants or funding. Fire departments that pursue alternate sources of funding find the revenue beneficial to service delivery and many times supplement the normal primary source/s of funding.

The County is encouraged to evaluate these opportunities and aggressively seek out these and other options for funding.

ANTICIPATED OUTCOMES

When conducting a review of the delivery of fire and EMS and projecting the needs of the future, it is not possible to delineate all the positive outcomes. Improving the quality of life in a community and saving lives for service providers and stakeholders do not necessarily involve quantitative analysis.

A number of the anticipated outcomes through implementation of the recommendations in this report/plan and the continuation of the outstanding services by fire/ and EMS volunteers in Culpeper County are as follows:

1. Improved public recognition of volunteer-based service delivery;
2. Enhanced data collection and utilization for operations, staffing, training, and volunteer participation;
3. Enhanced management and staff support from County employees and a department head for department direction;
4. Enhanced initiatives to recruit and retain volunteers;
5. Improved training of officers and supervisors;
6. Improved safety and efficiency of service providers through upgraded training;
7. Enhanced teamwork by service providers;
8. Improved delivery of fire and EMS services through upgraded apparatus;
9. Improved work environment through rehab and upgrades of stations;
10. Improved physical condition of members through fitness and health initiatives;

11. Improved utilization of the volunteer officers by establishing eligibility requirements;
12. Improved coordinated response through incident command training;
13. Reduced liability exposure through compliance with a number of national standards, e.g., driver training and other standards;
14. Improved self-development initiatives by volunteers through awards system for meeting specific certifications;
15. Improved coordination/management of apparatus-related replacement, records and maintenance programs; and
16. Improved apparatus acquisition and timing through apparatus replacement schedule.

SUGGESTED TIMELINE

This Study Report should be considered as a **strategic planning tool for use over the immediate, mid-term and future**. Additional issues may need consideration in the future; therefore, the Plan should be used as a flexible guide for decisions relative to the organization, management and provision of fire and EMS services.

Figure 11.1 depicts a timeline that could be used as a guide for consideration of important changes. After relevant review and input, a final timeline should be established.

QUALITY OF SERVICE PROVIDERS

This blueprint builds on the current strengths of the many men and women providing fire and EMS services in Culpeper County. This includes all the volunteers and the County staff in the Office of Emergency Operations (dispatch). A number of recommendations in this Study came from volunteers providing the services. These very talented personnel work hard and deserve the trust, support, and respect of the stakeholders in Culpeper County. **Full County support of these volunteer service providers, financially and programmatically, is essential to retain a volunteer fire and EMS service for the long-term.**

CONTENTS

EXECUTIVE SUMMARY	E-1
TABLE OF FIGURES	x
ACKNOWLEDGMENTS	xiii
CHAPTER ONE – INTRODUCTION AND BACKGROUND	1
THE SETTING	1
CULPEPER COUNTY GOVERNMENT	2
Board of Supervisors	2
County Administrator.....	2
FIRE AND EMERGENCY MEDICAL SERVICES	3
Volunteer Fire and Rescue Association.....	3
Volunteer Fire and EMS Companies	3
Fire & EMS Stations & Services	4
TRENDS IN EMERGENCY SERVICES DELIVERY	5
Concern about the Environment	5
Scientific and Technological Advancements.....	7
Fire/Injury Prevention and Public Education	7
Fiscal Constraints	8
Role of Fire and EMS Departments.....	9
STUDY FRAMEWORK	10
Standards and Accepted Practices	11
SCOPE OF SERVICES FOR THIS STUDY	13
CHAPTER TWO – ORGANIZATION & ADMINISTRATION	16
OVERVIEW	16
ACCEPTED PRINCIPLES AND PRACTICES—ORGANIZATION	17
NFPA 1201 - Standard for Developing Fire Protection Services	17
CFAI Governance and Administration Criteria.....	18
LEGAL AUTHORITY	19
State of Virginia	19
Culpeper County, Virginia – Code of Ordinances	33
Culpeper County, Virginia – Comprehensive Plan	41
AGREEMENT FOR PROVISION OF FIRE AND/OR RESCUE SERVICE	43

REVIEW OF COUNTY CODE AND LEGAL AUTHORITY 47

 Fire and Rescue 47

 Emergency (Management) Services 49

 Fire Prevention 50

CULPEPER COUNTY FIRE AND EMS ORGANIZATIONS..... 51

 Culpeper County Volunteer Fire and Rescue Association 51

 CCVFRA Mission and Purpose 52

 CCVFRA Membership 53

 CCVFRA Board of Directors and Officers 53

 CCVFRA Standing Committees 54

 Volunteer Fire and EMS Companies 54

 Fire and Rescue Company Incorporation..... 55

 Fire and Rescue Company By-Laws 56

 Organizational Structure of Fire and EMS Companies 56

INPUT FROM FIRE AND EMS PERSONNEL 57

 Personal Interviews 57

 Confidential Member Survey Form 57

ORGANIZATIONAL OBSERVATIONS..... 58

 Individual Company Perspective — Member Perceptions 58

 Organizational Strengths 59

 Improvement Opportunities..... 60

 Countywide Perspective 61

 Study Team Observations 62

 Fragile Nature of Volunteer Fire and EMS Organizations..... 64

ORGANIZATIONAL ALTERNATIVES 65

 Organizational Models Involving Volunteer-Staffed Agencies..... 65

 Culpeper Fire & EMS Organizational Alternatives 66

 Role of the Culpeper County Volunteer Fire and Rescue Association 67

 Fire and Emergency Services Commission 68

 Department of Fire, Rescue and Emergency Services 69

 Fire and EMS Department Director 69

 Chief Officers Board 70

 Implementation of this Model for the Future 71

 Career “Firefighter” Staffing Implementation Model 71

IMPLEMENTATION CONSIDERATIONS 72

 Culpeper County Fire & EMS Comprehensive Ordinance 72

FUNDING..... 73
 Alternate Sources of Funding 75
 SUMMARY 76
 OPTIONS & RECOMMENDATIONS 79
 APPENDIX A—CONTRACT BETWEEN CULPEPER COUNTY BOARD OF
 SUPERVISORS AND CCVFRA..... 82
 APPENDIX B—SAMPLE ORDINANCES 92

CHAPTER THREE – DEMOGRAPHICS & RISKS 108
 SERVICE AREA DESCRIPTION..... 109
 POPULATION & HOUSING 110
 RISKS..... 114
 FUTURE TRENDS 114

CHAPTER FOUR – FIRE STATION LOCATIONS 117
 CFAI FIXED FACILITIES CRITERIA 117
 CURRENT FIRE STATION LOCATIONS 118
 STATION LOCATION ASSESSMENT 119
 ISO Criteria 120
 Response Time Capability Criteria 121
 Fire-Related Response Time Considerations 122
 NFPA 1710 Guideline 123
 NFPA 1720 Guideline 123
 CURRENT SERVICE DEMAND ANALYSIS 126
 Department Level 126
 RESPONSE-TIME ANALYSIS 133
 Future Fire Station Locations 137
 SUMMARY 140
 OPTIONS & RECOMMENDATIONS 141

CHAPTER FIVE – FIRE AND EMS APPARATUS..... 142
 COMMISSION ON FIRE ACCREDITATION INTERNATIONAL (CFAI) 143
 FIRE AND EMS APPARATUS IN CULPEPER COUNTY 144
 CURRENT APPARATUS INVENTORIES 149
 Culpeper County Volunteer Fire Department..... 149
 Replacement/Purchase Process 150

Financing..... 150

Apparatus Maintenance 151

Hose, Pump, and Ladder Testing 151

Brandy Station Volunteer Fire Department 152

 Replacement/Purchase Process 152

 Financing..... 153

 Apparatus Maintenance 153

 Hose and Pump Testing..... 153

Richardsville Volunteer Fire Department & Rescue Squad..... 154

 Replacement/Purchase Process 154

 Financing..... 155

 Apparatus Maintenance 155

 Hose, Ladder, and Pump Testing 155

Salem Volunteer Fire Department 156

 Replacement/Purchase Process 157

 Financing..... 157

 Apparatus Maintenance 157

 Hose, Ladder, and Pump Testing 157

Little Fork Volunteer Fire & Rescue Company 158

 Replacement/Purchase Process 159

 Financing..... 159

 Apparatus Maintenance 159

 Hose, Ladder, and Pump Testing 159

Rapidan Volunteer Fire Department..... 160

 Replacement/Purchase Process 160

 Financing..... 161

 Apparatus Maintenance 161

 Hose, Ladder, and Pump Testing 161

Culpeper County Volunteer Rescue Squad 161

 Replacement/Purchase Process 162

 Financing..... 162

 Apparatus Maintenance 162

Office of Emergency Services 163

 Replacement/Purchase Process 163

 Financing..... 163

 Apparatus Maintenance 164

Reva Volunteer Fire & Rescue Company..... 164

 Replacement/Purchase Process 165

 Financing..... 165

 Apparatus Maintenance 165

 Hose, Ladder, and Pump Testing 165

APPARATUS REPLACEMENT SCHEDULE AND PROCESS 165

 Fleet Expansion 167

 Reserve Apparatus..... 168

APPARATUS AND EQUIPMENT MAINTENANCE 168

 Testing and Certifications 169

SUMMARY 169

OPTIONS & RECOMMENDATIONS 170

CHAPTER SIX – FIRE AND RESCUE TRAINING..... 173

OVERVIEW OF FIRE SERVICE TRAINING..... 173

NATIONAL TRAINING STANDARDS AND PROGRAMS 175

 National Professional Qualifications System 175

 National Fire Academy 176

STATE TRAINING PROGRAMS 177

 Virginia – National Pro Board Certifications 178

 Instructor Training..... 178

CULPEPER COUNTY TRAINING 178

 Training Coordinator 180

 Training Officers 181

 Training Facility 182

 Training Standards 183

 Officer Training Standards –Phase I (3 years) 185

 Officer Training Standards –Phase II (2 years) 186

 Training and Certification Standards Committee 188

 Firefighter Training 189

 Driver Training 191

 Skills Maintenance Training 193

 Drill Attendance 194

 Inter-Operability Training 194

 Training Certifications 195

 Training Records 196

Funding..... 197

SUMMARY 198

OPTIONS AND RECOMMENDATIONS..... 198

CHAPTER SEVEN – EMERGENCY MEDICAL SERVICES 205

OVERVIEW 205

HISTORY OF EMS 207

THE IDEAL CHAIN OF SURVIVAL EVENTS..... 208

EMS IN VIRGINIA 213

 EMS Levels of Training and Certification in Virginia..... 213

 Basic Life Support Levels in Virginia..... 214

 Advanced Life Support Levels in Virginia 215

EMS IN CULPEPER COUNTY 216

 Organizational Overview 216

EMS AGENCIES IN CULPEPER COUNTY 216

 Culpeper County Volunteer Rescue Squad, Inc. (Company 11)..... 216

 Culpeper County Emergency Services (Company 12)..... 218

COMPARISON OF EMS IN CULPEPER TO THE “IDEAL CHAIN OF SURVIVAL” . 220

 Public Education/Prevention Programs 220

 Handling the 911 Call 222

 Response Time 224

 Provider Training 226

 Medical Direction..... 226

 EMS Billing..... 227

 Quality Assurance 228

SUMMARY 229

OPTIONS AND RECOMMENDATIONS..... 230

CHAPTER EIGHT – OPERATIONS AND STAFFING 232

INTRODUCTION 232

THE FIRE PROBLEM 233

NATIONAL FIRE PROBLEM 234

VIRGINIA FIRE PROBLEM..... 235

CULPEPER FIRE PROBLEM..... 236

CULPEPER COUNTY INCIDENT WORKLOAD 236

SPECIAL OPERATIONS SERVICES 239

Overview of Special Operations 239

Hazardous Materials Response 240

 Hazardous Materials Response in Virginia..... 242

 Hazardous Materials Response in Culpeper County 244

Vehicle Extrication Service..... 244

Technical Rescue Services 245

Mass Casualty Incident Response..... 247

RESIDENTIAL SPRINKLERS 247

WATER SUPPLY 248

 Assessment and Training 248

 Alternative Water Supply Program (AWS)..... 248

 Water Supply Coordinator 249

PRE-FIRE PLANNING..... 250

 Pre-Fire Planning — The Concept..... 250

 Pre-Fire Planning in Culpeper County..... 252

POST-INCIDENT ANALYSIS 253

 National Incident Management System (NIMS) 253

INCIDENT COMMAND SYSTEM (ICS) 254

 National ICS Experience..... 254

 ICS in Culpeper County 256

INTEGRATED EMERGENCY COMMAND STRUCTURE..... 257

COMMAND OFFICER COVERAGE..... 258

POLICIES AND STANDARD OPERATING PROCEDURES 258

 Input from Culpeper County Fire and EMS Providers..... 258

CCVFRA SOPs..... 260

CONSISTENT DISPATCH BOX ASSIGNMENTS 280

STAFFING..... 280

INPUT FROM SERVICE PROVIDERS 283

DETERMINING STAFFING NEEDS 283

 Firefighter Utilization..... 285

STAFFING OPTIONS 287

STATION AND APPARATUS STAFFING..... 290

 Station Staffing..... 290

 Fire Apparatus Staffing 291

 In-Station Standby Programs 292

 Career Fire and EMS Staffing..... 293

SUMMARY 294

OPTIONS & RECOMMENDATIONS 296

CHAPTER NINE – HEALTH AND SAFETY 300

OVERVIEW 300

 Commission on Fire Accreditation International (CFAI) 301

NATIONAL FALLEN FIREFIGHTER SAFETY INITIATIVES 302

NATIONAL STANDARDS AND REGULATIONS 305

 OSHA Regulations 305

 National Standards 307

CULPEPER COMPLIANCE WITH STANDARDS AND REGULATIONS 307

 NFPA 1500 307

 Fire Department Administration 308

 Training and Education 313

 Fire Apparatus, Equipment and Driver/Operators 314

 Protective Clothing and Equipment 315

 Emergency Operations 318

 Facility Safety 322

 Medical and Physical Requirements 323

 Member Assistance and Wellness Program 324

SUMMARY 325

OPTIONS AND RECOMMENDATIONS 326

CHAPTER TEN – VOLUNTEER RECRUITMENT AND RETENTION ... 330

OVERVIEW OF VOLUNTEERISM 330

VOLUNTEERISM: THE PENNSYLVANIA EXPERIENCE 331

VOLUNTEERISM: THE VIRGINIA EXPERIENCE 333

INPUT FROM CULPEPER FIRE AND EMS SERVICES PROVIDERS 343

RECRUITMENT OF VOLUNTEERS 343

 High School Cadet Program 344

 Junior Firefighter/EMT Program 344

 Student Live-in Programs 345

RETENTION OF VOLUNTEERS 346

PUBLIC AWARENESS 351

RECRUITMENT AND RETENTION PLAN 352

VOLUNTEER COORDINATOR 352

OPTIONS AND RECOMMENDATIONS..... 353

CHAPTER ELEVEN – IMPLEMENTATION 355

REVIEW OF REPORT 355

FISCAL IMPACTS 356

 Alternate Sources of Funding 356

ANTICIPATED OUTCOMES..... 357

SUGGESTED TIMELINE 358

QUALITY OF SERVICE PROVIDERS 358

STUDY OPTIONS AND RECOMMENDATIONS..... 367

TABLE OF FIGURES

CHAPTER TWO – ORGANIZATION & ADMINISTRATION

Figure 2.1 CULPEPER COUNTY COMPREHENSIVE PLAN FUTURE FIRE AND RESCUE STATION PROJECTIONS.....	43
Figure 2.2 CULPEPER COUNTY FIRE AND RESCUE COMPANIES OPERATING AT A STRUCTURE FIRE.....	52
Figure 2.3 CULPEPER COUNTY FIRE AND RESCUE COMPANIES FY2016 BUDGET.....	73
Figure 2.4 CULPEPER COUNTY EMERGENCY SERVICES FY2016 BUDGET.....	74
Figure 2.5 CULPEPER COUNTY VOLUNTEER COMPANIES 2016 CIP.....	74
Figure 2.6 CULPEPER COUNTY POPULATIONS PROJECTIONS.....	77
Figure 2.7 CULPEPER COUNTY POPULATION TREND.....	78

CHAPTER THREE – DEMOGRAPHICS & RISK

Figure 3.1 SERVICE AREA.....	109
Figure 3.2 HISTORIC POPULATION.....	110
Figure 3.3 POPULATION DENSITY.....	111
Figure 3.4 CURRENT POPULATION BY AGE GROUP.....	112
Figure 3.5 POPULATION CHANGE.....	113
Figure 3.6 HOUSING BY OCCUPANCY.....	113
Figure 3.7 HOUSING OCCUPANCY CHANGES.....	114
Figure 3.8 LAND-USE RISKS.....	115
Figure 3.9 POPULATION PROJECTIONS.....	116

CHAPTER FOUR – FIRE STATION LOCATIONS

Figure 4.1 FIRE STATION DISTRIBUTION.....	119
Figure 4.2 ISO ENGINE DISTANCE.....	121
Figure 4.3 FLASHOVER COMPARISON.....	122
Figure 4.4 TRAVEL TIME EXTENT.....	125
Figure 4.5 SERVICE DEMAND.....	126
Figure 4.6 WORKLOAD BY CALL TYPE.....	127
Figure 4.7 WORKLOAD BY MONTH OF YEAR.....	128
Figure 4.8 WORKLOAD BY DAY OF WEEK.....	129
Figure 4.9 WORKLOAD BY HOUR OF DAY.....	130

Figure 4.10 SERVICE DEMAND.....	131
Figure 4.11 STRUCTURE FIRE INCIDENTS	132
Figure 4.12 COVERAGE STATISTICS.....	132
Figure 4.13 RESPONSE TIME PERFORMANCE	134
Figure 4.14 RESPONSE PERFORMANCE BY STATION AREA.....	135
Figure 4.15 STATION 12 RESPONSE-TIME PERFORMANCE	136
Figure 4.16 WORKLOAD FORECAST.....	137
Figure 4.17 CULPEPER COUNTY COMPREHENSIVE PLAN FUTURE FIRE AND RESCUE STATION PROJECTIONS	139

CHAPTER FIVE – FIRE AND EMS APPARATUS

Figure 5.1 CULPEPER COUNTY VFD APPARATUS INVENTORY	149
Figure 5.2 BRANDY STATION VFD APPARATUS INVENTORY	152
Figure 5.3 RICHARDSVILLE VFD & RS APPARATUS INVENTORY	154
Figure 5.4 SALEM VFD APPARATUS INVENTORY	156
Figure 5.5 LITTLE FORK VFRC APPARATUS INVENTORY.....	158
Figure 5.6 RAPIDAN VFD APPARATUS INVENTORY.....	160
Figure 5.7 CULPEPER COUNTY VRS APPARATUS INVENTORY.....	161
Figure 5.8 OFFICE OF EMERGENCY SERVICES APPARATUS INVENTORY	163
Figure 5.9 REVA VFRC FIRE AND EMS APPARATUS INVENTORY	164

CHAPTER SEVEN – EMERGENCY MEDICAL SERVICES

Figure 7.1 EMS RESPONSES BY STATION AREA (2014)	217
Figure 7.2 EMS EVENTS BY UNIT (2010-2014).....	219

CHAPTER EIGHT – OPERATIONS AND STAFFING

Figure 8.1 VIRGINIA FIRE DATA & STATISTICS	235
Figure 8.2 STRUCTURE FIRE INCIDENTS	236
Figure 8.3 CULPEPER COUNTY CALL VOLUME	238
Figure 8.4 CULPEPER COUNTY CALL VOLUME PROJECTIONS	238
Figure 8.5 VIRGINIA REGIONAL HAZMAT TEAMS	243
Figure 8.6 LITTLE FORK VOLUNTEER FIRE AND RESCUE COMPANY’S TECHNICAL LARGE ANIMAL RESCUE TEAM	246
Figure 8.7 OLD KELLER MANUFACTURING BUILDING FIRE — POST-INCIDENT ANALYSIS	256

Figure 8.8 NFPA 1720 STAFFING DEPLOYMENT 282
Figure 8.9 OSHA TWO IN, TWO OUT RULE 284

CHAPTER TEN – VOLUNTEER RECRUITMENT AND RETENTION

Figure 10.1 VIRGINIA VWS REPORT – CULPEPER RECRUITMENT
ACTIVITY ANALYSIS 338
Figure 10.2 VIRGINIA VWS REPORT – FAUQUIER COUNTY RECRUITMENT
ACTIVITY ANALYSIS 339
Figure 10.3 ROANOKE COUNTY VOLUNTEER INCENTIVE PLAN 349
Figure 10.4 ALBEMARLE COUNTY VOLUNTEER INCENTIVE PLAN 350

CHAPTER ELEVEN – IMPLEMENTATION

Figure 11.1 SUGGESTED TIMELINE 359

CHAPTER ONE INTRODUCTION AND BACKGROUND

This chapter provides a brief overview of Culpeper County; basic information regarding the fire, rescue and emergency medical services (EMS) delivery agencies; standards and practices in fire/EMS services; the background and framework for the development of this study; a discussion of current fire/EMS service trends; fiscal issues; and a summary review of the scope of services for this study.

THE SETTING

Culpeper County was established in 1749 from Orange County and was named for Thomas Culpeper. Culpeper County is located in Northern Virginia west of the confluence of the Rappahannock and Rapidan rivers and encompasses 379.23 square-miles. The Town of Culpeper is anchored near the center of the county and is equidistant northeast of Charlottesville and southwest of the District of Columbia. Culpeper County is just west of the city of Fredericksburg, and several U.S. and State highways cross within the area. Culpeper County is adjacent to the following counties:

- Stafford County
- Orange County
- Madison County
- Rappahannock County
- Spotsylvania County
- Fauquier County

As of the 2010 Census, the population was 46,689. The county seat and only incorporated municipality in the County is the Town of Culpeper.

The County of Culpeper is expected to maintain a modest population growth pattern. The County, like most communities, plans for improvements to the airport facility, County offices, courts, schools and parks. A new connector between Route 729 and Route 522 is also planned. Connectivity such as this helps first responders reach their destination faster.

CULPEPER COUNTY GOVERNMENT

Culpeper County is administered and managed by the Board of Supervisors and a County Administrator.

Board of Supervisors

According to the County's website, the powers and duties of the local Board of Supervisors include:

- Preparing the County budget and appropriating funds; levying County taxes; appointing members of various boards and committees;
- Pre-auditing claims against the County and issuing warrants for their settlement; constructing and maintaining County buildings and other property; adopting the County's Comprehensive Land Use Plan, approving and enforcing zoning and other land use ordinances; and,
- Adopting and enforcing ordinances for police, sanitation, health, and other purposes as permitted by State law.

County Administrator

Also, as stated on the County website, the County Administrator is the highest level management office of the Culpeper County government, he or she is a full-time official appointed by the Board of Supervisors. The County Administrator directs and supervises the day-to-day operations of all County departments and agencies, which are under the direct control of the Board of Supervisors pursuant to county ordinances and regulations.

The County Administrator also provides administrative support to the board and implements its directives with regard to board agendas, meetings, resolutions, responsible for recording the legal business of the Board, for supplying such records upon demand for publication according to legal requirements, and constituent services. Additionally, the County Administrator serves as the Board of Supervisors' official liaison to the constitutional officers, the judiciary, and state and regional agencies.

FIRE AND EMERGENCY MEDICAL SERVICES

Volunteer Fire and Rescue Association

The Culpeper County Volunteer Fire & Rescue Association (CCVFRA) exists to assist in the coordination and provision of emergency services between Culpeper County, Virginia, and its eight member companies: Brandy Station Volunteer Fire Department, Inc.; Culpeper County Volunteer Fire Department, Inc.; Culpeper County Rescue Squad, Inc.; Little Fork Volunteer Fire and Rescue Company, Inc.; Reva Volunteer Fire and Rescue Company, Inc.; Rapidan Volunteer Fire Department, Inc.; Richardsville Volunteer Fire Department and Rescue Squad, Inc.; and Salem Volunteer Fire Department, Inc.

Volunteer Fire and EMS Companies

Each of the eight volunteer fire and EMS companies are incorporated under the laws of the State of Virginia, operate under a set of adopted authorizations including a constitution, bylaws and other rules and guidelines, and elects and/or appoints a set of administrative and operational officers pursuant to their bylaws.

The volunteer fire and EMS companies that are part of the Culpeper County Fire and EMS Service include:

Culpeper Volunteer Fire Department
151 - 153 West Davis Street
Culpeper VA 22701
(540) 825-8777

Brandy Station Volunteer Fire Department
19601 Church Road
Brandy Station VA 22714
(540) 825-1555 or (540) 825-7678

Amissville Volunteer Fire and Rescue
14711 Lee Highway
Amissville VA 20106
(540) 937-5125

Richardsville Volunteer Fire and Rescue
29361 Eley's Ford Road
Richardsville VA 22736
(540) 399-1890

Salem Volunteer Fire and Rescue
13428 Scotts Mill Road
Culpeper VA 22701
(540) 825-9112

Little Fork Volunteer Fire and Rescue
6011 Rixeyville Road
Rixeyville VA 22737
(540) 937-7717

Rapidan Volunteer Fire and Rescue
9729 Locust Dale Road
Rapidan VA 22733
(540) 672-5744

Culpeper Volunteer Rescue
1121 North Main Street
Culpeper VA 22701
(540) 825-2247

Reva Volunteer Fire and Rescue
18230 Birmingham Road
Culpeper VA 22701
(540) 547-3747

Fire & EMS Stations & Services

Culpeper County receives services from 10 emergency services agencies providing fire suppression, first response medical and emergency medical treatment/ ambulance transportation services (EMS) from the following facilities:

- Station 1 – Culpeper Volunteer Fire Department
 - Fire Suppression Only
- Station 2 – Brandy Station Volunteer Fire Department
 - Fire Suppression & First Responder Medical
- Station 3 – Amissville Volunteer Fire & Rescue
 - Fire & EMS located outside of County limits with primary response area within Culpeper County
- Station 6 – Richardsville Volunteer Fire & Rescue
 - Fire & EMS
- Station 8 – Salem Volunteer Fire & Rescue
 - Fire & EMS
- Station 9 – Little Fork Volunteer Fire & Rescue
 - Fire & EMS
- Station 10 – Rapidan Volunteer Fire Department
 - Fire Suppression Only
- Station 11 – Culpeper Volunteer Rescue
 - EMS Only
- Station 12 – Culpeper County Office of Emergency Services
 - EMS Only (24/7 career staff, countywide coverage)
- Station 16 – Reva Volunteer Fire & Rescue
 - Fire & EMS

TRENDS IN EMERGENCY SERVICES DELIVERY

The fire, rescue and EMS services have been evolving nationwide for a number of reasons, not the least of which is the changing fiscal issues and complexities of the communities served. A variety of trends and issues in local government are requiring municipalities and emergency service providers to consider changes in the nature and level of services as part of an overall strategy to solve a number of problems. While the issue of recruitment and retention of volunteers in the fire, rescue and EMS services is a complex and challenging problem for local communities served by volunteers, a brief review of several other trends and issues affecting local municipalities and their emergency services is outlined in the next few sections.

More than any period in recent history, changes in local governments are having, and will continue to have, a significant impact on the fire, rescue and EMS service. The fire, rescue and EMS service, known for its traditionalism, is confronting these changes at an unprecedented rate. Certain trends for the next decade are becoming more apparent.

These trends can be categorized into five general headings:

1. Concerns about the environment;
2. Scientific and technological advancements;
3. Fire and injury prevention and public education;
4. Fiscal constraint; and
5. Role of fire departments, especially post 9/11.

Concern about the Environment

During the 1980s, worldwide concern about the environment impacted every facet of life. Substantial initiatives relative to the environment by various groups are ongoing. Businesses and industries are responding responsibly by adapting their ways of doing business to protect the environment. “Changes in the natural environment may necessitate revolutionary changes in the fire, rescue and EMS service,” stated Herman W. Brice, Chief Fire Administrator, Palm Beach County Fire Rescue. Brice, a noted fire expert, referred to water shortages and concern about water runoff as issues that may force the fire, rescue and EMS service to develop alternate means of extinguishment. With a perceived increase in global warming among major scientists, there may be an increase in the number of natural disasters to which the fire, rescue and EMS service must respond.

Part of this attitude about the environment stems from an overall concern of people toward their safety. The public is demanding that risks be lowered, and that they be shielded from potential harm. This results in legislation and regulations regarding hazardous materials and increased pressure for code enforcement.

The concern for personal safety extends beyond the general public. Fire, rescue and EMS service personnel, who previously showed little concern for their own well-being especially in emergency situations, are increasingly aware of the dangers inherent in their work. They are demanding that their risks of injury and illness be reduced through standards, regulations, training, safe equipment, and personal protection. These demands are increasing personnel and other costs associated with the fire, rescue and EMS service and are necessitating changes in the way fire suppression is conducted. The demands are also resulting in a greater focus by management on the employee as a valuable resource.

Concerns for the employee are extending beyond fireground safety issues. Employee assistance programs, wellness programs, physical fitness programs, and critical incident stress debriefings (CISD) are emerging as common approaches to employee health and safety.

Changes in the American workforce also affect the fire, rescue and EMS service. Increasingly, women and minorities are becoming vital members of the fire, rescue and EMS service. While many fire departments have started addressing these overdue workforce changes, many still have the attitude that “it won't happen to my department.” The impact of the Americans with Disabilities Act (ADA) is yet to be fully recognized by the fire, rescue and EMS service; legislation may cause the service to rethink its philosophy regarding qualifications to be a firefighter in today's world.

Proliferation of regulations is having a significant impact on the fire, rescue and EMS service. Occupational safety and health organizations have started enforcing regulations pertaining to the fire, rescue and EMS service and other public service agencies. New regulations regarding hazardous materials and the recent regulations on blood-borne pathogens have placed significant requirements on the fire, rescue and EMS service with regard to training of personnel, providing proper protection, and providing the resources necessary to fully implement the regulations. For the future, the work environment in the fire, rescue and EMS service will become more regulated from both outside and inside the fire protection community. While most of these regulations should enhance the fire,

rescue and EMS service's preparedness, there will be additional costs associated with operating a 21st century fire department.

Scientific and Technological Advancements

The technological trends will make the work of persons involved in fire and safety services easier and yet more challenging. The increasing sophistication of electronic detection and early activation of suppression systems will reduce the risk of devastating fires. Computer technology will enhance not only notification and dispatch specialties, but also the response sequence and maintenance of data. With improved data management systems brought about by the increased utilization of computers, the fire, rescue and EMS service will be able to provide more timely and complete evaluation of community needs, and the appropriate response to meet these needs.

Improvements in technology may also enhance the ability of fire personnel to perform certain functions, such as fire inspections, plans reviews and dispatching. Further, technology is likely to impact the staffing requirements to perform these functions. Overall, improved technology may help in preventing fires and in providing more efficient work performance. The end result is an anticipated decrease in the number of personnel in the fire, rescue and EMS service work force.

Fire/Injury Prevention and Public Education

Fire/injury prevention and public education has become one of the main activities to which more time, attention, and resources will be devoted in the fire, rescue and EMS service in the future. Over the past several decades, the fire, rescue and EMS service has been very effective in reducing the number of fires and losses due to fires through fire prevention programs and public education. Many fire, rescue and EMS service leaders now feel that the same lessons learned in developing effective public education programs can be applied to injury prevention programs. A significant reduction in the number of injuries is a goal. Public education programs can help reduce the number of injuries; moreover, public education should help individuals become more aware of early warning signs for various illnesses, so that timely intervention can occur and prevent complications.

Part of the public interest in health has centered on the ability to provide assistance during a crisis situation. For quite some time, fire, rescue and EMS companies have been looked upon as a source for public training to handle emergencies. For example, self-help programs, such as citizen CPR and “what to do before an ambulance arrives,” are programs provided by fire/EMS services personnel. These programs not only serve to enhance the safety of the community and save lives, but are also excellent methods for fire departments to market their services. As funding of public agencies continues to be a major constraint on local government, the fire, rescue and EMS service must recognize the need for promoting its services to the community to secure support for sufficient funding of its mission.

One challenge for the next decade in public education and prevention programs will be in reaching target groups that are experiencing the most significant problems with life safety. These groups include the very young and the elderly, as well as low-income and minority populations.

Fiscal Constraints

In local government, municipal administrators and elected officials have become frustrated with the loss of revenues and fiscal constraints imposed at the state and federal levels. While revenues are being reduced, labor costs in combination volunteer/paid departments and equipment costs in all fire and EMS agencies continue to rise. This has caused significant pressures on the municipalities to reduce other services to an even greater extent or raise taxes. Unfortunately, fiscal constraints can create tension and friction between administrators/elected officials and service providers as funding priorities are pursued and established.

Across the board decreases in tax revenues at all levels of government—federal, state and local—and increases in legal action and litigation have also negatively impacted the availability of revenues to reward good program managers and employee performance or enhance services.

These examples are only a few of the fiscal constraints that are negatively impacting local governments and causing officials to search for viable alternatives for maintaining strong volunteer fire, rescue and EMS services.

Role of Fire and EMS Departments

The future of the fire, rescue and EMS service will include not only an expanded role for fire departments, but also a more complex one. As noted earlier, fire, rescue and EMS service personnel will be increasingly required to protect the environment, promote public safety and education, and become/remain emergency care providers. Moreover, emergency medical services in the fire, rescue and EMS service (e.g., EMS first responder service) will become more important as the fire problems decrease and the population in the United States becomes older.

The post 9/11 era has placed major challenges on local public safety service providers to work as a team in responding to emergencies, especially in the area of interoperability radio communications. Additional resources and training will be required for these new challenges.

Additionally, fire, rescue and EMS service personnel will require excellent interpersonal skills to interact well with the public. Customer service, a key to success in business, has become a more important part of the fire, rescue and EMS service.

Increasingly, Americans are demanding satisfaction, not only in consumer products, but also in public services. In the future, fire departments will likely be held more accountable to the citizens of their communities for the services provided. This concept of accountability is likely to evolve into a quality assurance program, where a fire department's performance will be evaluated and measured against standards set by the community.

At the national level, progressive municipal officials and fire administrators are recognizing the inevitable changes. In making predictions about the future of fire, rescue and EMS service, Chief Herman Brice, a recognized fire and EMS services leader, and former chief of the Palm Beach County (FL) Fire & Rescue, stated that “due to budget constraints, increased demand for service, and increased levels of training and certification requirements by state and federal agencies, emergency services providers and local governments will find it necessary to consolidate smaller departments into regional service providers to take advantage of broader tax bases.” Chief Brice also stated that more cooperation will be required in certain functional areas, such as training, to be cost effective in providing the support services.

With the faltering economy currently affecting all levels of government, the impact of fiscal issues will linger into the future. The recent financial crisis has forced local governments to closely examine resources allocated to various services. Managers, including fire, rescue and EMS service managers, are being challenged with providing better and more services with fewer resources. Progressive leaders are accepting this challenge by working with government and the community in a partnership to provide and sometimes expand necessary services without an increase in resource allocation.

The trends impacting the fire, rescue and EMS service today and in the future should result in an improved fire, rescue and EMS service, safer communities, more teamwork, safer work environment, and an informed customer. Professional fire personnel, both paid and volunteer, should be prepared for these future challenges.

This study and plan for Culpeper County includes suggestions for Culpeper County to consider in the future delivery of fire and rescue services.

STUDY FRAMEWORK

The PSSi Study Team utilizes a modern industry-based framework for its analyses that is comprehensive and systematic. The framework for this analysis incorporates the model developed by the Accreditation Committee of the International Association of Fire Chiefs (IAFC), a program of accreditation for and by fire, rescue and EMS agencies and personnel.

This fire department accreditation process is currently under the auspices of the Commission on Fire Accreditation International (CFAI). Employing this model as a framework for Culpeper County study provided established criteria for review and gives the reader information on the latest thinking in the fire/EMS service.

The applicable analysis categories included in this model and to be used as a general guide during this Study for Culpeper County are as follows:

1. Assessment and Planning,
2. Governance and Administration,
3. Goals and Objectives,
4. Programs,

5. Physical Resources,
6. Human Resources,
7. Training and Competency,
8. Financial Resources,
9. Essential Resources, and
10. External Systems Relations.

Within each of these categories, criteria and considerations were weighed by the PSSi Study Team members as they conducted this analysis. Criteria in these categories will be applicable to the Culpeper County Fire/Rescue Study work areas to be utilized. The components of this model applicable to services provided by combination paid/volunteer and all volunteer staffing would be considered and applied, as appropriate.

In addition, the PSSi Study Team has developed a significant amount of customized material, applicable specifically to local fire departments and rescue squads/EMS. At the same time, there are several generic components that do not, based on their nature, vary from one system to the next, such as the description of the basic types of apparatus and equipment, the fire station location analysis model, and basic apparatus maintenance guidelines. As applicable, the PSSi Study Team always employed these basic criteria.

Standards and Accepted Practices

The PSSi Study Team also used published fire protection and EMS standards and information on accepted principles and practices for the operations and management of fire and EMS services as background and guidelines in conducting this Study. Some of the key organizations with standards and publications that were utilized as part of this Study include:

- National Fire Protection Association
- Virginia Office of State Fire Marshal
- Virginia Department of Insurance
- Insurance Service Office (ISO) Commercial Risk Services, Inc.
- International Association of Fire Chiefs
- International City Management Association
- Federal and Commonwealth OSHA, as appropriate

The National Fire Protection Association (NFPA) located in Boston, Massachusetts, follows a nationally recognized process for the establishment of many standards that are applicable to fire and emergency medical services operations and administration. In many jurisdictions, some of the NFPA standards have been adopted and fully implemented, while other NFPA standards are utilized as general guidelines for pursuing further improvement in safety and services. The following list includes some of the key NFPA standards that were considered by the PSSi Study Team to conduct this Study for Culpeper County.

<u>Name of Standard</u>	<u>NFPA Number</u>
Standard for Fire Fighter Professional Qualifications	1001
Standard for Fire Apparatus Driver/Operator Professional Qual.	1002
Standard for Fire Officer Professional Qualifications	1021
Standard for Professional Qualifications for Fire Inspector, Fire Investigator, and Fire Education Officer	1031
Developing Fire Protection Services for the Public	1201
Public Fire Service Communications Systems	1221
Fire Service Training Reports and Records	1401
Fire Department Occupational Safety and Health Program	1500
Fire Department Incident Management System	1561
Fire Department Deployment (<u>for combination & volunteer FDs</u>)	1720
Pumper Fire Apparatus	1901
Aerial Ladder and Elevating Platform Fire Apparatus	1904

These and other written standards and nationally recognized documents, such as the current edition of the *NFPA Fire Protection Handbook*, were utilized by the PSSi Study Team, as appropriate to volunteer services, as a framework for this fire, rescue and EMS Study.

SCOPE OF SERVICES FOR THIS STUDY

The following is the scope of services areas for this Study that addressed all aspects of the provision of fire and EMS services in Culpeper County, as stated in the County's Request for Proposal:

- 3.1 The consultant shall develop an Assessment, and Analysis report for the following:
 - 3.1.1 Analysis of citizen access to emergency services and recommendation for improvements. Areas of improvement should be prioritized for strategic planning and include projected cost of implementation of recommendations by item. The Consultant must identify existing strengths and weakness of the current system, document, levels of functionality at the E-911 Center to include service levels, appropriate staffing, the amount of time once the dispatcher Center receives a call, enter data, and dispatch units to provide the quality of service to the Fire/EMS without being distracted by other tasks at critical time. The Consultant must also rank each in the order of importance and deal with solutions as a follow-up effort.
 - 3.1.2 Assessment of current level of services and identification of additional services to be provided (or those that could be reduced or altered).
 - 3.1.3 Review and recommend any improvements, if necessary, to the organizational structure and make-up of the Culpeper County Fire and EMS Service operational policies and procedures on how the County dispatches for Fire/EMS to determine if resources allocation is appropriate.
 - 3.1.4 An assessment of organizational structure of Fire and Rescue organizations to include the County organizations is streamlined and operating at the most efficient level and recommendation on how the County can align the structure of operational and administrative officer's/duties across departments vs. being more individualized.
 - 3.1.5 Assessment of Culpeper County Volunteer Fire and Rescue company's financial statements for correctness, cost effectiveness of current operations and identification of areas where savings, cost avoidance and/or improved productivity and service cost can be accomplished, to include funding of volunteer organizations, consolidation, and to identify the value of the volunteer contributions to the county citizens.

- 3.1.6 Assessment of public safety policies, procedures, operational practices and training programs to assure personnel safety. This should include addressing whether or not county (system) wide operational policies and practices should be developed/alterd. The Consultant should provide recommendation if needed.
- 3.1.7 Analysis of the operating principles, participation, role and staffing of the Public Safety Committee, and Fire & Rescue Association. This should include leadership and staff support and include cost estimates for any additional recommended staff. The Consultant should make recommendation (if needed) for an administrative chief (or staff) to work across departments to be cost effective and operationally efficient.
- 3.1.8 Analysis of physical facilities, apparatus and equipment in regards to Fire and EMS operations, including the appropriateness of metrics such as equipment of various types per number of lives or dollars of assets protected. Also identify any facilities, equipment and apparatus that should be updated or modified immediately to provide safe and reliable execution of fire and rescue service.
- 3.1.9 Analysis of training facilities, personnel training, minimum levels of required training, as well as standardizing the level of training system wide.
- 3.1.10 Analysis of current personnel information and training record retention system-wide.
- 3.1.11 Recommendation of future staffing and equipment needs for fire and rescue services from today and ten years in the future. Include projected annual and capital cost to add all necessary infrastructure and equipment.
- 3.1.12 Evaluation of present emergency on scene communications support and future requirements.
- 3.1.13 Assessment of relationship and coordination with all governmental departments, volunteer organizations and external agencies.
- 3.1.14 Review and/or recommend Culpeper County ordinances as they related to Fire and EMS within Culpeper County.

- 3.1.15 Review current Operational Medical Director (OMD) role(s) in Culpeper County for each of the independent rescue squads. Provide benefits (if warranted) to the use of a system wide OMD.
- 3.1.16 Evaluation of financial consequences to residents of consolidation of or need for additional facilities, should any be recommended, in terms of insurance premium impacts and the like.
- 3.1.17 Review and provide recommendations as necessary on volunteer recruitment and retention program efforts. Provide staff and associated cost necessary to carry out recommendations to include recommendation of incentives to retain existing volunteers and other ideas on recruitment and retention.

Draft report, solicit comments from recipients, and address comments prior to presenting final report. Present final report, findings, and recommendations to the Culpeper County Public Safety Committee, Fire & Rescue Association and the Culpeper County Board of Supervisors.

CHAPTER TWO ORGANIZATION & ADMINISTRATION

This chapter provides a review of general aspects of the organization and staffing of fire and EMS services in Culpeper County, Virginia, to include legal authority, current structure of the various component organizations, staffing, observations, and recommendations.

OVERVIEW

The provision of public safety is one of the most important functions of local government. A main component of public safety is organizing fire and emergency services within a community to provide the most efficient and cost-effective delivery of quality service. Historically, many fire/EMS services were developed and organized on the basis of local neighborhood need and initiative and, in many instances, volunteer fire departments were initially formed. However, as communities have become increasingly urban, calls for service have risen resulting in the need for more coordination and direction of fire and rescue services and resources through paid services.

A key fire and EMS organizational principle relates to the basic responsibility for public safety, firefighter safety and service delivery within the community. In most areas of North America, it is widely accepted that the provision of fire and EMS service is considered to be a local government responsibility. Local government is broadly interpreted to include municipalities, such as cities, towns, villages and townships. However, in many eastern U.S. communities, fire and EMS was traditionally provided by community, private, not-for-profit organizations known as fire, rescue or ambulance companies.

To attain the delivery of optimum fire and emergency medical service, it is essential that local government recognizes and accepts that responsibility and fulfills that obligation to provide appropriate guidance and direction in order to:

- Oversee the formation process of the organization of fire and EMS services;
- Ensure that the fire/EMS organization reflects the public interest;
- Protect the service from undesirable external interference;
- Determine basic policies for providing services; and,
- Legally define the duties and responsibilities of service providers.

Identification of this authority and responsibility is addressed in Section 3-1 of NFPA 1201, Developing Fire Protection Services for the Public, as follows:

“The government agency responsible for establishment and operation of the fire department shall adopt a formal statement (bylaw, statute) of purpose and policies for the fire department that includes the type and levels of services that are to be provided, the area to be served, and the delegation of authority to the fire chief and other officers to manage and operate the fire department.”

ACCEPTED PRINCIPLES AND PRACTICES—ORGANIZATION

Both the National Fire Protection Association (NFPA) standards and Commission on Fire Accreditation International (CFAI) criteria provide guidance to municipalities and fire departments relating to organization structure.

NFPA 1201 - Standard for Developing Fire Protection Services

NFPA 1201 provisions relate further to the organization structure of fire departments providing guidance to this Performance and Management Study as follows:

“Chapter 5: Organizational Structure of the Fire Department

5-1 Purpose. The fire department shall have an organizational structure that facilitates efficient and effective management of its resources to carry out its mandate.

5-2 Management/Fire Chief.

5-2.1 The manager of the fire department shall be the fire chief. The fire chief shall be governed in the development of regulations and orders by the provisions of all applicable laws or ordinances and shall maintain a file of such documents.

5-2.2 The fire chief shall be appointed on the basis of merit and ability.

5-2.3 The fire chief shall communicate closely with the local government chief executive and governing body.

5-2.4 The governing body shall establish only the primary policies of the fire department and shall not act as an administrative agency or direct day-to-day management of the department.”

CFAI Governance and Administration Criteria

The CFAI accreditation criteria related to fire department organization governance and administration that is relevant to this Performance and Management Study is as follows:

Performance Indicators

The governing Board and/or agency manager has been legally established to provide general policies to guide the agency, approved programs and services, and appropriated financial resources.

1. The agency has been legally established.
2. The governing body having jurisdiction over the fire service organization or agency periodically reviews and approves programs and ensures compliance with basic agency policies.
3. The governing body approves the administrative structure that carries out the agency’s mission.

There is an established administrative structure and environment for achievement of the agency’s mission, purpose, goals, strategies and objectives.

1. There exists an administrative structure, which reflects the agency’s mission, goals, objectives, size and complexity.
2. Allocation of resources reflects the agency’s mission, goals and objectives.
3. The agency administration demonstrates compliance with legal requirements of local, state, and federal governments.
4. Personnel functions, roles and responsibilities are defined in writing and a current organization chart exists.

As the organization of the Culpeper fire and rescue services was reviewed, the Study Team considered the above criteria as part of this Fire and EMS Study.

The remainder of this chapter addresses current legal authority to operate fire and emergency medical services in Culpeper County; current organization and staffing of the Culpeper County fire and rescue services; and appropriate conclusions and recommendations.

LEGAL AUTHORITY

This section of the Fire and EMS Study outlines the legal authority under which the fire and rescue services are organized and operate in Culpeper County. The following sections address legal references in the Culpeper County Code and related documents relative to the organization of the fire protection, EMS and related services.

State of Virginia

Title 15.2, Chapter 9, of the Code of Virginia grants “General Powers of Local Governments.” Specific to the provision of fire and EMS is Section 15.2-955 regarding the approval needed by the local governing body for the establishment of volunteer emergency medical services agencies and firefighting organizations which states:

- A. No volunteer emergency medical services agency or volunteer firefighting organization shall be established in any locality on or after July 1, 1984, without the prior approval by resolution of the governing body.
- B. Each locality shall seek to ensure that emergency medical services are maintained throughout the entire locality.

Title 27, Chapter 1, of the Code of Virginia codifies the power of local government to assist one another (mutual and automatic aid) and/or to contract fire protection. Title 32, Chapter 4 addresses contracts of counties, cities, and towns to furnish emergency medical services; public liability insurance to cover claims arising out of mutual aid agreements.

Title 27, Chapter 2, of the Code of Virginia (Fire/EMS Departments and Fire/EMS Companies) grants authority to county government and establishes provision for providing fire and rescue services.

Section 27-6.01 defines, for the purposes of this chapter, unless the context requires a different meaning:

“Fire company” means a volunteer firefighting organization organized pursuant to § 27-8 in any county, city, or town of the Commonwealth for the purpose of fighting fires.

“Fire department” means a firefighting organization established as a department of government of any county, city, or town pursuant to § 27-6.1.

Section 27-6.02, establishing provision of firefighting services and states:

A. Any county, city, or town may provide firefighting services to its citizens by (i) establishing a fire department as a department of government pursuant to § 27-6.1 or (ii) contracting with or providing for the provision of firefighting services by a fire company established pursuant to § 27-8.

B. In cases in which a county, city, or town elects to contract with or provide for the provision of firefighting services by a fire company pursuant to clause (ii) of subsection A, the fire company shall be deemed to be an instrumentality of the county, city, or town and, as such, exempt from suit for damages done incident to fighting fires therein. The county, city, or town may elect to provide for the matters authorized in §§ 27-4 and 27-39.

As used in this section, "provide firefighting services" includes travel while performing fire, rescue, or other emergency operations in emergency vehicles or fire apparatus as described in §§ 46.2-920 and 46.2-1023, respectively.

Additionally, Section 27-6.1 allows the establishment of a fire department; chief, officers and employees, stating:

The governing body of any county, city, or town may establish a fire department as a department of government and may designate it by any name consistent with the names of its other governmental units. The head of such fire department shall be known as “the chief.” As many other officers and employees may be employed in such fire department as the governing body may approve.

Other provisions are codified in Title 27, Chapter 2, of the Virginia Code that establish broad powers that may be used by county government in providing fire and rescue services. Provisions applicable to this study include:

Section 27-7. Bylaws of fire department; compensation of officers and employees; information on check stubs, time cards, etc.

The governing body of any county, city, or town may empower the fire department therein to make bylaws to promote its objects consistent with the laws of the Commonwealth and ordinances of the county, city, or town and may provide for the compensation of the officers and employees of such department.

All check stubs or time cards purporting to be a record of time spent on the job by a firefighter shall record all hours of employment, regardless of how spent. All check stubs or pay records purporting to show the hourly compensation of a firefighter shall show the actual hourly wage to be paid. Nothing in this section shall require the showing of such information on check stubs, time cards, or pay records; however, if such information is shown, the information shall be in compliance with this section.

Section 27-9. Organization of fire company.

A writing stating the formation of a fire company, with the names of the members thereto subscribed, shall be recorded in the court of the city or the court of the county wherein such fire company is located, after which the members of the fire company may make regulations for effecting its objects consistent with the laws of the Commonwealth, the ordinances of the county, city, or town and the bylaws of the fire department thereof. The principal officer of such fire company shall be known as “the chief.”

Section 27-10. Dissolution of fire company.

Whenever the fire department of the county, city, or town to which any fire company belongs ascertains that such company has failed, for three months successively, to consist of 20 effective members, or ascertains that it has failed for the like period to have or keep in good and serviceable condition an engine, hose, and equipment and other proper implements, or the governing body of the county,

city, or town for any reason deems it advisable, such governing body may dissolve the fire company.

Section 27-11. Duty of members on alarm of fire or call of a medical emergency.

Every member of the fire company shall, upon any alarm of fire or call of a medical emergency, attend according to the ordinances of the county, city, or town, or the bylaws, rules, or regulations of the fire department or the fire company's regulations, and endeavor to extinguish such fire or assist in the medical emergency.

Section 27-14. Ordinances as to fire departments and fire companies.

A. The governing body of any county, city, or town in which a fire department or fire company is established may make such ordinances in relation to the powers and duties of such fire departments or fire companies, and chiefs and other officers of such fire departments or fire companies, as it may deem proper, including billing property owners on behalf of volunteer fire departments as provided in § 38.2-2130.

B. The ordinances shall not require a minor who achieved certification under National Fire Protection Association 1001, level one, firefighter standards, as administered by the Department of Fire Programs, on or before January 1, 2006, between the ages of 15 and 16, to repeat the certification after his sixteenth birthday.

Section 27-15.2. Purchase, maintenance, etc., of equipment; donated equipment.

A. The governing body of every county, city, and town shall have power to provide for the purchase, operation, staffing, and maintenance of suitable equipment for firefighting or performing emergency medical services in or upon the property of the county, city, or town and of its inhabitants, and to prescribe the terms and conditions upon which the same will be used for fighting fires or performing emergency medical services in or upon privately owned property. All equipment purchased after October 1, 1970, shall be equipped with threads of USA Standard B2.3, B2.4 of the American Standards Association.

B. Any fire department of a county, city, or town, or any fire company donating equipment for fighting fires to any fire department or any fire company, which equipment met existing engineering and safety standards at the time of its purchase by the donating entity, shall be immune from civil liability unless the donating entity acted with gross negligence or willful misconduct.

C. A safety inspection shall be completed by a certified emergency vehicle service center and a report designating any deficiencies shall be provided prior to the change in ownership of the donated emergency vehicle.

Section 27-23.1. Establishment of fire zones or districts; tax levies.

The governing bodies of the several cities or counties of the Commonwealth may create and establish, by designation on a map of the city or county showing current, official parcel boundaries, or by any other description which is legally sufficient for the conveyance of property or the creation of parcels, fire zones or districts in such cities or counties, within which may be located and established one or more fire departments, to be equipped with apparatus for fighting fires and protecting property and human life within such zones or districts from loss or damage by fire, illness or injury.

In the event of the creation of such zones or districts in any city or county, the city or county governing body may acquire, in the name of the city or county, real or personal property to be devoted to the uses aforesaid, and shall prescribe rules and regulations for the proper management, control, and conduct thereof. Such governing body shall also have authority to contract with, or secure the services of, any individual corporation, organization, or municipal corporation, or any volunteer firefighters for such fire protection as may be required.

To raise funds for the purposes aforesaid, the governing body of any city or county in which such zones or districts are established may levy annually a tax on the assessed value of all property real and personal within such zones or districts, subject to local taxation, which tax shall be extended and collected as other city or county taxes are extended and collected. However, any property located in Augusta County that has qualified for an agricultural or forestal use-value assessment pursuant to Article 4 (§ 58.1-3229 et seq.) of Chapter 32 of Title 58.1 may not be included within such a zone or district and may not be subject to such

tax. In any city or county having a population between 25,000 and 25,500, the maximum rate of tax under this section shall be \$0.30 on \$100 of assessed value.

The amount realized from such levy shall be kept separate from all other moneys of the city or county and shall be applied to no other purpose than the maintenance and operation of the fire departments and companies established under the provisions of this section.

Section 27-23.5. Exclusion of certain areas from fire zones or districts and exemption of such areas from certain levies.

The governing body of any city or county having a fire zone or district created under the provisions of § 27-23.1, prior to June 1 of any calendar year, may alter the boundaries of such fire zone or district for the purpose of excluding an area of any such fire zone or district that is also within the boundaries of a sanitary district providing fire protection services or under contract to a sanitary district providing fire protection services.

Any area excluded from a fire zone or district as provided by this section shall not be subject to the levy set forth in § 27-23.1 for the year such area is excluded.

Section 27-23.9. Supervision and control of joint services of fire companies or departments.

Whenever two or more fire companies or fire departments are called to provide joint services in any district or political subdivision, the commander of the first company or department to arrive shall have general supervision and control of all such participating companies and departments until an officer of such district or political subdivision who is otherwise authorized by law to do so assumes such general supervision and control.

Section 27-23.10. Ordinances to effectuate purposes of § 27-23.9.

Every county, city and town is authorized to enact and enforce appropriate ordinances to effectuate the purposes of § 27-23.9.

Title 27, Chapter 3, Section 27-30 allows the county to appoint a fire marshal, stating:

An officer, who shall be called a “fire marshal,” may be appointed for each county, city or town, by the governing body thereof, whenever, in the opinion of such body, the appointment shall be deemed expedient. The term “fire marshal” as used in this chapter may include the local fire official and local arson investigator when appointed pursuant to this section.

Title 27, Chapter 4 provides relief for Fire Fighters and Dependents.

Article 1 codifies general provisions. Section 27-39 authorizes counties, cities and towns to provide relief and states:

Any county, city or town which operates fire-fighting equipment may provide for the relief of (1) any children and surviving spouse of any fire fighter who dies (2) and on or before July 1, 1977, shall provide for the relief of any fire fighter who is disabled by injury or illness as the direct or proximate result of the performance of his duty, including the presumption under § 27-40.1, in the service of the county, city or town or any political subdivision with which it contracts or has contracted for fire protection, whether such fire fighter be a member of a fire company of the county in which the injury occurred or of a political subdivision with which it contracts for fire protection. Such total disability retirement benefits shall be not less than those provided under the in-line-of-duty disability retirement provisions of § 51.1-157. Such relief of any children and surviving spouse of any fire fighter who dies shall be exclusive of, and not dependent upon, any payment under the Line of Duty Act (§ 9.1-400 et seq.).

When providing relief as described in Section 27-39, it is important that the Board of Supervisors comply with Section 27-40.1:1 requiring the performance of physical examinations required by § 27-40.1 which states:

Any county, city or town providing death, retirement, sickness or other benefits pursuant to the authority granted by § 27-39, or pursuant to any other provision of law or the charter of any city or town, or otherwise, shall do so exclusive of, and without regard to, any such benefits paid or payable out of the general fund of the state treasury pursuant to § 9.1-400 et seq. and shall by ordinance make provision for the employment of physicians and the performance of the physical examination required by § 27-40.1 and shall cause such examination to be made

within ninety days after June 1, 1973, of every fire fighter in its service or the service of a political subdivision with which it has contracted for fire protection and of every fire fighter entering upon such service thereafter at the time of such entry, provided however, that any fire fighter employed by any such county, city or town which failed to cause such physical examination to be made on or before January 1, 1976, for any fire fighter employed prior to January 1, 1976, in its service or the service of a political subdivision with which it has contracted for fire protection shall be presumed to have been found free from respiratory disease, hypertension or heart disease as if such fire fighter had been examined pursuant to § 27-40.1. Such presumption shall also apply to the benefit of any fire fighter entering upon such service on or after January 1, 1976, unless said county, city or town shall cause such examination to be made of such fire fighter within ninety days after July 1, 1976. Every fire fighter entering upon such service on or after October 1, 1976, and thereafter, shall be entitled to the benefit of such presumption unless such county, city or town shall cause such examination to be made of such fire fighter at the time of such entry.

Article 1 codifies relief for volunteer Firefighters. Section 27-41 states:

Financial relief shall be extended by the counties, cities and towns of Virginia to volunteer fire fighters who are killed or injured while engaged in fighting fire or while responding to an alarm or returning from the scene of a fire, such relief to be paid in amounts and manner as hereinafter set forth.

Volunteer Firefighters are defined by Section 27-42 which states:

For the purposes of this article, the term “volunteer fire fighters” shall include only members of any organized fire-fighting company which has in its possession and operates fire-fighting apparatus and equipment, whose members serve without pay and whose names are maintained on a list kept by the secretary of such company. It shall be the responsibility of the secretary of such company or the secretary's designee to (i) file the list with the office of the clerk of the circuit court where such company is located, (ii) keep the list of such members up to date, and (iii) file the updated list with the clerk in a timely manner. The clerk shall not be responsible to obtain the list or an updated list from the secretary of the fire-fighting company if the list is not filed with the clerk.

However, it is important that the Board of Supervisors need not comply with Article 2 unless a formal resolution is adopted. This provision is found in Article 2, Section 27-50 which states:

This article shall not become effective in any county, city or town until the governing body thereof shall adopt and approve the same by resolution duly passed and spread on its minutes.

Title 32, Chapter 4, Article 2.1 codifies specific powers and provisions regarding Emergency Medical Services Systems and Services. Section 32.1-111.4:3 allows for the provision of emergency medical services. And states:

A. Any county, city, or town may provide emergency medical services to its citizens by (i) establishing an emergency medical services agency as a department of government pursuant to § 32.1-111.4:6 or (ii) contracting with or providing for the provision of emergency medical services by an emergency medical services agency established pursuant to § 32.1-111.4:7.

B. In cases in which a county, city, or town elects to contract with or provide for emergency medical services by an emergency medical services agency pursuant to clause (ii) of subsection A, the emergency medical services agency shall be deemed to be an instrumentality of the county, city, or town and, as such, exempt from suit for damages done incident to the provision of emergency medical services therein unless the emergency medical services agency is a private, for-profit emergency medical services agency.

Section 32.1-111.4:6 provides for the establishment of an emergency medical services agency as a department of local government and states:

A. The governing body of any county, city, or town may establish an emergency medical services agency as a department of government and may designate it by any name consistent with the names of its other governmental units. The head of such emergency medical services agency shall be known as "the emergency medical services agency chief" or "EMS chief." As many other officers and employees may be employed in such emergency medical services agency as the governing body may approve.

B. An emergency medical services agency established pursuant to subsection A may consist of government-employed emergency medical services personnel,

volunteer emergency medical services personnel, or both. If an emergency medical services agency established pursuant to this section includes volunteer emergency medical services personnel, such volunteer emergency medical services agency shall be deemed an instrumentality of the county, city, or town and, as such, exempt from suit for damages done incident to providing emergency medical services to the county, city, or town.

C. The governing body of any county, city, or town may empower an emergency medical services agency established therein pursuant to this section to make bylaws to promote its objects consistent with the laws of the Commonwealth and ordinances of the county, city, or town and may provide for the compensation of the officers and employees of such agency.

D. All check stubs or time cards purporting to be a record of time spent on the job by emergency medical services personnel employed by an emergency medical services agency established pursuant to this section shall record all hours of employment, regardless of how spent. All check stubs or pay records purporting to show the hourly compensation of emergency medical services personnel employed by an emergency medical services agency established pursuant to this section shall show the actual hourly wage to be paid. Nothing in this section shall require the showing of such information on check stubs, time cards, or pay records; however, if such information is shown, the information shall be in compliance with this section.

Section 32.1-111.4:7 provides for the establishment of an emergency medical services agency as a nongovernmental entity and states:

A. Any number of persons wishing to provide emergency medical services may establish an emergency medical services agency by (i) recording & writing stating the formation of such company, with the names of the members thereof thereto subscribed in the court of the county or city wherein such agency shall be located, (ii) complying with such local ordinances as may exist related to establishment of an emergency medical services agency, and (iii) obtaining a valid emergency medical services agency license from the Office of Emergency Medical Services together with such emergency medical services vehicle permits from the Office of Emergency Medical Services as the Office of Emergency Medical Services may require. The principal officer of such emergency medical services agency shall be known as "the emergency medical services agency chief" or "EMS chief."

B. The members of an emergency medical services agency established pursuant to subsection A may make regulations for effecting its objects consistent with the laws of the Commonwealth; the ordinances of the county, city, or town; and the bylaws of the emergency medical services agency thereof.

C. In every county, city, or town in which an emergency medical services agency is established pursuant to this section, there shall be appointed, at such time and in such manner as the governing body of such county, city, or town in which the emergency medical services agency is located may prescribe, an emergency medical services agency chief and as many other officers of the emergency medical services agency as such governing body may direct.

D. An emergency medical services agency established pursuant to this section may be dissolved when the local governing body of the county, city, or town in which the emergency medical services agency is located determines that the emergency medical services agency has failed, for three months successively, to have or keep in good and serviceable condition emergency medical services vehicles and equipment and other proper implements, or when the governing body of the county, city, or town for any reason deems it advisable.

Regardless of the type of organization chosen to provide EMS, the Board of Supervisors maintains the right to control the provision of EMS at the local level. Section 32.1-111.4:8 provides the power of the Board of Supervisors to enact EMS ordinances as they relate to emergency medical services agencies stating:

The governing body of any county, city, or town in which an emergency medical services agency is established pursuant to § 32.1-111.4:6 or 32.1-111.4:7 may make such ordinances in relation to the powers and duties of emergency medical services agencies and emergency medical services agency chiefs or other officers of such emergency medical services agencies as it may deem proper.

Other relevant powers granted to local governing bodies under Title 32.1, Chapter 4, include, but are not limited to:

Section 32.1-111.14. Powers of governing bodies of counties, cities, and towns.

A. Upon finding as fact, after notice and public hearing, that exercise of the powers enumerated below is necessary to assure the provision of adequate and continuing emergency medical services and to preserve, protect and promote the public health, safety and general welfare, the governing body of any county or city is empowered to:

1. Enact an ordinance making it unlawful to operate any emergency medical services vehicle or class thereof established by the Board in such county or city without having been granted a franchise, license or permit to do so;
2. Grant franchises, licenses or permits to emergency medical services agencies based within or outside the county or city; however, any emergency medical services agency in operation in any county or city on June 28, 1968, that continues to operate as such, up to and including the effective date of any ordinance adopted pursuant to this section, and that submits to the governing body of the county or city satisfactory evidence of such continuing operation, shall be granted a franchise, license or permit by such governing body to serve at least that part of the county or city in which the agency has continuously operated if all other requirements of this article are met;
3. Limit the number of emergency medical services vehicles to be operated within the county or city and by any emergency medical services agency;
4. Determine and prescribe areas of franchised, licensed or permitted service within the county or city;
5. Fix and change from time to time reasonable charges for franchised, licensed or permitted services;
6. Set minimum limits of liability insurance coverage for emergency medical services vehicles;
7. Contract with franchised, licensed or permitted emergency medical services agencies for emergency medical services vehicle transportation services to be rendered upon call of a county or municipal agency or department and for

transportation of bona fide indigents or persons certified by the local board of social services to be public assistance or social services recipients; and

8. Establish other necessary regulations consistent with statutes or regulations of the Board relating to operation of emergency medical services vehicles.

B. In addition to the powers set forth above, the governing body of any county or city is authorized to provide, or cause to be provided, services of emergency medical services vehicles; to own, operate and maintain emergency medical services vehicles; to make reasonable charges for use of emergency medical services vehicles, including charging insurers for emergency medical services vehicle transportation services as authorized by § 38.2-3407.9; and to contract with any emergency medical services agency for the services of its emergency medical services vehicles.

C. Any incorporated town may exercise, within its corporate limits only, all those powers enumerated in subsections A and B either upon the request of a town to the governing body of the county wherein the town lies and upon the adoption by the county governing body of a resolution permitting such exercise, or after 180 days' written notice to the governing body of the county if the county is not exercising such powers at the end of such 180-day period.

D. No county ordinance enacted, or other county action taken, pursuant to powers granted herein shall be effective within an incorporated town in such county which is at the time exercising such powers until 180 days after written notice to the governing body of the town.

E. Nothing herein shall be construed to authorize any county to regulate in any manner emergency medical services vehicles owned and operated by a town or to authorize any town to regulate in any manner emergency medical services vehicles owned and operated by a county.

F. Emergency medical services vehicles operated by a county, city, or town under authority of this section shall be subject to the provisions of this article and to the regulations of the Board.

Section 32.1-111.14:2. Establishment of emergency medical services zones or districts; tax levies.

The governing bodies of the several counties or cities of the Commonwealth may create and establish, by designation on a map of the county or city showing current, official parcel boundaries, or by any other description that is legally sufficient for the conveyance of property or the creation of parcels, emergency medical services zones or districts in such counties or cities within which may be located and established one or more emergency medical services agencies for providing emergency medical services within such zones or districts.

In the event of the creation of such zones or districts in any county or city, the county or city governing body may acquire, in the name of the county or city, real or personal property to be devoted to the uses aforesaid and shall prescribe rules and regulations for the proper management, control, and conduct thereof. Such governing body shall also have authority to contract with, or secure the services of, any individual corporation, organization, or municipal corporation or any volunteer emergency medical services agency or emergency medical services provider for such emergency medical services as may be required.

To raise funds for the purposes aforesaid, the governing body of any county or city in which such zones or districts are established may levy annually a tax on the assessed value of all property, real and personal, within such zones or districts, subject to local taxation, which tax shall be extended and collected as other county or city taxes are extended and collected. However, any property located in Augusta County that has qualified for an agricultural or forestal use-value assessment pursuant to Article 4 (§ 58.1-3229 et seq.) of Chapter 32 of Title 58.1 may not be included within such a zone or district and may not be subject to such tax. In any county or city having a population between 25,000 and 25,500, the maximum rate of tax under this section shall be \$0.30 on \$100 of assessed value.

The amount realized from such levy shall be kept separate from all other moneys of the county or city and shall be applied to no other purpose than the maintenance and operation of the emergency medical services agencies established pursuant to this section.

Culpeper County, Virginia – Code of Ordinances

The County of Culpeper has established in the Code of Ordinances that the independent Fire Companies and Rescue Squad serving Culpeper County are designated as part of County's Official Safety Program as outlined below:

Section 2-1 - Fire Departments and Rescue Squad designated as part of County's Official Safety Program.

The active members of the Culpeper County Volunteer Fire Department, Incorporated; the Culpeper County Rescue Squad, Incorporated; the Brandy Volunteer Fire Department, Incorporated; the Little Fork Volunteer Fire and Rescue Company, Incorporated; the Reva Volunteer Fire and Rescue Company, Incorporated; the Richardsville Volunteer Fire Department and Rescue Squad; the Rapidan Volunteer Fire Department; the Salem Volunteer Fire Department, Incorporated; the Culpeper County Department of Emergency Management; and the Virginia Department of Emergency Services Search and Rescue Teams are hereby recognized as an integral part of the Official Safety Program of the County.

Other sections of the Culpeper County Code of ordinances relevant to Fire and EMS include:

Section 2-13. - Charges for non-emergency use of emergency medical services vehicles.

Any person who calls for, causes the dispatch of, or is the recipient of, emergency medical transport services dispatched by the County through its 911 dispatch system for a non-emergency purpose, including non-emergency transport, shall be liable to the County for all fees and charges related to the response of the emergency medical service dispatch and/or transportation.

The fees and charges shall be uniform and established by the Board of Supervisors. No fee or charge imposed hereunder shall operate to preclude or prohibit the criminal prosecution of any person who knowingly calls, or causes to be called, the County's 911 dispatch system for non-emergency purposes.

For purposes of this chapter, the following words and terms shall have the meaning ascribed to them as follows:

County shall mean the County of Culpeper, Virginia.

Dispatch shall mean the sending out of emergency personnel and/or equipment (including vehicles) in response to specific requests for emergency assistance.

Emergency shall mean a condition manifesting itself by acute symptoms of sufficient severity (including severe pain) such that the absence of immediate medical attention could reasonably be expected to result in placing the individual's health in serious jeopardy, serious impairment to bodily functions, or serious dysfunction of bodily organs.

Emergency medical transport service (EMS) vehicle shall mean any County dispatched ambulance.

Non-emergency transport shall mean utilizing an EMS vehicle and personnel to transport a patient for a non-emergency medical purpose. (Example: transporting a patient to the pharmacy or a doctor's office.)

Person shall mean any individual, business (incorporated or non-incorporated), association, partnership, or entity.

The following are exempted from the operation of the provisions of this chapter: calls rendering service of as an EMS vehicle to a government or political subdivision in the event of a major catastrophe or emergency.

CHAPTER 1, ARTICLE III. OFFICE OF EMERGENCY MANAGEMENT

Editor's note—An ordinance adopted Oct. 7, 2014, amended article III in its entirety to read as herein set out. Former art. III, §§ 2-32—2-39, pertained to office of emergency services, and derived from a resolution adopted Sept. 2, 1975; and an ordinance adopted Oct. 7, 1975.

Section 2-32. - Purpose of article.

This article is adopted in order to develop and maintain an emergency services organization to ensure that preparations are adequate to deal with disasters or emergencies resulting from enemy attack, sabotage or other hostile action, resource shortage or fire, flood, earthquake or other natural cause, and generally to

protect the public peace, health and safety and to preserve the lives and property and economic well-being of the people of the County.

Section 2-33. - Definitions.

As used in this article, the word "office" shall mean the Office of Emergency Management created by Section 2-34 and the word "Director" shall mean the Director of Emergency Management referred to in Section 2-34.

Section 2-34. - Office created; Director designated.

There is hereby created a County Office of Emergency Management. The head of such office shall be known as the Director of Emergency Management. Such Director shall be a member of the Board of Supervisors selected by the Board.

Section 2-35. - Line of succession for Director.

The line of succession for the Director shall be as follows:

- (1) The Chairman of the Board of Supervisors, if not already the Director.
- (2) The Vice-Chairman of the Board of Supervisors, if not already the Director.
- (3) Any member of the Board of Supervisors who is not already the Director.

Section 2-36. - General duties of Director; cooperation from other County officers and personnel.

The Director shall be responsible for organizing emergency services and directing emergency operations through the regularly constituted government structure and shall utilize the services, equipment, supplies and facilities of existing departments, offices and agencies of the County to the maximum extent practicable. The officers and personnel of all such departments, offices and agencies are directed to cooperate with and extend such services and facilities to the Director upon request.

Section 2-37. - Appointment of Coordinator and other office of personnel.

The Director shall, with the consent of the Board of Supervisors, have authority to appoint a Coordinator of Emergency Management and such other personnel for the office as is necessary.

Section 2-38. - Emergency operations plan; mutual aid agreements.

The Director shall prepare or cause to be prepared and keep current a local emergency operations plan. He may, in collaboration with other public and private agencies, develop, or cause to be developed, mutual aid agreements for reciprocal assistance in the case of a disaster or emergency.

Section 2-39. - Declaration of local emergency.

(a) A local emergency, as defined in Code of Virginia, § 44-146.16(6), may be declared by the Director, with the consent of the Board of Supervisors. In the event the Board cannot convene due to the disaster, the Director, or any member of the Board in the absence of the Director, may declare the existence of a local disaster, subject to confirmation by the entire Board of Supervisors at a special meeting within five (5) days of the declaration. The Board, when in its judgment all emergency actions have been taken, shall take appropriate action to end the declared emergency.

(b) A declaration of a local emergency shall activate the response and recovery programs of all applicable local and inter-jurisdictional emergency operations plans and authorize the furnishing of aid and assistance thereunder.

CHAPTER 9, ARTICLE I. – MISCELLANEOUS

Section 9-1. - Burning of brush, leaves, grass, etc.

(a) It shall be unlawful for any owner or lessee of land within the County to set fire to, or to procure another to set fire to, any woods, brush, logs, leaves, grass, debris or other flammable material upon such land, unless he previously shall have taken all reasonable care and precaution, by having cut and filed the same or carefully cleared around the same, to prevent the spread of such fire to lands other than those owned or leased by him. It shall also be unlawful for any employee of any such owner or lessee of land to set fire to or to procure another to set fire to

unless he shall have taken similar precautions to prevent the spread of such fire to any other land.

(b) During the period beginning March 1st and ending May 15th of each year, even though the precautions required by subsection (a) above are taken, it shall be unlawful in any portion of the County organized for forest fire control under the direction of the state forester, for any person to set fire to, or to procure another to set fire to, any brush, leaves, grass, debris or field containing dry grass or other flammable material capable of spreading fire, located in or within three hundred (300) feet of any woodland or brush land, or field containing dry grass or other inflammable material, except between the hours of 4:00 p.m. and 12:00 midnight.

(c) The provisions of subsection (b) of this section shall not apply to any fires which may be set on rights-of-way of railroad companies by their duly authorized employees.

(d) Any person violating any provision of this section shall be guilty of a Class 4 misdemeanor. In addition to any penalty imposed for such violation, if a forest fire results from the violation, such person shall be liable to the County for the full amount of all expenses incurred by it in suppressing such fire, such amount to be recoverable by action brought by the Board of Supervisors on behalf of the County.

Section 9-3. - Junior fire fighters.

(a) Any person sixteen (16) years of age or older, with parental or guardian approval, may work with or participate fully in all activities of a volunteer fire company, provided such person has attained certification under National Fire Protection Association 1001, Level One, Fire Fighter Standards, as administered by the Department of Fire Programs of the Commonwealth of Virginia.

(b) Any trainer or instructor of such persons mentioned in subsection (a) of this section or any member of a paid or volunteer fire company who supervises any such person when engaged in activities of a volunteer fire company shall be exempt from the provisions of § 40.1-103 of the 1950 Code of Virginia, as amended.

CHAPTER 9, ARTICLE III. - REGULATION OF OPEN FIRES

Section 9-32. - Title.

This article shall be known as the Culpeper County Ordinance for the Regulation of Open Fires.

Section 9-33. - Purpose.

The purpose of this article is to protect public health, safety, and welfare by regulating the making and supervision of open fires within Culpeper County. This article is intended to supplement other applicable laws and regulations of the Commonwealth of Virginia, and is not intended to limit the application of any other law or regulation within the County of Culpeper.

Section 9-34. - Definitions.

For the purpose of this article and subsequent amendments or any orders issued by Culpeper County, the words or phrases shall have the meaning given them in this section.

Garbage means rotting animal and vegetable matter accumulated by a household in the course of ordinary day to day living.

Household refuse means waste material and trash (except garbage, animal carcasses or animal waste) normally accumulated by a household in the course of ordinary day to day living, and, for the purposes of this article, is limited to household refuse from the premises on which the open fire is to be made.

Yard waste means leaves and tree, yard and garden trimmings from growth on the premises on which the open fire is to be made or growth on the premises immediately adjacent thereto.

Open fire means the burning of any matter in such a manner that the products resulting from combustion are emitted directly into the atmosphere without passing through a stack, duct or chimney.

Section 9-35. - Prohibitions on open fires.

- (a) No owner or other person shall cause or permit the making of an open fire on any street, alley or other public place.
- (b) No owner or other person shall cause or permit the making of an open fire on any parcel of land on which is located an occupied dwelling, or which is immediately adjacent to any property on which is located an occupied dwelling, in which is burned any material that is not household refuse or yard waste.
- (c) No owner or other person shall cause or permit the making of an open fire that is within fifty (50) feet of any occupied dwelling.
- (d) No owner or other person shall cause or permit the making of an open fire that is within two hundred (200) feet of any occupied dwelling without the permission of the occupants of the dwelling.
- (e) No owner or other person shall cause or permit the burning of an open fire unless the fire shall at all times be attended by a responsible adult, and unless adequate provisions have been made in advance of the burning for preventing the unintentional or accidental spreading of the fire to any structure or any other parcel of land.
- (f) No owner or other person shall cause or permit the burning of an open fire within one hundred (100) feet of a property boundary without the permission of the adjacent property owner.

Section 9-36. - Exemptions.

The following open fires are exempted from the prohibitions of section 9-35 to the extent permitted by other applicable State laws or regulations:

- (a) Open fires for training and instruction of government and public fire fighters under the supervision of the designated official and industrial in-house fire fighting personnel;
- (b) Open fires for campfires or other fires that are used solely for recreational purposes, for ceremonial occasions, for outdoor noncommercial preparation of food, and for warming of outdoor workers;
- (c) Open burning for the destruction of any combustible liquid or gaseous material by burning in a flare or flare stack; and

(d) Open burning for forest management and agriculture practices as approved by the appropriate State regulatory agency.

Section 9-37. - Declaration of local open fire emergencies.

The Director of Emergency Services may, in consultation with the County Administrator and the Coordinator of Emergency Services, if the forest lands, brush lands, and fields within the County have become so dry as to create a fire hazard endangering lives and property in the County, declare an emergency and require that no person make or permit any open fire until such time as the Director of Emergency Services proclaims that the fire hazard emergency has been terminated.

Section 9-38. - Penalties for violation.

(a) Any violation of this ordinance is punishable as a Class 1 misdemeanor.

(b) Each separate incident may be considered a new violation.

(c) Notwithstanding the foregoing, no person shall be convicted of a violation of this article unless there shall have been before the court competent evidence that the sheriff or other enforcement official had, prior to the commencement of any proceeding hereunder, notified such person of the provisions of this article, and given such person an opportunity to cease and desist any action in violation hereof.

ARTICLE XIV. - FIRE AND RESCUE SERVICE DISTRICT TAX

Section 12-200. - Volunteer Fire and Rescue Association.

The Culpeper County Volunteer Fire and Rescue Association is recognized as the coordinating organization of the individually authorized volunteer fire and/or rescue companies. Requests for funding, benefits or any support provided by the County shall come through the association and not from individual companies.

Section 12-201. - Culpeper County fire and rescue district established.

There is hereby created a Culpeper County fire and rescue district with boundaries that follow the boundaries of Culpeper County, and which fire and rescue district

includes all real and personal property located within the boundaries of Culpeper County, a political subdivision of the Commonwealth of Virginia.

Section 12-202. - Fire and rescue district levy.

The Board of Supervisors may annually levy a tax on the assessed value of all property real and personal within the Culpeper County fire and rescue district, which tax shall be extended and collected in the same manner as real and personal property taxes are extended and collected in the County.

Section 12-203. - Use of fire and rescue district levy.

The Culpeper County Treasurer shall keep all amounts realized from any levy made pursuant to section 12-202 of this chapter in an account separate from all other monies of the County and such monies shall be applied to no other purpose than the maintenance and operation of fire departments and rescue squads.

Culpeper County, Virginia – Comprehensive Plan

Culpeper County’s first Comprehensive Plan was adopted by the Culpeper County Board of Supervisors on September 1, 1964, and was entitled Future Land Use Plan for the Town and County of Culpeper. The Comprehensive Plan has been amended numerous times since 1964, with the 2010 plan serving as the most recent official policy guide for the County until the adoption of the 2015 Comprehensive Plan, which was adopted on September 1, 2015.

The Comprehensive Plan is Culpeper County’s official policy guide for current and future land-use decisions. The Comprehensive Plan is considered long-range in nature and provides a picture of how Culpeper County wishes to develop over the next 5 to 20 years.

As a policy document, the Comprehensive Plan provides a means for the County’s citizens and decision makers to determine the best methods or strategies for achieving the goals conceptualized in the Plan. The provision of fire and EMS services is a vital component of the Comprehensive Plan.

The following criteria are set out in the Comprehensive Plan to be used in determining appropriate sites for additional stations to provide a consistent level of service across the County.

Location Criteria

- Locate stations at points with fast, easy access to a major arterial. Possible sites should be located near two major arterials that offer both east-west and north-south travel.
- Locate new fire/rescue stations near village centers where possible based upon key site planning considerations such as access, safety and response time.
- Reduce response areas to a 3-mile radius for facilities within the areas of highest population density.
- Response areas in less populated areas should be a 5-mile radius. Short Term 2015– 2020

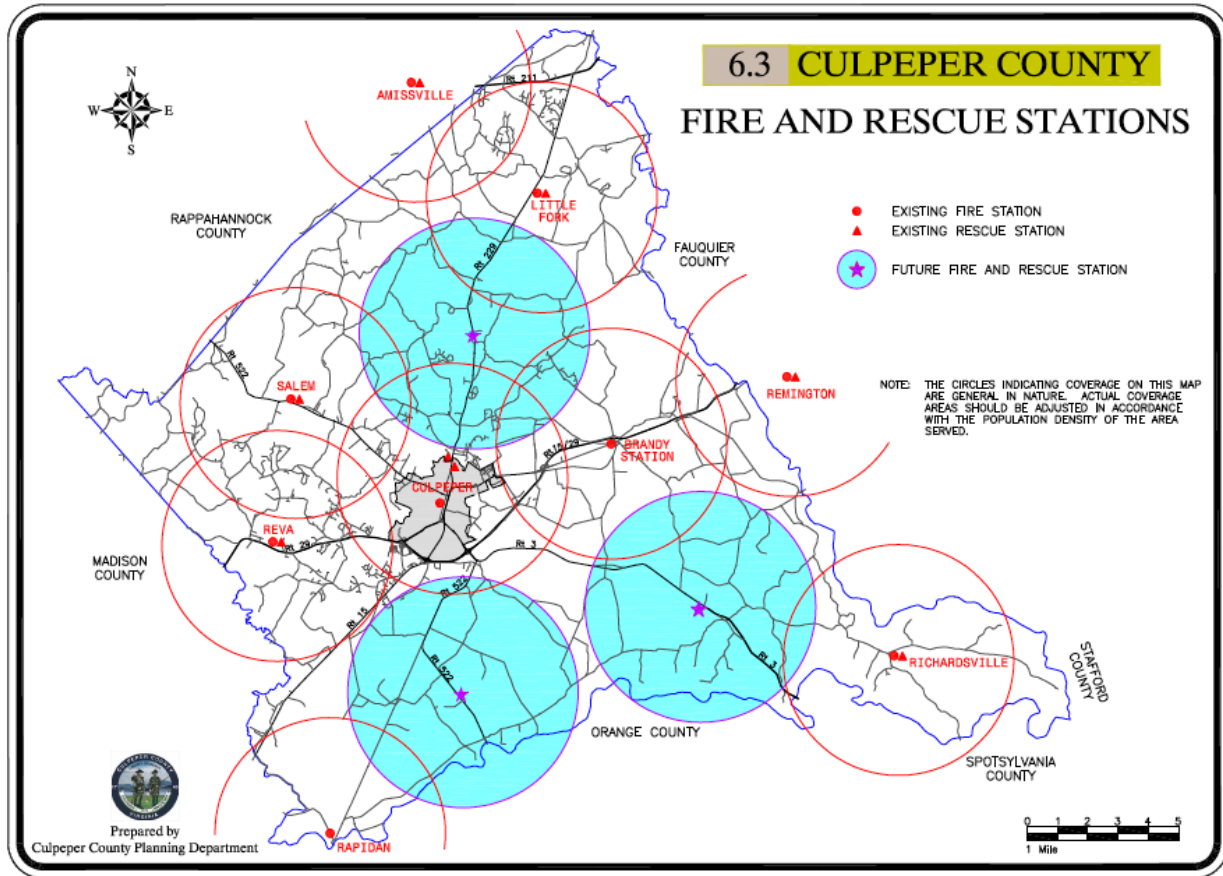
Short Term 2015 – 2020 Goals

- Begin to plan for, and consider land acquisition for future fire and rescue stations.
- Continue to evaluate the need for career personnel and increase existing staff as needed.
- Begin developing plans for a fire and rescue training center. Long Term 2020 and beyond

Long Term 2020 and Beyond Goals

- Reduce coverage areas to a 3-mile radius in village centers.
- Add new fire and rescue facilities as needed to accommodate smaller area coverage requirements and to keep the number of calls at each facility within a reasonable capacity.

Figure 2.1
CULPEPER COUNTY COMPREHENSIVE PLAN
FUTURE FIRE AND RESCUE STATION PROJECTIONS



AGREEMENT FOR PROVISION OF FIRE AND/OR RESCUE SERVICE

The County Code (Section 12-200) legally recognizes the Culpeper County Volunteer Fire and Rescue Association as the coordinating organization of the individually authorized volunteer fire and/or rescue companies. To establish expectations and responsibilities, the Board of Supervisors entered into a contract with the Culpeper County Volunteer Fire and Rescue Association, Inc., on August 10, 2011 (Appendix A).

This agreement outlines:

1. Each Company physically located in Culpeper County shall be a member of the Culpeper County Fire and Rescue Association as described in Article I, §2-1 and Article XIV, §12-200 *et seq* of the Culpeper County Code.
2. The Companies shall have one voting representative in the Association, who shall be designated by each Company.
3. In consideration of the Association, in conjunction with career staff, providing coordination of emergency services in accordance with Culpeper County Code provisions, applicable federal and state provisions, and Association bylaws and other policies, the County, subject to annual appropriation, will provide adequate funding (100% funding for all operating expenses as well provide funding for purchases of major equipment, apparatus, facility upgrades and/or replacements) to the Association for these purposes as determined by the County and the Association, from revenue received pursuant to Ord. §12-202, *et seq*.
4. Each Company will remain at all times a member in good standing of the Association, pursuant to the bylaws of the Association.
5. The Board of the Association shall implement all Association policies.
6. The Association will submit an annual budget in accordance with the policies promulgated by the County and by the Association, for review and approval by the County during its annual budget process.
7. Whenever the County determines in writing, at the direction of the Board of Supervisors, that examination, audit or inspection of all or any portion of the Association or a member Company's business records related to the expenditure of county funds is necessary for the purpose of conducting financial reviews or audits, and that such financial reviews or audits are necessary to protect the interest of the public, the Association or Company shall permit the County Administrator and/or representatives of the County Administrator to inspect its business records specifically relating to county funds at such reasonable times and under such reasonable circumstances as the County Administrator may direct. The Association and/or Company shall make available all records relating to county funds and shall cooperate fully in all financial reviews or audits of the Association and/or Company's business affairs ordered by the County Administrator pursuant to this section.
8. The Association shall continue developing dispatch and response procedures for its services and within the limits of its financial resources. The E911 Board shall serve as the body responsible for the appropriate implementation of these procedures.

9. The Association will cooperate to provide emergency service to other governmental jurisdictions with which the County has established mutual aid agreements.
10. All parties shall facilitate efforts to recruit, train and maintain viable volunteer fire and emergency rescue services.
11. Should the authorized designee of the Company and the Director of the Office of Emergency Services (“Director”), deem it necessary to assign career staff to a station, then, before such career staff may be assigned, the Director and the Company's designee shall agree to abide by a standardized set of operating guidelines developed by the Association in conjunction with the Office of Emergency Services to ensure continuity throughout the County. The assigned career staff shall comply with the Company’s operating guidelines or procedures but otherwise the career staff shall remain under the direction and control of the Director. The standard operating guidelines will address but will not be limited to the management; utilization, repair and maintenance of facilities and apparatus; daily operations; workplace safety; custodial duties; and the responsibilities of the career and volunteer staff.
12. Supervision of career staff rests with the Director or his designee. However, career staff shall be subject to the authority of the Company Chief, or designee, and the applicable standards, procedures and/or guidelines of both the Association and applicable member companies operating on an emergency incident.
13. Formal and informal complaints made or received by any volunteer company member concerning employee behavior or performance or any other issues related to the career service must be forwarded to the Company Chief, or their designee, who will send it to the Director for official investigation. As a part of the personnel process, any complaint must remain confidential. Formal and informal complaints concerning volunteer personnel or any other issues related to the volunteer Company, made or received by career personnel, must be forwarded to the Director, who will send it to the Company Chief for official investigation. As part of the personnel process, any complaint must remain confidential.
14. The term of this Agreement shall be one year from the date of its execution. This Agreement shall be automatically renewed for successive one-year periods, without limitation. This Agreement shall be subject to annual review by the County and the Association. In each year after the first full year this Agreement is in effect, the Association shall schedule a meeting with the County Administrator or his designee, to be held no later than December of that year, for the purpose of

reviewing the contents of this Agreement. This Agreement shall remain in full force and effect unless terminated or modified by the parties as set out below.

15. This Agreement may be terminated by either party upon six (6) months written notification to the other.
16. This Agreement shall not terminate in the event a Company ceases to comply with the requirements herein. Further, although the County may desire to dissolve a Company, the County agrees that it will only act to dissolve a Company upon first receiving a recommendation from the Association (due within 90 days of the request for the recommendation) and then upon a finding by the County, that the Company has failed to provide adequate emergency service to the area which it serves, or a condition exists which makes the Company, even with the assistance of the Association, unable to provide adequate fire and/or rescue service. This Agreement shall not terminate if the Company is so dissolved. This paragraph does not modify either parties' rights as they currently exist.
 - a. Upon dissolution of a Company, assets of the said Company shall be distributed in accordance with the stipulation of their Articles of Incorporation, By-laws or other applicable organizational documents. Title to any remaining assets shall then be assigned to the Association for distribution.
 - b. The Association shall transfer title to the remaining assets to the Company that has been designated to assume responsibility for providing emergency services to the first due area of the dissolved Company.
 - c. If the first due area of a dissolved Company is split between two or more existing companies, the Association shall decide, based on public safety, which companies shall assume the responsibility of providing emergency services and shall report to the County Administrator the Association's determination. The division of the remaining real and personal property of the dissolved Company shall be divided among those Companies unless a new fire and/or rescue company is to be formed, with approval by the County following the recommendation of the Association and the County Administrator, to assume responsibility for the first due area. If a new company is to be formed, the real and personal property of the dissolved Company may be transferred to such new Company.
 - d. The purpose of these provisions of this Agreement for the transfer of title in the event the Company is dissolved is to ensure, to the extent possible, the continuous, uninterrupted provision of emergency service to the area served

by the Company. These provisions shall be interpreted and applied to achieve this purpose.

17. This Agreement shall be subject to the continuation of Article XII, §200, of the Culpeper County Code relating to the creation of the Culpeper County Fire and Rescue Association.
18. This Agreement supersedes all prior agreements.

REVIEW OF COUNTY CODE AND LEGAL AUTHORITY

Fire and Rescue

In reviewing the Code and related documents, the Culpeper County has legally created a fire and rescue district with boundaries that follow the boundaries of Culpeper County, and which fire and rescue district includes all real and personal property located within the boundaries of Culpeper County, a political subdivision of the Commonwealth of Virginia.

The Board of Supervisors has established the means to annually levy a tax on the assessed value of all property, real and personal, within the Culpeper County fire and rescue district, which tax shall be extended and collected in the same manner as real and personal property taxes are extended and collected in the County. The County Treasurer is directed by the Code to keep all amounts realized from any levy made pursuant to section 12-202 of the County Code in an account separate from all other monies of the County and such monies shall be applied to no other purpose than the maintenance and operation of fire departments and rescue squads.

By the County Code, the Board of Supervisors recognizes the Culpeper County Volunteer Fire and Rescue Association as the coordinating organization of the individually authorized volunteer fire and/or rescue companies. The Board of Supervisors further codifies that all requests for funding, benefits or any support provided by the County shall come through the association and not from individual companies.

The County of Culpeper has established in the Code of Ordinances that the independent Fire Departments and Rescue Squad serving Culpeper County are designated as part of County's Official Safety Program.

To achieve the provisions of fire and EMS in the County and implement the requirements in the County Code, the County entered into a contract with the Culpeper County Volunteer Fire and Rescue Association, Inc., on August 10, 2011 to define and establish expectations and responsibilities.

The County of Culpeper has established in the Code of Ordinances the position of Junior Firefighter and set forth that any person sixteen (16) years of age or older, with parental or guardian approval, may work with or participate fully in all activities of a volunteer fire company, provided such person has attained certification under National Fire Protection Association 1001, Level One, Fire Fighter Standards, as administered by the Department of Fire Programs of the Commonwealth of Virginia.

While State Code allows for persons between the ages of 16 and 18 years of age to fully participate in volunteer fire and EMS response, under certain conditions, the Study Team feels that putting minor children in physical or psychological harm's way is ill advised and the Study Team recommends that the County amend the County Code to only allow those individuals 18 years and older to "fully participate in all activities of a volunteer fire company." The Study Team further recommends that this ordinance be amended to allow only individuals 18 years and older to "fully participate in all activities of a volunteer EMS or rescue company." The County should use the *Opening New Doors, The Silver Ribbon Report, Guidelines and Best Practices for a Successful Youth Fire Service Program*, published by the IAFC Volunteer and Combination Officers Section, to determine the restrictions on junior firefighters between the ages of 16 to 18 years of age that are not allowed to "fully participate."

While this recommendation may be seen as hindering the recruitment of volunteers, the Study Team believes that policies can be put in place to allow the volunteer companies to recruit and utilize 16 to 18 year olds in many capacities, including obtaining all necessary training so that they are fully functional when they reach the age of 18.

The County of Culpeper has established in the Code of Ordinances (Section 2-13) the ability to charge for non-emergency use of emergency medical services vehicles. However, the Study Team could find no authority to implement full cost recovery of EMS services.

While the Study Team has been able to affirm that Culpeper County began full EMS cost recovery of the insurance portion of the ambulance bill in October 2006, and the Study Team has made note that a resolution was passed in February 2015 regarding cost recovery and contract for such services is in effect between the County of Culpeper and McKesson Business Performance Services (BPS), Fire and EMS Solutions (formerly Med 3000), the Study Team recommends that the authority to perform EMS cost recovery services be codified in the County Code.

The Study Team recommends that all references and regulations related to the County's authority, provision of fire and EMS and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.

Emergency (Management) Services

The County of Culpeper has established in the Code of Ordinances that it desires to develop and maintain an emergency services organization and that a County Office of Emergency Management is created. The head of such office shall be known as the Director of Emergency Management. Such Director *shall be a member of the Board of Supervisors* selected by the Board. *The Director shall be responsible for organizing emergency services and directing emergency operations* through the regularly constituted government structure and shall utilize the services, equipment, supplies and facilities of existing departments, offices and agencies of the County to the maximum extent practicable. The officers and personnel of all such departments, offices and agencies are directed to cooperate with and extend such services and facilities to the Director upon request.

The Study Team found several references in the contract between the County and the Association, as well in county job descriptions, policy and operating guidelines that refer to the "Director" as the employee of the County who oversees "emergency services."

The Study Team recommends that the County more clearly define and codify the position of "Director" to reflect requirements in the State and County Code and the actual operation of the Office of Emergency Management (Emergency Services) in the County.

The County Code states that the Director, as defined above as having to be a member of the Board of Supervisors, shall, with the consent of the Board of Supervisors, have authority to appoint a Coordinator of Emergency Management and such other personnel for the office as is necessary. This may serve as one possible remedy.

The Study Team recommends that all references and regulations related to the County's emergency management/services office and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.

Fire Prevention

The County of Culpeper has established in the Code of Ordinances that it desires to protect public health, safety, and welfare by regulating the making and supervision of open fires and burning of brush within Culpeper County. However, the County of Culpeper lacks the position of fire marshal, and the Study Team found that practical enforcement of this ordinance is non-existent.

Furthermore, in discussions with the volunteer fire and rescue chief and the Director of Emergency Services, it was the general consensus that enforcement of these regulations by the County would reduce the burden on the volunteers. Additionally, it was felt that creating the position of fire marshal would assist their agencies in assuring compliance with codes and standards enacted by the Commonwealth and/or the County, therefore, increasing fire prevention effectiveness to further reduce the burden on the volunteers.

The position of fire marshal would also benefit (1) the oversight of the water supply requirements and dry hydrant installation, (2) the liaison with Town and County planning departments regarding fire protection issues, (3) the regulation of hazardous materials, and (4) a consistent means of investigating fires in the County.

Title 27, Chapter 3, Section 27-30 of the Code of Virginia allows the County to appoint a fire marshal whenever, in the opinion of the County, the appointment shall be deemed expedient. The term "fire marshal" as used in this chapter may include the local fire official and local arson investigator when appointed pursuant to this section.

The Study Team recommends that Culpeper County appoint a fire marshal for the purposes of (1) protecting public health, safety and welfare and (2) enforcing regulations to safeguard life and property from the hazards of fire or explosion arising from the improper maintenance of life safety and fire prevention and protection materials, devices, systems and structures, and the unsafe storage, handling and use of substances, materials and devices.

The Culpeper County fire marshal should be designated to act as the enforcement entity for this article and shall have all powers as authorized by the County and the Code of Virginia.

The Study Team recommends that all references and regulations related to the County's fire marshal and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.

CULPEPER COUNTY FIRE AND EMS ORGANIZATIONS

This section outlines the organization of the Culpeper County Fire and EMS Service as a primarily volunteer combination paid/volunteer fire and EMS services delivery system.

Culpeper County Volunteer Fire and Rescue Association

The Culpeper County Volunteer Fire & Rescue Association (CCVFRA) exists to assist in the coordination and provision of emergency services between Culpeper County, Virginia, and its eight member companies: Brandy Station Volunteer Fire Department, Inc.; Culpeper County Volunteer Fire Department, Inc.; Culpeper County Rescue Squad, Inc.; Little Fork Volunteer Fire and Rescue Company, Inc.; Reva Volunteer Fire and Rescue Company, Inc.; Rapidan Volunteer Fire Department, Inc.; Richardsville Volunteer Fire Department and Rescue Squad, Inc.; and Salem Volunteer Fire Department, Inc.

Figure 2.2
CULPEPER COUNTY FIRE AND RESCUE COMPANIES
OPERATING AT A STRUCTURE FIRE



The CCVFRA provides essential services for the member companies, including (but certainly not limited to):

- Coordinating training of emergency services personnel
- Assisting in the development of uniform dispatch protocols
- Developing standard operating guidelines for approval by the member companies
- Receiving budget allocations from the county and distributing them to its member companies
- Providing a forum where all the member companies can work together to create consistent delivery of emergency services to the citizens

CCVFRA Mission and Purpose

The purpose of the Culpeper County Volunteer Fire & Rescue Association, as stated in its Articles of Incorporation, is exclusively educational, scientific and charitable. In furtherance of these purposes it is the function of the corporation to promote cooperative relationships among members of the volunteer fire and rescue organizations of Culpeper County; to enhance the delivery of emergency services to the citizens of Culpeper County; and to act as a liaison between the Culpeper County volunteer fire and rescue companies and Culpeper County.

The Board of Directors may adopt such guidelines, policies and procedures as may be necessary to implement the purposes and functions of the corporation as set forth in these Bylaws and its Articles of Incorporation provided that any such guidelines, policies and procedures are consistent with the corporation's status as exempt from tax under Section

501(c)(3) of the Internal Revenue Code and be established in such a way that the expenditures will not constitute taxable expenditures within the meaning of Section 4945 of the Internal Revenue Code.

CCVFRA Membership

The Association consists of representatives and alternatives from each fire and/or rescue member organization located in Culpeper County that are recognized as Association members by the CCVFRA Board. These representatives fill various Board and Committee positions within the CCVFRA. Each member department appoints one of these representatives to serve on the Board of Directors. Each Department also appoints an alternate Board member in case of absence by the appointed representative.

Voting membership may be extended to any volunteer fire and/or rescue department located within Culpeper County by the CCVFRA Board at any regularly scheduled meeting. A simple majority vote of the Board members present at that meeting is required to extend membership.

Non-voting membership may be extended to companies located outside Culpeper County at the discretion of the Board of Directors.

CCVFRA Board of Directors and Officers

The Board of Directors consists of a President, Vice President, Secretary, Treasurer, and an at-large Director position for each of the remaining Board Members. The number of Directors constituting the Board of Directors shall be equal to the number of voting member volunteer companies currently operating.

The property, affairs and business of the Association is managed by the Board of Directors and (except as otherwise expressly provided by law, the Articles of Incorporation, or the Bylaws) all powers of the corporation shall be vested in such Board.

The officers of the corporation shall be the President, Vice President, Secretary and Treasurer. These positions have such duties that generally pertain to their offices, as well as such powers and duties as are prescribed by law or provided by the By Laws or as from time to time shall be conferred by the Board of Directors.

CCVFRA Standing Committees

The Association maintains five (5) primary standing committees directly responsible to the Board of Directors. These committees consist of Administrative, Budget & Finance, Communications, EMS and Fire Committees. Each committee has one representative and one alternate appointed by his/her respective department. These committees address issues pertaining to the Association and receive their guidance from the Board of Directors.

Each committee answers directly to the CCVFRA Board. Committees elect a Chair and Vice Chair at their first meetings held after the January Association meeting. The chairperson chairs committee meetings and acts as the liaison to the Board of Directors. The chairperson and/or vice chairperson attend Board of Directors meetings to present a written report of committee actions, business and recommendations to the Board. All committee recommendations and expenditures must be approved by the Board of Directors.

Policies or procedures developed by the Standing Committees shall not be imposed on any single individual fire/rescue department, and no authority assumed by the committee shall extend to, supersede, or in any way impede the authority of individual fire and/or rescue departments to act independently for the Culpeper County Volunteer Fire and Rescue Association. Standing Committees do not have the authority to enter into contracts, authorize expenditure of funds, or to in any way obligate the CCVFRA.

The Study Team noted that the Association Bylaws do not include a listing of member fire and EMS companies. Further, there is no mention of an established volunteer recruitment and retention committee.

With the importance placed on the need to recruit and retain volunteers, the Study Team recommends that the CCVFRA form and codify a volunteer recruitment and retention committee as a Standing Committee of the Association.

Volunteer Fire and EMS Companies

Each of the eight volunteer fire and EMS companies is incorporated under the laws of the State of Virginia; operates under a set of adopted authorizations including a constitution,

bylaws and other rules and guidelines; and elects and/or appoints a set of administrative and operational officers pursuant to their bylaws.

The volunteer fire and EMS companies that are part of the Culpeper County Fire and EMS Service include:

Culpeper Volunteer Fire Department 151 - 153 West Davis Street Culpeper VA 22701 (540) 825-8777	Brandy Station Volunteer Fire Department 19601 Church Road Brandy Station VA 22714 (540) 825-1555 or (540) 825-7678
Amissville Volunteer Fire and Rescue 14711 Lee Highway Amissville VA 20106 (540) 937-5125	Richardsville Volunteer Fire and Rescue 29361 Eley's Ford Road Richardsville VA 22736 (540) 399-1890
Salem Volunteer Fire and Rescue 13428 Scotts Mill Road Culpeper VA 22701 (540) 825-9112	Little Fork Volunteer Fire and Rescue 6011 Rixeyville Road Rixeyville VA 22737 (540) 937-7717
Rapidan Volunteer Fire and Rescue 9729 Locust Dale Road Rapidan VA 22733 (540) 672-5744	Culpeper Volunteer Rescue 1121 North Main Street Culpeper VA 22701 (540) 825-2247
Reva Volunteer Fire and Rescue 18230 Birmingham Road Culpeper VA 22701 (540) 547-3747	

Fire and Rescue Company Incorporation

The fire and rescue companies were separately incorporated under the laws of the State of Virginia when originally established. The articles of incorporation for each of the companies typically include:

1. Certification as to the name of the corporation;
2. Statement as to the purpose of the corporation;
3. Listing of the powers of the corporation;
4. Identification of the location of the offices of the corporation; and,

5. Certification as to the general management approach---committee.

As changes have occurred through the years, these articles of incorporation may have been modified.

Fire and Rescue Company By-Laws

Each of the fire and rescue companies originally adopted a constitution and/or by-laws that have been subsequently revised, as considered appropriate by the membership of each company. Although the constitution/bylaws of the companies vary, a number of sections/articles/subjects comprising these documents, including:

1. Name and address;
2. Membership;
3. Meetings and participation requirements;
4. Nominations and elections of officers;
5. Board of directors/trustees;
6. Executive committee;
7. Officers - qualifications and terms of office;
8. Financial practices;
9. Expulsion and discipline; and,
10. Amendment of constitution and/or by-laws.

Operationally each of the fire and rescue companies is under the command of its respective chief and may adopt station operational procedures. Incident response operational procedures may only be adopted with the approval of CCFVRA.

Organizational Structure of Fire and EMS Companies

A review of the constitution and/or bylaws of the volunteer fire and rescue companies indicates that the companies are organized into the following two primary organizational elements:

1. *Administration.* The volunteer fire and rescue companies are administered by a number of elected or appointed administrative officers. The administrative officers of each volunteer organization generally include: President, Vice President, Chief, Secretary, and Treasurer. The volunteer companies normally

include a board of directors that typically provides overall policy and administrative direction to the department.

2. *Operations.* The typical operational officers of each of the volunteer companies include the following ranks of elected or appointed operational officers: Fire Chief, Assistant Chief, Deputy Chief, Captain, and Lieutenant

The Study Team has provided planning assistance, managed or participated as a member of volunteer fire and EMS companies in the Commonwealth of Virginia. In the view of the Study Team, the fire and EMS companies in Culpeper County are organized in a similar manner to many fire companies in the Commonwealth and demonstrate prudent practices in the operation of their individual company.

INPUT FROM FIRE AND EMS PERSONNEL

During the course of this fire and EMS planning process, the Study Team concentrated a considerable amount of effort in obtaining the opinions and input from volunteer and career fire and EMS members; officers and officials of the fire and EMS companies; and the CCVFRA. This effort was pursued through both personal interviews and a confidential member survey form.

Personal Interviews

The Study Team elicited comments and input through personal and group interviews and discussions. Fire and EMS members, operations and administrative officers and other internal and external stakeholders were interviewed on the subject of the organization, administration and fire and EMS service delivery in Culpeper County. These individuals were asked their opinions on the major problem areas and suggestions to improve the fire and EMS organization and services delivery. The Study Team solicited input from more than 50 individual and/or group meetings.

Confidential Member Survey Form

Input was also elicited through offering service providers the opportunity to complete a multi-page confidential member survey. The survey asked a broad cross-section of

questions to gain information on members' thoughts relating to strengths, weaknesses and opportunities for improvement.

It should be noted that the Study Team received completed survey forms from over 150 firefighter and EMS service providers of the eight fire and rescue companies. The reader will observe that throughout this Study report selected applicable thoughts and input from the survey are included in appropriate sections to provide the perspective of the various service providers.

The Study Team appreciates the time and effort of the individuals who chose to give of their time and effort to provide this valuable input and feedback through the survey tool and individual and group interviews and meetings. This information was invaluable to the development of the conclusions and recommendations contained in this Study report and played a key role in formulating the suggestions for the future of the Culpeper County Fire and EMS Service.

ORGANIZATIONAL OBSERVATIONS

The following sections are general observations about the organization of the Culpeper volunteer fire, rescue and EMS services from both a company and countywide perspectives.

Individual Company Perspective — Member Perceptions

The companies are organized under state chartered certificates of incorporation, as are many volunteer fire companies across the nation. They are governed internally by constitution and/or bylaws the membership adopted and modified. The fire and rescue companies also operate under policies and/or procedures approved by either their chief, president and/or governing board. These policies vary significantly in terms of quality, detail and currency.

The charter, bylaws and policies of each of the fire and rescue company organizations generally focus internally on their organization, structure and operation. They do not generally relate to the other companies or the overall countywide fire and EMS service.

Operationally, the fire and EMS companies appear to generally focus many of their service needs assessments, decision-making and strategies for staffing, apparatus and equipment in their first-due response area in an effort to try to provide all services.

Organizational Strengths

In considering their own fire and EMS companies, many firefighters, EMTs, paramedics and officers discussed a number of strong points from a company perspective. Many positive aspects of the fire and EMS companies discussed/mentioned by members of the various companies include the following:

1. Well-organized;
2. Years of experienced volunteers;
3. Commitment to community;
4. Reputation in community;
5. Level of commitment of members;
6. Fiscal responsibility;
7. Fire prevention at community events;
8. Good equipment;
9. Progressive website;
10. Level of call response activity;
11. Depth of members experience;
12. Participation by paid fire/EMS crews;
13. Age diversity of membership;
14. Positive attitude of members;
15. Few complaints from public;
16. Good relations with other companies;
17. Training participation;
18. Family orientation of company;
19. More senior members serving as mentors;
20. Community event involvement;
21. Improvements in fire station funded by County;
22. Members proud of company;
23. Excellent facility;
24. Strong training program;
25. Teamwork;
26. Perseverance in tough times;

27. Call Volume;
28. Combination system;
29. Company succession planning; and,
30. Sense of tradition.

These are only a small number of the many positive points relating to their own fire and EMS company discussed by members interviewed by the Study Team. In the view of the members, the fire and EMS companies in Culpeper County have much to be proud of. The Study Team is of the opinion that, **as volunteers of fire and EMS companies, they have a proud history and tradition of volunteerism, which has been serving the County and its residents and businesses well for decades.**

Improvement Opportunities

The Study Team was impressed with the fact that many volunteer members and leaders, while proud of their fire and EMS companies, knew there were substantial improvements needed, both in their own companies as well as countywide. Members mentioned the following primary areas in their own companies where there is a need for improvement:

1. Improved benefits and incentives for volunteer members;
2. In-station training drills need for improvement;
3. Need more volunteers in station;
4. Better facilities to attract and house volunteers;
5. Reduce volunteer turnover rate;
6. Number of slow unit responses;
7. Consistency in operations;
8. Improve career volunteer relations;
9. Limited county funding
10. More training, consistent training;
11. Company difficulty meeting workload demand;
12. Limited and outdated policies and procedures;
13. Daytime staffing problem;
14. Number of failures to responds on calls;
15. Association out of touch with members;
16. Phantom staffing;
17. Improvement in deployment of volunteer staffing;
18. Long response times;

19. No organized recruitment effort; and,
20. New apparatus.

These, as well as other areas of potential opportunities for improvement mentioned by members or observed by the Study Team, will be discussed later in this chapter and other relevant chapters of this report.

Countywide Perspective

Possibly, the most difficult issue that hinders progress and teamwork in the Culpeper County fire and EMS services is the lack of consistency and central leadership on a countywide basis. A dangerous safety situation will develop if there are limited consistent operational procedures in place. Many procedures are in need of revision and important fire and EMS strategies and tactics must be addressed.

General Comments Regarding the Overall System

1. Too few volunteers for such a large county and population;
2. Some companies doing their own thing;
3. There is no individual responsible for countywide for fire/EMS issues;
4. Lack of County financial support;
5. Need a fire and rescue grant person;
6. There needs to be a single person responsible for overall operations;
7. There needs to be stricter leadership in the fire and EMS companies;
8. There needs to be a fire “official,” to solve dispatch issues, fire/EMS budget allotments, approve/disapprove specifications and funding for apparatus, gear or operations items;
9. The Fire/EMS Association needs to be more inclusive;
10. A County Fire Administrator is needed;
11. More career fire/EMS/rescue people to support/supplement the volunteers;
12. Either replace the Association or fix it;
13. The County fire service needs to be more unified;
14. Need to stop “egos” from getting in the way improvement;
15. Need for an administrator to oversee training and all companies;
16. Eliminate the power and personal bias of the Association;
17. Need County support for volunteer recruitment and retention program;
18. General attitude that there was no need for this Study;

19. A fire administrator with authority to enforce standards and rules is needed;
20. Need for someone to oversee operations with authority to crack down on mismanaged companies;
21. Need a full-time county volunteer recruiter;
22. There is nothing in place to hold the companies accountable;
23. There is no accountability and oversight of the fire and EMS service by the County;
24. County should maintain fleet and provide reserve apparatus;
25. Appoint a County Fire Marshal to enforce codes;
26. Too many expectations of volunteers, County should fund, no fundraising;
27. Need to stop home staffing, need in-station duty crews;
28. Safe fire houses;
29. Handle purchasing the same for all;
30. Accountability to follow procedures;
31. Better dispatch system;
32. Use of new technologies;
33. More specialized training; and,
34. Training officer should not report to the Association.

Study Team Observations

From a countywide point of view, Culpeper County is being served by a number of volunteer Fire and EMS companies generally operating at emergency scenes in concert with one another. However, the makeup of the current system allows for various autonomous approaches to the following important aspects of the fire and EMS service delivery and management:

1. Chain of command;
2. Budgeting and accounting for tax funds;
3. Operational policies, procedures and SOPs;
4. Apparatus purchases and fleet size;
5. Apparatus deployment dispatch procedures;
6. Apparatus and personnel utilization on emergency incidents;
7. Public fire education;
8. Fire prevention and code enforcement;
9. Personnel training program/s;
10. Officer promotional requirements;

11. Determination of specific goals and objectives;
12. Firefighter supervision and discipline;
13. Tax funding level needed from County;
14. Tactics and strategy on emergency incidents;
15. Station staffing;
16. Apparatus staffing;
17. Apparatus maintenance;
18. Services provided;
19. Volunteer recruitment and retention;
20. Accountability for actions and the quality of services rendered;
21. Maintaining incident response times as short as possible;
22. Compliance with adopted standards and policies;
23. Utilization and supervision of career staff;
24. Service expansion/improvement planning; and,
25. Safety of personnel.

There are eight service delivery teams in Culpeper County rather than a one-team approach. Each of the companies, to a greater or lesser extent, seems to focus on its own organization and response area thus creating duplication of effort and apparatus and equipment in a number of areas. Some members mentioned the existence of “fiefdoms” and “egos” on the part of some fire and EMS company leaders and service providers. However, the Study Team noted that the Culpeper County volunteer companies are far more cooperative with one another than in many systems. Furthermore, the Study Team noted that there is a general desire to maintain consistency in all operations.

As with most communities across the nation, Culpeper County and its fire and EMS services are dealing with limited resources. In addition, all of the fire and EMS companies noted that they are having difficulty recruiting and retaining members to serve as volunteer firefighting and EMS personnel. This same difficulty has been observed by the Study Team in volunteer fire/EMS organizations nationwide.

The effort most fire and EMS companies expend to provide as many services as possible further strains their limited fiscal resources and their ability to raise funds to supplement the tax revenue they receive. All companies commented that they have reached a breaking point by which they may not be able to continue community fundraising to the level needed to support their operations.

This is not to say that there is not a desire on the part of many in the Culpeper County fire and EMS services to provide consistent high quality service to the public. The Study Team noted many company and individual efforts at various different levels aimed at trying to maintain and enhance the level of service they provide.

All of this said, an organizational framework to facilitate the creation of a unified, consistent approach to the provision, administration and operational aspects of fire and EMS services in Culpeper County does not require the hiring of an all-paid staff, establishment of one fire department, and/or the desolation of the volunteer organizations. There are many other alternatives to providing a unified and consistent approach in communities that have proven to be effective in a number of other jurisdictions. Those alternatives do not have to drive away the volunteer staffing and spirit. In many cases, alternatives strengthen volunteerism and the spirit of quality of service delivery.

Fragile Nature of Volunteer Fire and EMS Organizations

It is a known trend, nationally and statewide, that attracting and retaining volunteer members in fire and EMS organizations is a significant problem. Most volunteer fire and EMS companies across the United States are dealing with the loss of volunteers. In some regions, even in the Commonwealth of Virginia, volunteer fire departments are “closing their doors” and disbanding their organizations. This is causing significant issues for many counties. As a result, many studies and assessments locally, regionally and nationally have been conducted to determine the causes and solutions to this problem. Further, many local government and first responder organizations are conducting volunteer recruitment and retention studies and implementing appropriate programs and incentives.

Considering this trend in reduced volunteer participation, Culpeper County is very fortunate to continue to be served by many dedicated volunteers and fire and EMS company organizations. This continued service depends on the recognition on the part of the County of the need to provide important financial resources and coordination and support functions to the volunteers to allow them to concentrate their efforts on service provision related activities.

In developing recommendations for consideration by the County, the Study Team has considered this fragile nature of the volunteer services in an effort to provide constructive suggestions for the future.

The Study Team firmly believes that in the case of volunteer fire and rescue companies there is strength through cooperation and teamwork serving growing counties such as Culpeper County.

ORGANIZATIONAL ALTERNATIVES

The following sections will discuss and propose options for Culpeper County to consider in assuring the survival and the strengthening of the volunteer approach to service provision through improving teamwork and cooperation.

It should be noted that a pre-eminent goal of these recommendations will be to, where possible, strengthen the volunteer nature of fire and EMS service delivery, while at the same time maintain and, where possible, upgrade the quality of service delivery as the County develops.

The initial suggested options and recommendations in this section will lay the foundation for a unified and consistent fire and EMS operation, taking into consideration what may develop into the future as it relates to the organization of the Culpeper County fire and EMS services.

Organizational Models Involving Volunteer-Staffed Agencies

The Study Team has managed or conducted planning projects for more than 130 fire, rescue and EMS organizations with some level of volunteer staffing in counties and cities. In their experience, there are a number of organizational approaches. These models involve all-volunteer staffing with career support or a combination of volunteer and paid staffing.

Although not totally inclusive, these models include the following:

1. All-volunteer staffing;
2. All-volunteer staffing with a fire and rescue/EMS association;

3. All-Volunteer with a communications director providing support to the volunteer organization/s;
4. All-volunteer staffing with a fire/rescue/EMS commission, council or board;
5. All-volunteer staffing with a fire/rescue/EMS coordinator, with or without a fire/rescue/EMS commission, council or board;
- 6. Combination volunteer/paid staffing with a fire/rescue/EMS association (the current Culpeper County model considering the paid EMS staffing);**
7. Combination volunteer/paid with a fire/rescue/EMS association and with a fire/rescue/EMS commission, council or board;
8. Combination volunteer/paid with a fire/rescue/EMS coordinator and with or without a fire/rescue/EMS commission, council or board;
9. Combination volunteer/paid with a civilian director and with or without a fire/rescue/EMS commission, council or board; and,
10. Combination volunteer/paid with a paid fire chief and with or without a fire/rescue/EMS commission, council or board.

Any of these models could include a fire/rescue/EMS association.

It has been the Study Team's observation that, although there may be variations on this list of fire services models that include volunteer staffing, developing counties and cities tend to progress through these models in the order listed. A developing county or city fire services model would not normally progress in the reverse order of these models.

Culpeper Fire & EMS Organizational Alternatives

For the immediate future, the options and recommendations suggested consider basic restructuring to build on and strengthen a number of very good aspects of today's organizations.

A timeline for the suggested implementation of the organizational alternatives outline is included as part of the Implementation chapter of this report.

The Study Team recommends the following organizational alternatives for consideration:

1. Address the issues and enhance and strengthen participation of the Culpeper County Volunteer Fire and EMS Association;
2. Create a Fire, Recue and Emergency Services Commission;
3. Create a Department of Fire, Rescue and Emergency Services;
4. Establish the position of Director to head the Department;
5. Establish a Chief Officers Board;
6. Employ support staff to provide volunteer recruitment and retention, fire and EMS training, fire code enforcement and planning, fleet and facility maintenance and volunteer staffing coordination.

The following sections provide a further description of these organizational alternatives as envisioned by the Study Team.

Role of the Culpeper County Volunteer Fire and Rescue Association

The role of the CCVFRA could be enhanced and strengthened by:

1. Revising the County Code to designate the CCVFRA as an advisory agency to the Director and the Commission on the Culpeper County Fire and EMS System with specific language on membership, participation and equal representation;
2. Providing the CCVFRA with the responsibility to develop and present a unified budget request of all volunteer companies annually and to develop policies, procedures and SOPs for the administrative operation of a unified county fire and EMS system to be recommended to the Commission for adoption;
3. Providing the CCVFRA with the authority as the sole organization to advise and represent all fire and EMS companies on matters of budget and administrative policy with the Director and the Commission; and,
4. Providing the support and assistance of the Department Director and staff.

Fire and Emergency Services Commission

The role of the newly created Fire and Emergency Services Commission would be:

1. Monitoring, supporting and facilitating the implementation of this Fire and EMS Master Plan;
2. Establishing, monitoring and reporting on established measures of performance (MOPs) and standards of cover (SOCs) implementing revisions and additions as determined appropriate;
3. Develop and implement standards for purchasing, facilities, apparatus and equipment.
4. Monitoring and making recommendations regarding the establishment of a comprehensive countywide fire and EMS data collection and analysis system;
5. Reviewing policies, procedures and standard operating procedures of the fire and EMS services for approval;
6. Serving as an advocate for the fire and EMS services;
7. Advising the Board of Supervisors on matters relating to the fire and EMS service;
8. Reviewing the financing and annual budget requests (operating and CIP) of the fire and EMS organizations and making final recommendations to the Board of Supervisors;
9. Distributing funds appropriated by the Board to the fire and EMS companies and withhold funds as deemed necessary to enforce compliance with the procedures, policies and standards created or adopted by the Board of Supervisors;
10. Redistribute funds allocated to a fire or EMS company not complying within a reasonable time with the procedures, policies and standards created or adopted by the County assuming coverage of the respective area of the noncomplying fire, rescue or EMS company; and
11. Approving and overseeing the formation and/or dissolution of volunteer companies and the distribution of their assets not addressed in the company by-laws.

Department of Fire, Rescue and Emergency Services

As envisioned by the Study Team, the general mission of the Department of Fire, Rescue and Emergency Services would be:

To protect, preserve and support the volunteer aspects of the Culpeper County fire and EMS system; to assure high quality fire protection, rescue and emergency medical services to the citizens of Culpeper County in the safest, effective and efficient manner possible, while upholding the County's policies, procedures and directives; to ensure a unified and operationally consistent fire and EMS service delivery organization; to promote partnerships within the public safety community and other county agencies, providing for fire prevention, code enforcement and fire investigation; to promote recruitment and retention of volunteer personnel by providing education, training and benefit opportunities.

Headed by the Director, this new Department could provide support services and functions for the Commission, CCVFRA, volunteer Chief Officers, and fire and EMS companies to include the following current organizational elements:

1. Fire and EMS staffing coordination;
2. Training and formation of specialty operation teams;
3. Fire and EMS records management system and data analysis capability;
4. Volunteer recruitment and retention;
5. Coordinating fire and EMS training;
6. Fire prevention and education functions;
7. Fire code enforcement, planning and fire investigation;
8. Emergency management;
9. Fire, Rescue and Emergency Services Commission and CCVFRA support;
10. Monitoring, supporting and facilitating the implementation of this Plan;
11. Career firefighter staffing; and,
12. Other functions and responsibilities, as determined appropriate.

Fire and EMS Department Director

The responsibilities of the Director of the Department of Fire, Rescue and Emergency Services should include the following:

1. Manage and direct the Department;

2. Supervise and assign all Department career uniformed and non-uniformed staff;
3. Assist and provide support to the Fire, Rescue and Emergency Services Commission;
4. Assist and provide support to the CCVFRA;
5. Serve as an advocate for the Culpeper County fire and EMS service,
6. Serve as a focal point for the fire and EMS service in regard to communications and dispatch matters;
7. Issue General Orders for immediate correction of any operational or tactical safety issue with ratification required by the Fire, Rescue and Emergency Services Commission;
8. Oversee all County-owned assets, assure consistent specifications of all apparatus and equipment purchased for use in the Culpeper County fire and EMS system;
9. Provide advice and input and recommend policies and SOPs to the Fire, Rescue and Emergency Services Commission on matters related to the fire and EMS service; and,
10. Assure unified and consistent operation of the Culpeper County fire and EMS system.

When this position is implemented, the County is encouraged to hire a highly experienced individual with senior fire and EMS officer qualifications who is experienced in successful combination volunteer/career county fire and EMS system management. This person should have no prior background or involvement relating to Culpeper County. This department head should report to the County Administrator and “serve at the pleasure” of the Board of Supervisors under a detailed contract allowing for the success of this new position.

Chief Officers Board

The Chief Officers Board would consist of the Chief (or designated representative) of each volunteer company and the career service to oversee the planning, development and implementation of operations related to policies and service matters, as well as to develop operational and tactical policies and procedures to be recommend to the Fire, Rescue and Emergency Services Commission for adoption.

These suggested organizational changes are intended to maintain and strengthen the organizational elements with substantial operational reliance on the volunteer staffing

approach that exists and functions today while at the same time facilitating and providing a more unified perspective to the operations and administration of Culpeper County fire and EMS services.

Implementation of this Model for the Future

While this may seem to some to be an aggressive approach, it is the Study Team’s assessment that, although the fire and EMS company leadership and members are very dedicated and well intentioned, major components of the Culpeper fire and EMS system are overwhelmed and experiencing problems. There is good leadership on the part of the volunteers. However, this is subject to change at each election. In order to implement a unified and operationally consistent fire and rescue system, a single point of leadership and coordination is needed.

Philosophically, the first goal of this approach would be to provide a strong County fire and EMS coordinating agency that would be customer oriented, supporting the volunteers and the career fire and EMS personnel. Secondly, this approach could provide a firm foundation for future growth and development of the fire and EMS services as further career staff may be added to meet needs of the growing County fire and EMS service delivery.

Looking to 2025 and beyond, this organizational approach would be similar to the fire and EMS models used in the development of other area county fire and rescue departments such as Loudoun, Fauquier, Stafford and Prince William counties. Although Culpeper operates with much fewer career staff and many more volunteers than those organizations, if the right actions are implemented to support the volunteers through selectively implemented career support and leadership staff, this model can shore-up the current volunteer system and develop the organizational foundation for the future.

Career “Firefighter” Staffing Implementation Model

While the current Culpeper County OES employees assist the volunteers at fires, they are primarily assigned to county operated ambulances. In the future, career firefighting staffing may be needed. As such, there are two primary career-staffing models that could be implemented in Culpeper County. These models are:

1. Integrated approach involving all career fire and EMS staff working in the volunteer fire stations and riding the apparatus along with available volunteer members; or,
2. Non-integrated that involves most career fire and EMS staff working in separate career-staffed-only stations.

The Study Team recommends the long-term implementation of the integrated volunteer/career staffing approach. This approach fosters a unified and operationally consistent fire and EMS service. While friction will at times develop, strong leadership and support from the Board of Supervisors; the Fire, Rescue and Emergency Services Commission; and the volunteer and career leadership can overcome obstacles related to the integrated model.

IMPLEMENTATION CONSIDERATIONS

The following sections provides an approach to implement the suggested fire and EMS organizational considerations.

Culpeper County Fire & EMS Comprehensive Ordinance

The implementation of the fire, EMS and other organizational options suggested in this chapter should be implemented through the adoption of a comprehensive revision in the County Code.

The Study Team recommends that a County fire and EMS organization ordinance be adopted to include the recommendations previously outlined in this chapter and include primary sections relating to:

1. Statement of legislative intent regarding providing adequate public safety, health and welfare through a fire and emergency medical services that is highly competent and efficiently delivered by a combination of volunteer and career personnel;
2. Objectives of the combination fire and EMS system;
3. Maximum participation of volunteer fire and EMS personnel;
4. Fire, Rescue and Emergency Services Commission's authority;

5. Culpeper County Volunteer Fire and Rescue Association’s role and responsibilities;
6. Independent volunteer fire and EMS companies’ roles and responsibilities;
7. Department of Fire, Rescue and Emergency Services, headed by the Director, authority and responsibilities;
8. Assets purchased by County funds to be owned by the County;
9. Additional Fire and EMS companies;
10. Relocation/addition of facilities and apparatus;
11. Equitable allocation of funding;
12. Annual fire tax levy;
13. EMS cost recovery;
14. Emergency management;
15. Fire prevention and code enforcement; and,
16. Volunteer recruitment and retention incentives.

The adoption of a comprehensive ordinance, envisioned by the Study Team, could lay the foundation for the Culpeper County fire and EMS service to remain a vibrant, progressive and highly motivated volunteer-based service into the future. The Study Team has provided sample ordinances in effect in other Northern Virginia counties in Appendix B.

FUNDING

The County provided \$2,041,783 for the operation of the Culpeper fire and rescue companies for FY2016.

**Figure 2.3
CULPEPER COUNTY FIRE AND RESCUE COMPANIES FY2016 BUDGET**

	FY13 Actual	FY14 Actual	FY15 Adopted	FY16 Adopted	% of Change from FY15
Personnel	75,510	70,206	87,153	96,753	11.02%
Operating	1,716,299	1,742,270	1,831,418	1,942,530	6.07%
Capital	401,930	560	22,100	2,500	-88.69%
Total	2,193,739	1,813,036	1,940,671	2,041,783	5.21%

The County provided \$2,121,047 for the operation of the Culpeper Emergency Services Department for FY2016.

Figure 2.4
CULPEPER COUNTY EMERGENCY SERVICES FY2016 BUDGET

	FY13 Actual	FY14 Actual	FY15 Adopted	FY16 Adopted	% of Change from FY15
Personnel	1,492,562	1,529,600	1,698,497	1,720,996	1.33%
Operating	250,009	298,666	447,759	400,051	-10.66%
Capital	336,401	30,243	0	0	0%
Total	2,078,972	1,858,509	2,146,256	2,121,047	-1.18%

In addition, the county provided \$400,000 in FY2016 CIP funding to the volunteer companies.

Figure 2.5
CULPEPER COUNTY VOLUNTEER COMPANIES 2016 CIP

PS – Fire & Rescue Association	The Association has compiled a five-year C.I.P. which can be funded through a combination of sources. A flat County contribution of \$400,000 per year will support Companies 1,2,6,8,9,10,11 and 16 (\$50,000 per company). See Accompanying Fire & Rescue detail sheets.	Funds will assist all County VFD's with various capital projects. County funds combined with VFD fundraising and grants funds will provide primarily for equipment, but also for facilities improvements.	400,000
---	--	---	---------

Over the years, the County has assumed an increasing role in the financial support of the fire and EMS operations, administration and capital requirements of the volunteer fire and EMS companies. This approach is justified, as increased support has been necessary to maintain the volunteer nature of the services. In today's fiscal environment, it would be practically impossible for the Culpeper County fire and EMS companies to be financially self-supporting.

Each of the companies reportedly conducts various fundraising efforts that, to a greater or lesser extent, are successful in providing support funding. However, depending on the area served and the fundraising efforts undertaken, the revenue from these efforts may be relatively limited when compared to the funds needed for the operations and administration of each of the companies.

A central theme noted by the Study Team was the current process in which the County allocates County funds to the volunteer companies. Volunteer leadership across-the-board felt that both the operational and CIP allocations were insufficient to keep their

operations viable. Several examples were given to the Study Team where the Study Team felt funding was lacking.

Most of the facilities operated, as well as many of the apparatus, are in immediate need of repair or replacement and, under the current allocation of funds, the volunteer companies are hamstrung. During station visits, the Study Team noted that the condition of many of the fire stations was substandard and not sufficient for housing volunteer duty-crew staffing. Furthermore, the Study Team noted that the conditions of these facilities act as an impediment to volunteer recruiting efforts.

To ensure the continued support of the volunteer system in Culpeper County, the Study Team recommends a complete overhaul of the allocation of funds provided to the volunteer companies. Financial needs of the volunteer companies will vary from year-to-year, especially regarding CIP items, and will fluctuate based on call volume, response activity, number of active members, training needs of new volunteers and state fire and EMS requirements. As such, the Study Team recommends that funds be allocated based on need, justification and activity. As outlined above, a system of funding requests should be developed to allow individual companies to develop a needs-based budget and present that budget to the CCVFRA for inclusion in a comprehensive budget request for all companies. The CCVFRA budget would then be sent to the Fire, Rescue and Emergency Services Commission for ratification and approval and then forwarded to the Board of Supervisors as a recommendation.

Alternate Sources of Funding

The Study Team is aware of a number of potential current and future alternate sources of funding that should be considered by the County. These sources include:

1. United States Fire Administration (USFA) Assistance to Firefighters Grant Program for grants and funding;
2. U.S. Department of Homeland Security Commercial Equipment Direct Assistance Program for equipment for first responders;
3. USFA Staffing for Adequate Fire and Emergency Response (SAFER) program;
4. Federal Office of Hazardous Materials, Hazardous Materials Emergency Preparedness (HMEP) grant program;
5. Various Virginia State grants and low interest loans;

6. Fire inspection and plans review fees;
7. Patient billing for EMS transports;
8. False alarm registration and enforcement charges; and,
9. National Fire Academy Training Assistance funding.

Some of these funding opportunities have the potential for substantial ongoing sources of revenue and others may be one-time project specific grants or funding. Fire departments that pursue alternate sources of funding find the revenue beneficial to service delivery and many times supplement the normal primary source/s of funding.

The County is encouraged to evaluate these opportunities and aggressively seek out these and other options for funding.

SUMMARY

The organization of the fire and EMS services in a community is a very important factor in the delivery of quality services. An important aspect of the establishment of an efficient and effective fire and EMS delivery system team relates to local government fulfilling its role in guiding its formation to ensure that the fire and EMS delivery organization/s reflect the public interest.

As is the case with many Virginia counties and other local governments throughout the nation, the largely volunteer fire and EMS services in Culpeper County evolved through the years with limited involvement and guidance by the County. Various volunteer fire and EMS organizations were established and developed based on local neighborhood initiative with both single and multiple fire station fire and EMS organizations.

Currently, Culpeper County is being served by eight fire and rescue companies that are staffed by volunteer members. Each of these companies is directed operationally by a chief and administratively by a president. The Culpeper County Volunteer Fire and Rescue Association, comprised of representatives from each of the fire and rescue companies, serves as a focal point for communications. Basic decisions are made from a countywide perspective.

The chief, or designee, of each company serves on the Fire Committee, a committee of the Association, to bring some countywide focus to operational matters. Further, there is

a EMS Committee responsible for producing policies, procedures and SOPs to be followed by rescue companies. There has been some success in establishing these comprehensive written directives. However, given the fact that all companies vote on any standards or directives to be adopted, the process to establish these policies, procedures and standards is slow, and at times, arduous. Further, much of the volunteer leadership feels that there has been insufficient success in the Association's effort to establish consensus to bring about compliance with countywide standards.

It is important to note that the men and women in the fire and rescue companies have saved the taxpayers of Culpeper County a substantial amount of tax money: A fact that the citizens, County and volunteer fire and EMS service providers should be proud of. That said, the Study Team cannot state more emphatically the importance of maintaining and strengthening the volunteer system at this time in order to maintain the volunteer nature of the services.

As a result of ongoing development and growth in the County the provision of EMS has become increasingly difficult with slow responses and failures to respond. Therefore, in recognition of this service delivery issue, the Culpeper County Board of Supervisors commissioned this study. As demand grew and staffed units fell short, this largely County tax and fire and rescue company funded fire and rescue system staffed career emergency medical services providers (paramedics and EMTs) at a County rescue station in central Culpeper County to ensure 24/7 EMS response. This action has been providing an important support mechanism to the volunteers of the fire and EMS companies in their valiant effort to provide EMS service in the County.

Development in the County has continued in recent years, particularly along the US29/15 corridor. The population is now estimated to be over 48,500.

Figure 2.6
CULPEPER COUNTY POPULATIONS PROJECTIONS

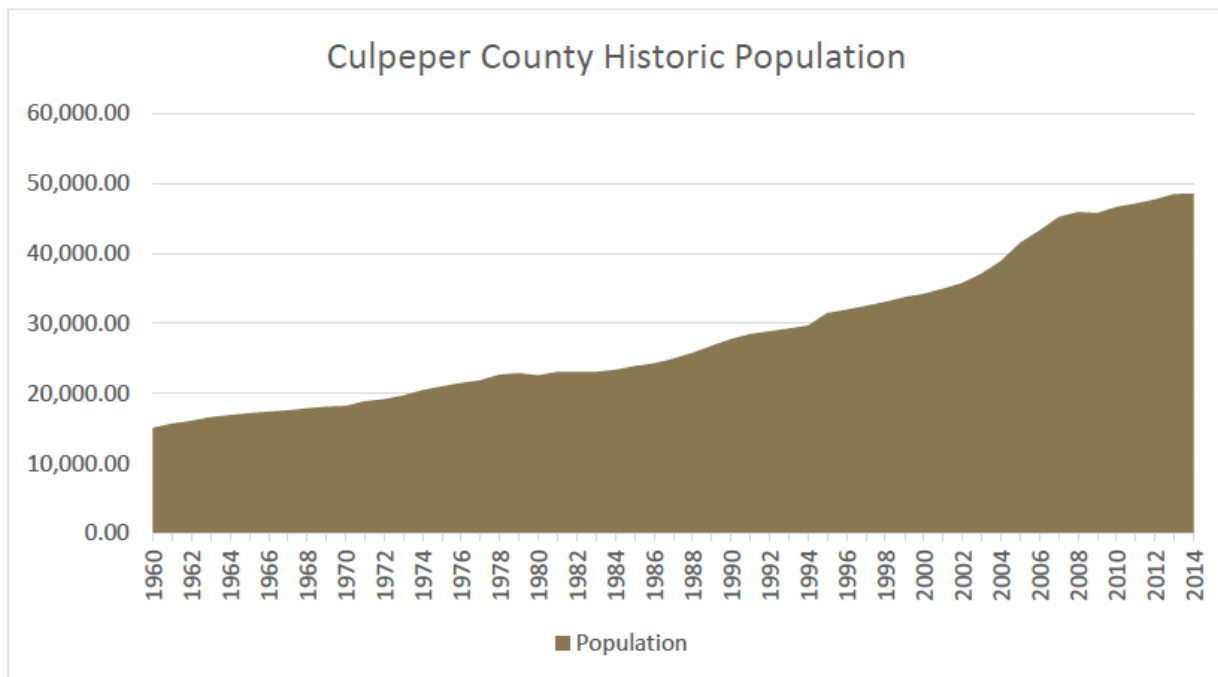
CULPEPER COUNTY POPULATION PROJECTIONS				
2000	2010	2020	2030	2040
34,262	46,807	55,102	63,614	72,835

Source: Virginia Employment Commission, provided by the Weldon Cooper Center

Further development is anticipated as a result of “in-migration,” which is population growth resulting from people moving closer to employers who are relocating their businesses further from the core of Washington, DC. This expected growth is based on:

1. The continuing suburbanization of the Washington, DC, Metropolitan Statistical Area (MSA).
2. The trend of locating major employers just outside the Washington DC, Northern Virginia MSA.
3. The increased development in the Northern Virginia region.
4. As employment opportunities in the Washington Metropolitan area increase and home prices increase, commuting remains a viable option.

Figure 2.7
CULPEPER COUNTY POPULATION TREND



A number of alternatives were presented in this chapter that are intended to provide enhanced support to the currently overworked fire and EMS system and provide options that will help the Board of Supervisors meet future service delivery demands. The suggestions provided are made with the intent of providing support and strengthening the volunteer nature of service provision.

While this chapter focused on the organization and administration of the fire and EMS system, now and in the future, this entire report provides numerous options and recommendations that range from “keep doing what you are doing” to formation of a new Culpeper County Fire, Rescue and Emergency Services Department. It is important that the reader understand that many of the recommendations made by the Study Team are “stand alone” and intentionally assume no substantial change in the current organization. While the Study Team feels that now is the time for the Board of Supervisors to take their fire and rescue system to the next level, this report was intentionally completed in the manner above so that, regardless of the direction chosen, the recommendations were useful and applicable now and into the future.

OPTIONS & RECOMMENDATIONS

- 2-1 While State Code allows for persons between the ages of 16 and 18 years of age to fully participate in volunteer fire and EMS response, under certain conditions, the Study Team feels that putting minor children in physical or psychological harm’s way is ill advised, and the Study Team recommends that the County amend the County Code to only allow those individuals 18 years and older to participate fully in all activities of a volunteer fire company.

- 2-2 The Study Team recommends that the authority to perform EMS cost recovery services be codified in the County Code.

- 2-3 The Study Team recommends that all references and regulations related to the County’s authority, provision of fire and EMS and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.

- 2-4 The Study Team recommends that the County more clearly define and codify the position of “Director” to reflect requirements in the State and County Code and the actual operation of the Office of Emergency Management (Emergency Services) in the county.

- 2-5 The Study Team recommends that all references and regulations related to the County’s emergency management/services office and any and all administrative

and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.

- 2-6 The Study Team recommends that Culpeper County appoint a fire marshal for the purposes of protecting public health, safety and welfare and for the purpose of enforcing regulations to safeguard life and property from the hazards of fire or explosion arising from the improper maintenance of life safety and fire prevention and protection materials, devices, systems and structures, and the unsafe storage, handling and use of substances, materials and devices.
- 2-7 The Study Team recommends that all references and regulations related to the County's fire marshal and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
- 2-8 With the importance placed on the need to recruit and retain volunteers, the Study Team recommends that the CCVFRA form and codify a volunteer recruitment and retention committee as a Standing Committee of the Association.
- 2-9 The Study Team recommends that the County address the issues and enhance and strengthen participation of the Culpeper County Volunteer Fire and Rescue Association; create a Fire, Rescue and Emergency Services Commission; create a Department of Fire, Rescue and Emergency Services; establish the position of Director to head the Department; establish a Chief Officers Board; employ support staff to provide volunteer recruitment and retention, fire and EMS training, fire code enforcement and planning, fleet and facility maintenance and volunteer staffing coordination.
- 2-10 The Study Team recommends that the long-term implementation career firefighting staff use the integrated volunteer/career staffing approach.
- 2-11 The Study Team recommends that a County fire and EMS organization ordinance be adopted and should include the recommendations previously outlined in this chapter and include primary sections relating to:
 - 1. Statement of legislative intent regarding providing adequate public safety, health and welfare through a fire and emergency medical services that is

highly competent and efficiently delivered by a combination of volunteer and career personnel;

2. Objectives of the combination fire and EMS system;
 3. Maximum participation of volunteer fire and EMS personnel;
 4. Fire, Rescue and Emergency Services Commission's authority;
 5. Culpeper County Volunteer Fire and Rescue Association's role and responsibilities;
 6. Independent volunteer fire and EMS companies' roles and responsibilities;
 7. Department of Fire, Rescue and Emergency Services, headed by the Director, authority and responsibilities;
 8. Assets purchased by County funds to be owned by the County;
 9. Additional Fire and EMS companies;
 10. Relocation/addition of facilities and apparatus;
 11. Equitable allocation of funding;
 12. Annual fire tax levy;
 13. EMS cost recovery;
 14. Emergency management;
 15. Fire prevention and code enforcement; and,
 16. Volunteer recruitment and retention incentives.
-
- 2-12 The Study Team recommends a complete overhaul of the allocation of funds provided to the volunteer companies in order to ensure the continued support of the volunteer system in Culpeper County.
- 2-13 The Study Team recommends, in overhauling the funds allocation, that funds be allocated based on need, justification and company performance activity.
- 2-14 The Study Team encourages the County research and consider alternate sources of funding.

APPENDIX A—CONTRACT BETWEEN CULPEPER COUNTY BOARD OF SUPERVISORS AND CCVFRA

AGREEMENT FOR PROVISION OF FIRE AND/OR RESCUE SERVICES

THIS AGREEMENT is made this 10 day of AUGUST 2011, by and between the **BOARD OF SUPERVISORS OF CULPEPER COUNTY, VIRGINIA** (“County”) and the **CULPEPER COUNTY VOLUNTEER FIRE & RESCUE ASSOCIATION, INC.**, a Virginia Corporation (“Association”).

WITNESSETH:

WHEREAS, to assist in the administration and coordination of emergency services, the Association was created and now consists of the Brandy Volunteer Fire Department, Inc.; Culpeper County Volunteer Fire Department, Inc.; Culpeper County Rescue Squad, Inc.; Little Fork Volunteer Fire & Rescue Company, Inc.; Reva Volunteer Fire & Rescue Company, Inc.; Rapidan Volunteer Fire Department, Inc.; Richardsville Volunteer Fire Department & Rescue Squad, Inc.; and Salem Volunteer Fire Department, Inc.; and

WHEREAS, the member Companies have been duly organized prior to and pursuant to Title 27 of the VA Code, and other applicable law with the approval of the County to provide emergency services as volunteer companies to the residents of Culpeper County; and

WHEREAS, the County desires to contract with the Association to continue to coordinate the provision of emergency services by its member companies to Culpeper County in accordance with Section 12-200 of the Culpeper County Code for which the County desires to continue to appropriate funds to the Association for this purpose; and

WHEREAS, nothing in this Agreement is intended, nor shall it be construed to make any volunteer company or any member of a volunteer company, an employee of Culpeper County or a member of its career Office of Emergency Services;

NOW, THEREFORE, this Agreement is entered into upon the following provisions:

A. ASSOCIATION AGREES:

1. Each Company physically located in Culpeper County shall be a member of the Culpeper County Fire and Rescue Association as described in Article I, §2-1 and Article XIV, §12-200 *et seq* of the Culpeper County Code.

2. The Companies shall have one voting representative in the Association, who shall be designated by each Company.

3. In consideration of the Association, in conjunction with career staff, providing coordination of emergency services in accordance with Culpeper County Code provisions, applicable federal and state provisions, and Association bylaws and other policies, the County, subject to annual appropriation, will provide adequate funding (100% funding for all operating expenses as well as provide funding for purchases of major equipment, apparatus, facility upgrades and/or replacements) to the Association for these purposes as determined by the County & the Association, from revenue received pursuant to Ord. §12-202, *et seq*.

4. Each Company will remain at all times a member in good standing of the Association, pursuant to the bylaws of the Association.

5. The Board of the Association shall implement all Association policies.

6. The Association will submit an annual budget in accordance with the policies promulgated by the County and by the Association, for review and approval by the County during its annual budget process.

7. Whenever the County determines in writing, at the direction of the Board of Supervisors, that examination, audit or inspection of all or any portion of the Association or a member Company's business records related to the expenditure of county funds is necessary for the purpose of conducting financial reviews or audits, and that such financial reviews or audits are necessary to protect the interest of the public, the Association or Company shall permit the County Administrator and/or representatives of the County Administrator to inspect its business records specifically relating to county funds at such reasonable times and under such reasonable circumstances as the County Administrator may direct. The Association and/or Company shall make available all records relating to county funds and shall cooperate fully in all financial reviews or audits of the Association and/or Company's business affairs ordered by the County Administrator pursuant to this section.

8. The Association shall continue developing dispatch and response procedures for its services and within the limits of its financial resources. The E911 Board shall serve as the body responsible for the appropriate implementation of these procedures.

9. The Association will cooperate to provide emergency service to other governmental jurisdictions with which the County has established mutual aid agreements.

10. All parties shall facilitate efforts to recruit, train and maintain viable volunteer fire and emergency rescue services.

11. Should the authorized designee of the Company and the Director of the Office of Emergency Services (“Director”), deem it necessary to assign career staff to a station, then, before such career staff may be assigned, the Director and the Company’s designee shall agree to abide by a standardized set of operating guidelines developed by the Association in conjunction with the Office of Emergency Services to ensure continuity throughout the County. The assigned career staff shall comply with the Company’s operating guidelines or procedures but otherwise the career staff shall remain under the direction and control of the Director. The standard operating guidelines will address but will not be limited to the management; utilization, repair and maintenance of facilities and apparatus; daily operations; workplace safety; custodial duties; and the responsibilities of the career and volunteer staff.

12. Supervision of career staff rests with the Director or his designee. However, career staff shall be subject to the authority of the Company Chief, or designee, and the applicable standards, procedures and/or guidelines of both the Association and applicable member companies operating on an emergency incident.

13. Formal and informal complaints made or received by any volunteer company member concerning employee behavior or performance or any other issues related to the career service must be forwarded to the Company Chief, or their designee, who will send it to the Director for official investigation. As a part of the personnel process, any complaint must remain confidential.

Formal and informal complaints concerning volunteer personnel or any other issues related to the volunteer Company, made or received by career personnel,

must be forwarded to the Director, who will send it to the Company Chief for official investigation. As part of the personnel process, any complaint must remain confidential.

14. The term of this Agreement shall be one year from the date of its execution. This Agreement shall be automatically renewed for successive one year periods, without limitation. This Agreement shall be subject to annual review by the County and the Association. In each year after the first full year this Agreement is in effect, the Association shall schedule a meeting with the County Administrator or his designee, to be held no later than December of that year, for the purpose of reviewing the contents of this Agreement. This Agreement shall remain in full force and effect unless terminated or modified by the parties as set out below.

15. This Agreement may be terminated by either party upon six (6) months written notification to the other.

16. This Agreement shall not terminate in the event a Company ceases to comply with the requirements herein. Further, although the County may desire to dissolve a Company, the County agrees that it will only act to dissolve a Company upon first receiving a recommendation from the Association (due within 90 days of the request for the recommendation) and then upon a finding by the County, that the Company has failed to provide adequate emergency service to the area which it serves, or a condition exists which makes the Company, even with the assistance of the Association, unable to provide adequate fire and/or rescue service. This Agreement shall not terminate if the Company is so dissolved. This paragraph does not modify either parties' rights as they currently exist.

a. Upon dissolution of a Company, assets of the said Company shall be distributed in accordance with the stipulation of their Articles of Incorporation, By-laws or other applicable organizational documents. Title to any remaining assets shall then be assigned to the Association for distribution.

b. The Association shall transfer title to the remaining assets to the Company that has been designated to assume responsibility for providing emergency services to the first due area of the dissolved Company.

c. If the first due area of a dissolved Company is split between two or more existing companies, the Association shall decide, based on public safety, which companies shall assume the responsibility of providing emergency services and shall report to the County Administrator the Association's determination. The division of the remaining real and personal property of the dissolved Company shall be divided among those Companies unless a new fire and/or rescue company is to be formed, with approval by the County following the recommendation of the Association and the County Administrator, to assume responsibility for the first due area. If a new company is to be formed, the real and personal property of the dissolved Company may be transferred to such new Company.

d. The purpose of these provisions of this Agreement for the transfer of title in the event the Company is dissolved is to ensure, to the extent possible, the continuous, uninterrupted provision of emergency service to the area served by the Company. These provisions shall be interpreted and applied to achieve this purpose.

17. This Agreement shall be subject to the continuation of Article XII, §200, of the Culpeper County Code relating to the creation of the Culpeper County Fire and Rescue Association.

18. This Agreement supersedes all prior agreements.

IN WITNESS WHEREOF the parties hereto have duly executed this Agreement as of the day and year set out above.

BOARD OF SUPERVISORS - COUNTY OF CULPEPER, VIRGINIA:

By: *William Chase* Date: 10/5/2011
William Chase, Chairman

ATTEST:

Frank T. Bossio Date: 10/5/2011
Frank T. Bossio, Clerk to the Board

CULPEPER COUNTY VOLUNTEER FIRE & RESCUE ASSOCIATION, INC.

President:
Culpeper County Volunteer Fire and Rescue Association, Inc.
Anthony M. Clattergood *[Signature]* 8/8/11
Printed name *president* Signature *print* Date

CULPEPER COUNTY VOLUNTEER FIRE & RESCUE ASSOCIATION, INC.

ATTEST:

Secretary:

BOBBY J. JENKINS, JR. *[Signature]* 8/8/11
Printed name Signature Date

Culpeper Co. Vol. Fire & Rescue Association, Inc.

Member Company Representative Signatures:

Brandy Volunteer Fire Department, Inc.:

<u>Joseph A. Troiloff</u>	<u>[Signature]</u>	<u>8/8/11</u>
Printed name	Signature	Date
<u>BOBBY J JENKINS, JR</u>	<u>[Signature]</u>	

Culpeper County Volunteer Fire Department, Inc.:

<u>Stephen W Corbin</u>	<u>[Signature]</u>	<u>8/8/11</u>
Printed name	Signature	Date

Culpeper County Rescue Squad, Inc.:

<u>Matthew G. Halcy</u>	<u>[Signature]</u>	<u>8/8/11</u>
Printed name	Signature	Date

Little Fork Volunteer Fire & Rescue Company, Inc.:

<u>Ronald J Beard</u>	<u>[Signature]</u>	<u>8/8/11</u>
Printed name	Signature	Date

Rapidan Volunteer Fire Department, Inc.:

<u>Cary Stanley</u>	<u>[Signature]</u>	<u>8/8/11</u>
Printed name	Signature	Date

Reva Volunteer Fire & Rescue Company, Inc.:

Reva Volunteer Fire & Rescue Company, Inc.
Anthony M. Cirincus [Signature] 8/8/11
Printed name *proabil* Signature *President* Date

Richardsville Volunteer Fire Department & Rescue Squad, Inc.:

Linda Sue Feagan [Signature] 8/8/11
Printed name Signature Date

Salem Volunteer Fire Department, Inc.:

Keith Beebe [Signature] 8/8/11
Printed name Signature Date

INDIVIDUAL ACKNOWLEDGMENT

State/Commonwealth of VIRGINIA }
County of CULPEPER } ss.

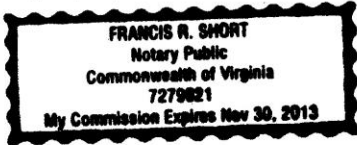
On this the 08 day of AUGUST, 2011, before me,
FRANCIS R. SHORT, the undersigned Notary Public,
Name of Notary Public

personally appeared ANTHONY CLATTERBUCK, BOBBY J. JENKINS JR.,
JOSEPH A. TROILLO JR., STEPHAN W. CORBIN, MATHEW R. HALSEY,
RONALD J. BEARD, CARY A. STANLEY, LINDA SUE FEARAN, KEITH BESS
Name(s) of Signer(s)
 personally known to me - **OR** -

proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged to me that he/she/they executed the same for the purposes therein stated.

WITNESS my hand and official seal.



Francis R. Short
Signature of Notary Public

FRANCIS R. SHORT
Other Required Information (Printed Name of Notary, Residence, etc.)

Place Notary Seal and/or Stamp Above

OPTIONAL

Although the information in this section is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Any Attached Document

Title or Type of Document: AGREEMENT FOR PROVISION

Document Date: 10 AUGUST 2011 Number of Pages: 10

Signer(s) Other Than Named Above: _____

Right Thumbprint of Signer
Top of thumb here

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APPENDIX B—SAMPLE ORDINANCES

FREDERICK COUNTY ORDINANCE

Chapter 89. Fire and Rescue Services

[HISTORY: Adopted by the Board of Supervisors of the County of Frederick 12-12-2007. Amendments noted where applicable.]

GENERAL REFERENCES

Fire prevention — See Ch. **90**.

Article I. General; Department of Fire and Rescue

§ 89-1. Definitions.

For the purposes of this chapter, the following words and/or terms shall have the meanings ascribed to them by this section:

ASSOCIATION

The Frederick County Volunteer Fire and Rescue Association.

BOARD

The Frederick County Board of Supervisors.

COMPANIES

County volunteer fire and rescue companies.

COMPANY

A County volunteer fire and rescue company.

DEPARTMENT

The Frederick County Department of Fire and Rescue.

§ 89-2. Department established.

There is hereby established the Frederick County Department of Fire and Rescue. The Department shall consist of the Department Chief and any such career officers and employees approved by the Board and appointed by the Department Chief. The Department shall work in conjunction with the volunteer fire and rescue companies as defined above, as well as the Association and its members, to achieve the mission of fire and rescue services.

§ 89-3. Department Chief.

The County Administrator shall appoint the head of the Department, who shall be known as the "Department Chief." The Department Chief shall have general supervision and control over the Department. The Department Chief shall, after consultation with the Association, establish rules and regulations for the operation of the Department. Such rules shall be consistent with the provisions of this article. The Department Chief shall have no jurisdiction over the internal affairs of the companies. The Department Chief shall develop and administer a program for the career personnel of the Department.

Article II. Fire and Rescue Association

§ 89-4. Creation; purpose; bylaws.

The Association is hereby recognized by the County for the following purposes: to work in conjunction with the Department on matters regarding the operations of the Department, including, but not limited to, reviewing operating procedures, rules and regulations, budget matters, as noted in the current service agreement; to create enthusiasm among the member companies; to coordinate the work of its membership; to disseminate knowledge of fire-fighting methods and techniques; to promote goodwill and devoted service to the people of Frederick County; and to promote a general interest and knowledge of fire prevention. The Association shall be dedicated to the service of volunteer fire and rescue members and the volunteer companies of Frederick County; and to promote and encourage cooperation among the member companies. The Committee is empowered to promulgate bylaws to effectuate the purposes set out herein.

§ 89-5. Membership.

Membership in the Association is governed by the current bylaws.

Article III. Fire Companies

§ 89-6. List of companies.

Each individual fire and rescue organization that is located in Frederick County shall be defined as a "fire and rescue company" as provided in § 27-8.1 of the Code of Virginia, 1950, as amended. These presently include: Stephens City Volunteer Fire & Rescue Company, Inc.; Middletown Volunteer Fire & Rescue Company, Inc.; Clear Brook Volunteer Fire & Rescue, Inc.; Gore Volunteer Fire Company; Round Hill Community Fire & Rescue Company, Inc.; Gainesboro Fire Company, Inc.; Star Tannery Volunteer Fire Department; Greenwood Volunteer Fire & Rescue Company, Inc.; North Mountain Volunteer Fire Company, Inc.; Reynolds Store Volunteer Fire & Rescue Company, Inc.; Millwood Station Volunteer Fire & Rescue Company 21, Inc.

§ 89-7. Approval of names and numbers.

Newly established fire and rescue company names and numbers shall be recommended by the Association and are subject to final approval by the Board.

§ 89-8. Establishment.

Pursuant to § 27-8 of the Code of Virginia, any number of persons, not less than 20, may form themselves into a company for emergency response, subject to approval by the Board.

§ 89-9. Organization.

A writing stating such formation of a company, with names of its members, shall be presented to the Board and recorded in the Circuit Court pursuant to § 27-9 of the Code of Virginia.

§ 89-10. Dissolution.

Pursuant to § 27-10 of the Code of Virginia, whenever the Department shall ascertain that a company has failed, for three consecutive months, to consist of 20 active and effective members, or ascertains that it has failed for the same period of time to keep in good and serviceable condition its fire and rescue apparatus (an engine), hose, emergency medical services vehicle, equipment and other proper implements, or whenever the Board for any reason deems it advisable, the Board may act to dissolve a company.

§ 89-11. Rules and regulations.

The members of each company may make their own rules and regulations consistent with the laws of the Commonwealth of Virginia, this chapter, and other ordinances of the County.

Article IV. Volunteer Membership

§ 89-12. Volunteer fire fighter and rescue members.

Any person, 18 years of age or older, is eligible for membership in a company as a regular member. Persons must apply and be accepted by the company to which application is made according to its rules and regulations, the rules and regulations of the company and state law. Participation by members must be in accordance with the company rules and regulations and state law.

§ 89-13. Authorization for youth to serve; parental guardian approval.

Pursuant to the provision of § 40.1-79.1 of the Code of Virginia, any person 16 or 17 years of age, with parental or guardian approval, is authorized to work with or participate fully in all activities of a volunteer fire company, provided that such person has attained certification under National Fire Protection Association 1001, Level 1, Firefighter standards, as administered by the Department of Fire Programs.

Article V. Hazardous Materials Response Reimbursement

§ 89-14. Payment of monies recovered; purpose.

Any monies recovered by the County of Frederick, as reimbursement for actual costs incurred by a company for hazardous materials (HAZMAT) response, shall be reimbursed to the company.

Article VI. Cost Reimbursement for Emergency Medical Transport

§ 89-15. Service fees for emergency medical transport.

A service fee will be imposed for basic life support transport (BLS), advanced life support, level 1 transport (ALS1), advanced life support, level 2 transport (ALS2), and for ground transportation mileage on each person being transported by an emergency medical services vehicle that is operated or maintained by the County and/or a company or for which a permit has been issued to the County by the Virginia Office of Emergency Medical Services. The term "emergency medical services vehicle" has the definition specified in Virginia Code § 32.1-111.1. The funds received from the payment of this fee shall be paid into a fund for the Frederick County Fire and Rescue Cost Recovery Program.

§ 89-16. Definitions.

As used in this article, the following terms shall have the meanings indicated:

ADVANCED LIFE SUPPORT, LEVEL 1 (ALS1)

Medical treatment or procedures provided to a patient beyond the training of an EMT-Basic as defined by the National EMS Education and Practice Blueprint for the EMT-Basic, but not ALS2.

ADVANCED LIFE SUPPORT, LEVEL 2 (ALS2)

Advanced life support services provided to a patient, including one or more of the following medical procedures:

- A. Defibrillation/Cardioversion;
- B. Endotracheal intubation;
- C. Cardiac pacing;
- D. Chest decompression;
- E. Intraosseous line; and/or
- F. The administration of three or more medications.

BASIC LIFE SUPPORT (BLS)

Medical treatment or procedures to a patient defined as basic life support by the National Emergency Medicine Services (EMS) Education and Practice Blueprint for the Emergency Medical Technician — Basic (EMT-Basic).

GROUND TRANSPORT MILEAGE (GTM)

Mileage shall be assessed in road miles from the location of the incident to a hospital or other facility where a patient is transported.

§ 89-17. Authority of County Administrator; amount of fees.

- A. The County Administrator is hereby authorized and directed to establish rules and regulations for the administration of the fees imposed by this section, including, but not limited to, payment standards for those persons who demonstrate economic hardship.
- B. The service fees imposed by this article shall be payable in such amounts as may from time to time be set by the Board of Supervisors.

LOUDOUN COUNTY ORDINANCE

CHAPTER 258

Loudoun County Combined Fire and Rescue System

- 258.01 Short title.
- 258.02 Purpose.
- 258.03 Definitions.
- 258.04 Governance structure.
- 258.05 Recognized Fire and Rescue Companies (line of duty).
- 258.06 Chain of command/certification standards.
- 258.07 Code of conduct and discipline.
- 258.08 Financial Audits.

258.01 SHORT TITLE.

This chapter shall be known and cited as the “Loudoun County Combined Fire and Rescue System (LC-CFRS) Ordinance.”
(Ord. 14-05. Passed 4-16-14.)

258.02 PURPOSE.

The purpose of this chapter is to promote the public health, safety and welfare by establishing a framework for governance of the LC-CFRS to include, but not be limited to: system-wide discipline, financial reporting and training and certification standards for operating members of all volunteer and career fire and/or emergency medical services (EMS) companies.
(Ord. 14-05. Passed 4-16-14.)

258.03 DEFINITIONS.

- (a) “Combined System” or “LC-CFRS” means every volunteer fire-fighting and EMS organization formed pursuant to Va. Code Title 27 and authorized by the Board of Supervisors to operate as a fire-fighting and/or EMS organization within the geographic boundaries of Loudoun County or any of its incorporated towns, as well as the Loudoun County Department of Fire, Rescue and Emergency Management (DFREM).
- (b) “System Chief” means the individual who has the responsibility of overseeing and leading the LC-CFRS, with the duties and responsibilities as outlined in this Chapter and who is the department head of the DFREM, or similarly named county government agency as established pursuant to Va. Code Title 27. The System Chief shall be hired and report to the County Administrator.
- (c) “Department” means DFREM, or any other official name as may be established by the Board of Supervisors for the government agency established pursuant to Va. Code Title 27 for the purpose of the provision of fire-fighting and EMS services. This department also is known as the “career company,” or “career department.”

(d) “System-Wide Procedures” (“SWPs”) means the guidelines adopted and endorsed by the Executive Committee of the LC-CFRS, or the former Loudoun County Fire and Rescue Commission.

(e) “Volunteer Chief” means the individual selected by a volunteer company to serve as the leader of a volunteer fire-fighting or EMS organization organized pursuant to Va. Code Title 27.

(f) “Volunteer Company or Volunteer Companies” means a volunteer fire-fighting or EMS organization formed pursuant to Va. Code § 27-8 within the geographic boundaries of Loudoun County as provided for by the Board of Supervisors in accordance with Va. Code Title 27.

(g) “Company” means either a volunteer fire-fighting or EMS organization as defined in (f) above, or the DFREM as defined in (c) above.

(h) “Executive Committee” means the LC-CFRS policy-making body with the membership, duties, and responsibilities as outlined in Section 258.04.

(i) “Operations Committee” means the LC-CFRS policy making body, or bodies, which reports to the Executive Committee, with the membership, duties, and responsibilities as outlined in Section 258.04 and which consist of the following: (1) Administrative Operations Committee (“AOC”); (2) the Fire Operations Committee (“FOC”) and (3) the EMS Operations Committee (“EMSOC”).

(j) “SCSC” means the System Compliance Subcommittee of the AOC, with the membership, duties and responsibilities as defined in Section 258.04 .

(k) “EMS Council” means the Emergency Medical Council, Incorporated, which reports to the EMSOC, with the membership, duties and responsibilities as defined in Section 258.04 .

(l) “Operational Medical Director (“OMD”)” or “Medical Director” means the licensed medical physician Chief who under their licensure is responsible for providing medical advice, guidance, and direction for the emergency medical services programs and activities managed by the LC-CFRS on behalf of the County government.

(m) “Code of Conduct,” means the LC-CFRS' Code of Conduct as referenced in Section 258.07 and by the LC-CFRS SWPs.

(Ord. 14-05. Passed 4-16-14; Ord. 14-12. passed 7-2-14.)

258.04 GOVERNANCE STRUCTURE.

(a) System Chief Position Established. The position of System Chief is hereby established, and shall possess operational authority pursuant to Va. Code Title 27.

(1) The System Chief shall be selected by the County Administrator.

(2) The System Chief shall report directly to the County Administrator.

(3) The System Chief shall serve as the head of the LC-CFRS and the chief executive of the LC-CFRS governance structure as defined under this section.

(4) The System Chief shall supervise and manage the duties and responsibilities of the career personnel of the DFREM as defined in his/her performance plan in accordance with applicable policies set forth in the *Loudoun County Human Resources Handbook*.

(5) The System Chief shall have the authority, duties and responsibilities as established by this chapter with respect to the LC-CFRS in the following areas:

A. Full scope of fire prevention, fire suppression, hazardous materials, emergency medical services, emergency management and other related public safety operational and management functions as provided to the County and its incorporated towns.

B. Formulation, administration and enforcement of the rules, regulations, policies and SWPs as established by the LC-CFRS governance structure including, but not limited to, disciplinary actions pertaining to service in the system.

C. Executive management and administration of the LC-CFRS governance structure including working in conjunction with the Executive Committee and any other LC-CFRS committees, subcommittees and ad-hoc committees as necessary and as established under Section 258.04 or newly-created outside of this chapter.

D. Serve as the highest appeal hearing officer for LC-CFRS disciplinary cases as set forth in Section 258.07 and any relevant LC-CFRS SWPs which includes veto authority.

E. Carry out other duties and responsibilities as assigned by the County Administrator with regard to the provision of fire-rescue services, and emergency management.

F. This position shall have the ability to establish, implement, veto and enforce LC-CFRS SWPs at his/her discretion.

(b) Executive Committee Established.

(1) The Executive Committee shall be comprised of the following seven (7) voting members appointed and/or elected on an annual basis:

A. Chairperson of the AOC as annually elected by a quorum of said committee;

B. Chairperson of the FOC as annually elected by a quorum of said committee;

C. Chairperson of the EMSOC as annually elected by a quorum of said committee;

D. The Operational Medical Director;

E. The DFREM assistant chief, or other career employee designee as annually appointed by the System Chief who serves as chairperson of the Executive Committee;

F. The career DFREM deputy chief of operations, or other designee as annually appointed by the System Chief;

G. The career DFREM deputy chief of EMS, or other designee as annually appointed by the System Chief.

(2) The Executive Committee shall provide advice and counsel to the System Chief with regard to policies, procedures, strategic planning, finances, audits, training requirements and LC-CFRS-wide discipline of volunteer members and any other duties as assigned by the System Chief.

(3) The Executive Committee serves as the highest level legislative policy making body for the LC-CFRS and is responsible for System-wide proposed guidelines for recommendation to the System Chief.

(4) The Executive Committee shall provide direction and receive input from the Operations Committees, subcommittees and ad hoc committees and others.

(5) The Executive Committee shall not have involvement in the rules, regulations, or policies of individual volunteer companies, DFREM, or county government unless these

directly conflict with the LC-CFRS mission, goals and objectives as defined by the LC-CFRS governance structure.

(c) Administrative Operations Committee Established. The AOC shall serve as a standing committee under the Executive Committee and the System Chief.

(1) The AOC shall be comprised of the duly elected president or chairperson of the board of Chiefs for each volunteer company and one (1) member of the career staff appointed by the System Chief.

(2) The AOC shall be responsible for electing a chairperson annually who will also serve on the LC-CFRS Executive Committee.

(3) The AOC shall be responsible for providing advice, counsel and recommendations to the Executive Committee and/or the System Chief on matters pertaining to LC-CFRS SWPs which include but are not limited to the following: administration guidelines, policies, procedures, fiscal matters, recruitment and retention of volunteers and objectives of the volunteer companies, and other matters as may be deemed appropriate by the Executive Committee and the System Chief.

(4) The AOC shall appoint a System Compliance Subcommittee.

(d) System Compliance Subcommittee (“SCS”) Established. There is a standing subcommittee formed by the AOC which is created to address LC-CFRS disciplinary matters involving participation in the system by volunteer and career members of the LC-CFRS.

(1) The size and composition of the SCS shall be determined by the AOC in consultation with the Executive Committee and the System Chief.

(2) Members of the Executive Committee and the System Chief may not serve as members of the SCS.

(3) The SCS will provide advice and counsel and provide recommendations to the Executive Committee and the System Chief on LC-CFRS-wide disciplinary policies and serious misconduct based upon the LC-CFRS Code of Conduct as referenced in Section 258.07 .

(4) The SCS shall be responsible for the timely hearing of all LC-CFRS-wide disciplinary action appeals by LC-CFR members including those of volunteer companies and the DFREM and will be responsible for reporting their decisions to the Executive Committee and the System Chief respectively.

(e) EMS Operations Committee Established. The EMSOC shall serve as a standing committee under the Executive Committee and the System Chief.

(1) The EMSOC shall be comprised of the highest ranking qualified operational EMS officer in each EMS volunteer company, and one (1) member of the career staff appointed by the System Chief.

(2) In order to participate on the EMSOC, a member must be from a EMS transport company duly licensed by the Commonwealth of Virginia for the provision of EMS, and

the EMS transport company must hold a valid EMS license from the Virginia Office of EMS.

(3) The EMSOC shall provide advice, counsel and recommendations to the Executive Committee and/or the System Chief and OMD on LC-CFRS matters pertaining to EMS and EMS rescue, as well as objectives of the volunteer companies and other matters as deemed appropriate by the Executive Committee and the System Chief.

(4) The EMSOC shall be responsible for oversight of the EMS Council, Incorporated, Advanced Life Support (ALS) Committee, Basic Life Support Committee (BLS), or any other subcommittees and/or ad hoc committees created by the EMSOC for the purpose of assisting them with their objectives. The EMS Council, Incorporated reports to the EMSOC as part of the governance structure.

(5) The EMS Council, Incorporated will serve in an advisory and subordinate role to the System Chief, the Executive Committee, EMSOC and the OMD.

(f) Fire Operations Committee (“FOC”) Established. The FOC shall serve as a standing committee under the Executive Committee and the System Chief.

(1) The FOC shall be comprised of one (1) operationally qualified fire chief from each volunteer company and one (1) member of the career staff appointed by the System Chief.

(2) The FOC shall provide advice, counsel and recommendations to the Executive Committee and/or the System Chief on LC-CFRS matters pertaining to fire prevention and suppression and fire related rescue, as well as objectives of the volunteer companies and among others as deemed appropriate by the Executive Committee and the System Chief;

(3) The FOC shall have oversight of any subcommittee and/or ad hoc committee it may create to assist with their duties and responsibilities.

(Ord. 14-05. Passed 4-16-14; Ord, 14-12. Passed 7-2-14.)

258.05 RECOGNIZED FIRE AND RESCUE COMPANIES (LINE OF DUTY).

(a) The following volunteer agencies are deemed to be instrumentalities of the County as recognized members of the Loudoun County Combined Fire and Rescue System:

- (1) Leesburg Volunteer Fire Company
- (2) Purcellville Volunteer Fire Department, Inc.
- (3) Middleburg Volunteer Fire Department, Inc.
- (4) Round Hill Volunteer Fire Department, Inc.
- (5) Hamilton Volunteer Fire Department
- (6) Ashburn Volunteer Fire and Rescue Department
- (7) Aldie Volunteer Fire Department
- (8) Philomont Volunteer Fire Department
- (9) Arcola-Pleasant Valley Volunteer Fire Department, Inc.
- (10) Lucketts Volunteer Fire Company, Inc.

- (11) The Sterling Volunteer Fire Company, Inc.
- (12) Lovettsville District Fire and Rescue Co., Inc.
- (13) Loudoun County Volunteer Rescue Squad, Inc.
- (14) Purcellville Volunteer Rescue Squad, Inc.
- (15) The Sterling Park Rescue Squad, Inc.
- (16) Hamilton Volunteer Rescue Squad, Inc.

(b) The Loudoun County Department of Fire, Rescue and Emergency Management, established pursuant to Va. Code Title 27, is recognized as a member of the Loudoun County Combined Fire and Rescue System.

(Ord. 14-05. Passed 4-16-14.)

258.06 CHAIN OF COMMAND/CERTIFICATION STANDARDS.

(a) The System Chief shall establish an integrated chain of command for volunteer members of the LC-CFRS and career employees of the DFREM.

(1) The System Chief, under the advice, counsel and recommendation of the Executive Committee, shall utilize the training and certification standards for all duly qualified career and volunteer fire and EMS officers and ranks as stipulated by the SWPs for determining operational eligibility.

(2) Qualifications for operational certification at each rank for career and volunteer personnel shall be in accordance with policies established by the System Chief with the advice and counsel of the LC-CFRS governance structure.

(3) Volunteer companies may appoint officers who do not meet operational training and certification standards to the LC-CFRS governance structure.

(4) The operational authority of volunteer administrative officers shall be commensurate with their level of operational certification under established officer qualifications.

(Ord. 14-05. Passed 4-16-14.)

258.07 CODE OF CONDUCT AND DISCIPLINE.

(a) There is hereby established a LC-CFRS Code of Conduct which shall apply to all members of the LC-CFRS as follows:

(1) As a basic condition of operating within the LC-CFRS, all personnel have an obligation to conduct their official duties in a manner that serves the public interest, upholds the public trust and protects the county's resources. To this end, all LC-CFRS members have a responsibility to:

A. Perform their duties to the very best of their abilities and in a manner that is efficient, cost-effective and meets the needs of the public.

B. Demonstrate integrity, honesty, and ethical behavior in the conduct of all company and LC-CFRS business.

C. Ensure that their personal interests do not come into conflict with their official duties, resulting in a real conflict of interest or the appearance of a conflict of interest

when dealing with vendors, customers, and other individuals doing business or seeking to do business with Loudoun County government, or their respective volunteer company.

D. Ensure that all county and volunteer company resources including County and company funds, equipment, vehicles, and other property are used in strict compliance with rules and regulations of the LC-CFRS and solely for the benefit of the LC-CFRS and those of our citizens, visitors, and mutual aid partners.

E. Conduct all dealings with the public, peers, and other organizations in a manner that presents a courteous, professional and service oriented image of the LC-CFRS, the Loudoun County Government and the volunteer companies.

F. Treat the public and other LC-CFRS members fairly and equitably without regard to race, color, religion, sex, national origin, disability, political affiliation, sexual orientation, gender identity, or other non-merit factors.

G. Avoid any behavior that could be considered misconduct as defined by the System Chief of the LC-CFRS.

(b) Any amendment to the LC-CFRS Code of Conduct must be performed in conformance with the LC-CFRS governance structure decision making process as established by the LC-CFRS SWPs.

(c) No volunteer company code of conduct shall countervail what is prescribed within this chapter, although a company may make its own Code of Conduct more restrictive than the one set forth herein.

(Ord. 14-05. Passed 4-16-14.)

258.08 FINANCIAL AUDITS.

This hereby establishes that there shall be regular financial audits of all volunteer companies using appropriate audit procedures as prescribed by the Loudoun County government with full cooperation of the companies, the LC-CFRS governance structure and the System Chief.

(Ord. 14-05. Passed 4-16-14.)

STAFFORD COUNTY ORDINANCE

BOARD OF SUPERVISORS
COUNTY OF STAFFORD
STAFFORD, VIRGINIA

ORDINANCE

At a regular meeting of the Stafford County Board of Supervisors (the Board) held in the Board Chambers, Stafford County Administration Center, Stafford, Virginia, on the 20th day of September, 2005:

MEMBERS:

Gary D. Pash, Chairman
Gary F. Snellings, Vice Chairman
Jack R. Cavalier
Peter J. Fields
Robert C. Gibbons
Kandy A. Hilliard
Mark W. Osborn

VOTE:

Yes
Yes
Yes
Yes
Yes
Yes
Yes

On motion of Ms. Hilliard, seconded by Mr. Snellings, which carried by a vote of 7 to 0, the following was adopted:

AN ORDINANCE TO AMEND AND REORDAIN CHAPTER 12 OF THE STAFFORD COUNTY CODE ENTITLED "FIRE PREVENTION AND PROTECTION" BY ADDING ARTICLE VI ENTITLED "DEPARTMENT OF FIRE, RESCUE & EMERGENCY SERVICES"

WHEREAS, the provisions of public safety services is a primary responsibility of the County; and

WHEREAS, the seamless integration of volunteers and career personnel will enhance fire and rescue service in the County; and

WHEREAS, the Board believes the appointment of a Fire & Rescue Chief is necessary and in the public's best interest;

NOW, THEREFORE, BE IT ORDAINED by the Stafford County Board of Supervisors on this the 20th day of September, 2005, that Chapter 12 of the Stafford County Code entitled "Fire Prevention and Protection" be amended and reordained by adding Article VI entitled "Department of Fire, Rescue & Emergency Services" to read as follows:

ARTICLE VI. DEPARTMENT OF FIRE, RESCUE & EMERGENCY SERVICES

Sec. 12-72. Establishment of the Department of Fire, Rescue & Emergency Services

The Stafford County Department of Fire, Rescue & Emergency Services ("the department") is hereby established. The department shall provide all fire and emergency medical services and services related to civilian protection and evacuation in disasters and emergencies. The department shall also be responsible for administration of local, state and federal emergency response, assistance and recovery programs within the county.

Sec. 12-73. Composition of the Department of Fire, Rescue & Emergency Services

The department shall be comprised of the officials and staff of the department and the following volunteer fire companies and rescue squads, which are an integral part of the official safety program of the county: Stafford Volunteer Rescue Squad, Mountain View Volunteer Rescue Squad, White Oak Volunteer Rescue Squad, Rockhill Volunteer Rescue Squad, Aquia Harbour Volunteer Rescue Squad, Falmouth Volunteer Fire & Rescue Company, Stafford Volunteer Fire Company, Widewater Volunteer Fire & Rescue Company, Mountain View Volunteer Fire Company, Brooke Volunteer Fire & Rescue Company, Hartwood Volunteer Fire & Rescue Company, White Oak Volunteer Fire Company and Rockhill Volunteer Fire Company.

Sec. 12-74. Responsibilities of the Department of Fire, Rescue & Emergency Services

The department shall be responsible for:

- (a) regulating and managing the provisions of all pre-hospital emergency patient care and services, and for regulating providers of either emergency or non-emergency transportation of patients requiring medical services.
- (b) regulating and managing the provision of fire prevention, protection, investigation, suppression, education and rescue services for enforcing the laws related to fire prevention and for provision of services related to hazardous materials and similar hazards which pose a threat to life and property.
- (c) any additional related services that are necessary for the provision of fire and emergency medical services.

Sec. 12-75. Fire & Rescue Chief

The head of the department shall be known as the Fire & Rescue Chief, who shall be appointed by the County Administrator. The department shall have as many other officers and employees as the Board of Supervisors may approve. The Fire and Rescue Chief shall have the following duties:

- (a) provide the general management of the department function and may delegate authority to other officials and staff of the department;
- (b) establish and enforce departmental regulations. Such regulations shall be consistent with this chapter, but may provide for additional and more stringent requirements applicable to the department. The Fire and Rescue Chief shall have the authority to promulgate Standard Operating Procedures and Policies, both operational and administrative, after providing sufficient time for input from the Fire & Rescue Association. The Fire and Rescue Chief shall establish and enforce training and physical standards; equipment specifications for all departmental equipment, both mobile and non-mobile, and shall determine the department's fleet size and function;
- (c) control of station operations, relating to the provision of Fire and Rescue services, including staffing, and shall ensure the regulations are applied to all fire and rescue personnel of the department.

(d) hire, appoint and terminate officers, staff and volunteers of the department. The Fire and Rescue Chief shall provide for appropriate investigation of staff and volunteer applicants and incumbents, including a review of both criminal history and driving records; disciplinary actions will be taken in accordance with county policy. Termination of volunteers shall not occur until after providing sufficient time for input from the respective volunteer company and the Fire & Rescue Association.

(e) provide general management, planning, preparation and response for any disaster that occurs in the county and requires the implementation of the county's emergency response plan and shall function as the Coordinator of Emergency Services pursuant to Title 44 of the Virginia Code;

(f) take all actions, on behalf of the County Administrator, necessary to implement and carry out the terms of agreements for mutual aid, disaster preparedness and provision of services related to hazardous materials, rescues, fire suppression, investigation, medical services or other emergency response services deemed necessary in the judgment of the Fire and Rescue Chief in events exceeding the capabilities of an individual locality or government agency; and

(g) enter into contracts on behalf of the county and to expend funds after an official disaster or emergency declaration to provide for the public safety during such events in accordance with applicable laws and regulations. The Fire and Rescue Chief shall have the authority to take all actions necessary to obtain funding and assistance from other localities and from state and federal agencies for these purposes. The powers enumerated in this subsection (g) are only authorized at the express direction of the County Administrator who serves as the Director of Emergency Services, pursuant to Title 44 of the Code of Virginia.

Sec. 12-76. Advisors to the Fire and Rescue Chief

The Stafford County Fire and Rescue Association (Fire and Rescue Association) shall serve as an advisory group to the Fire and Rescue Chief and shall be consulted prior to the issuance of any regulations or policies related to fire or emergency medical operations.

Sec. 12-77. Criminal and Driving Record Checks

The Fire and Rescue Chief shall review or cause to be reviewed:

(a) criminal records of applicants for employment and volunteer members in the department. The review shall be conducted in the interest of public welfare and safety, to determine if the past criminal conduct of any person with a criminal record would be compatible with the nature of the employment or volunteer service.

(b) driving records of applicants for employment or volunteer status may be conducted in accordance with county personnel policies to determine if the record is compatible with employment or volunteer service.

Sec. 12-78. Compliance with Regulations and Policies; Penalties

(a) Compliance with all regulations, directives, policies, and procedures of the department as enforced by the Fire and Rescue Chief, by the entities, officials, and staff, is required by all fire and rescue personnel.

(b) As the department's enforcing authority, the Fire and Rescue Chief shall have the responsibility to remove, suspend or revoke the privileges of any individual or entity to operate as an EMS or fire service provider or officer in the county, for violations of regulations promulgated by the Fire and Rescue Chief or the operational medical director, or for the purpose of protecting public safety. Disciplinary action of volunteers shall not occur until after providing sufficient time for input from the respective volunteer company and the Fire & Rescue Association.

(c) Volunteer members not in compliance shall be afforded a review process established by departmental regulations and applicable to any removal, suspension, or revocation of privileges.

(d) Any violation of this article for which a penalty is not specified shall be a Class 1 misdemeanor. Any misrepresentation made by any person to any county officer or employee in the course of obtaining or renewing a permit or in providing information for a criminal or other record investigation shall constitute a Class 1 misdemeanor.

(e) Volunteer appeals of a decision of the Fire and Rescue Chief shall be referred to the Fire & Rescue Association. Fire & Rescue Association appeals of a decision of the Fire and Rescue Chief shall be referred to the County Administrator.

Sec. 12-79. Volunteer Rescue Squads and Fire Companies

Volunteer rescue squads and volunteer fire companies may be formed, named and dissolved and shall operate in compliance with applicable statutes, provisions of this chapter and regulations, including those issued by the Fire and Rescue Chief. Formation, naming and dissolution shall be effective only if approved by the Board of Supervisors. Volunteer rescue squads and volunteer fire companies may adopt by-laws for their internal administrative functions.

Sec. 12-80. Definitions

Stafford Fire & Rescue Association shall consist of two representatives from each recognized volunteer company and two career fire and rescue employees.

Fire & Rescue Personnel includes emergency responder volunteers and career fire and rescue county employees.

A Copy, teste:

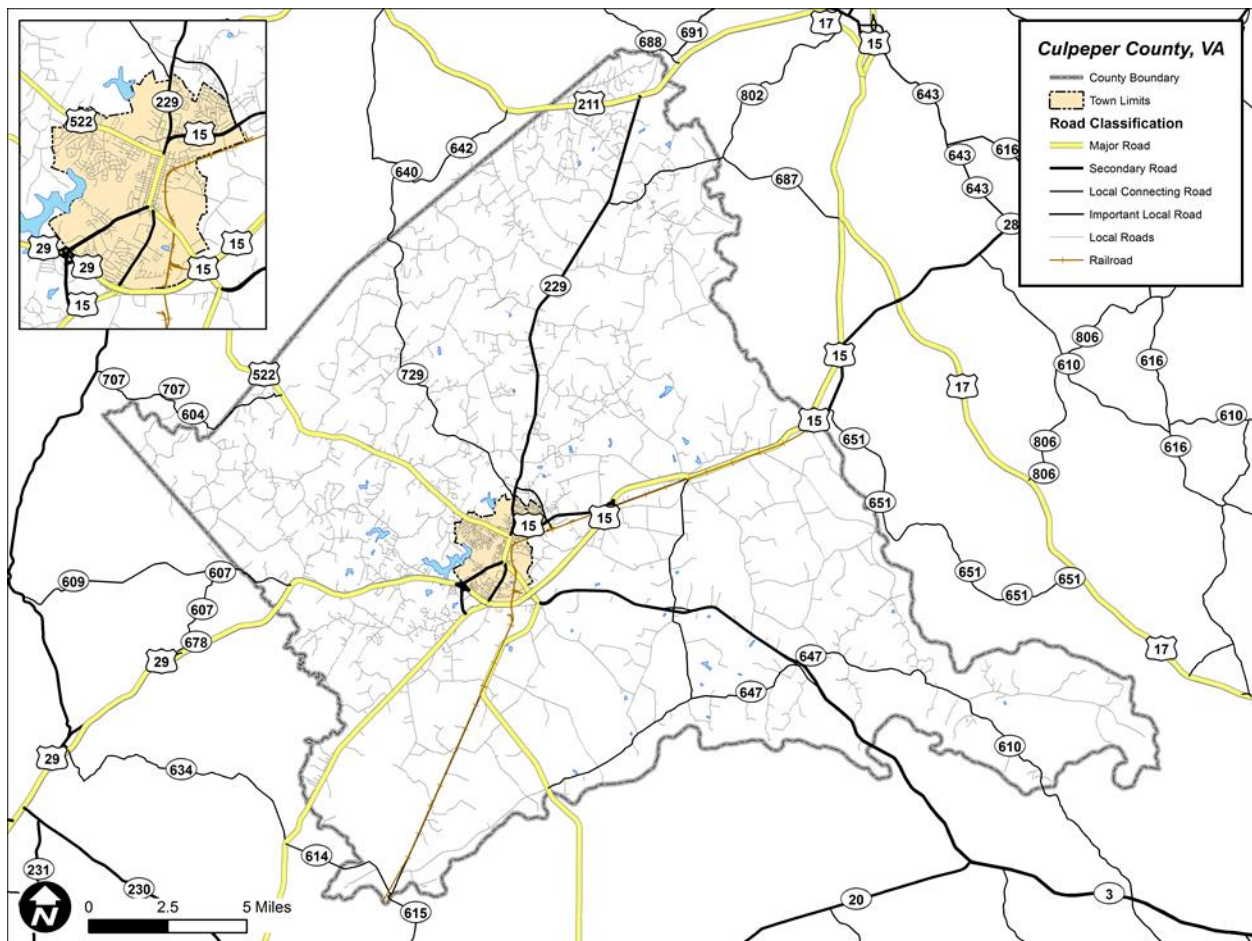
Steve Crosby
County Administrator

CHAPTER THREE DEMOGRAPHICS & RISKS

SERVICE AREA DESCRIPTION

Culpeper County is located in Northern Virginia west of the confluence of the Rappahannock and Rapidan rivers and encompasses 379.23 square-miles. The Town of Culpeper is anchored near the center of the county and is equidistant northeast of Charlottesville and southwest of the District of Columbia. Culpeper County is just west of the city of Fredericksburg, and several U.S. and State highways cross within the area.

Figure 3.1
SERVICE AREA

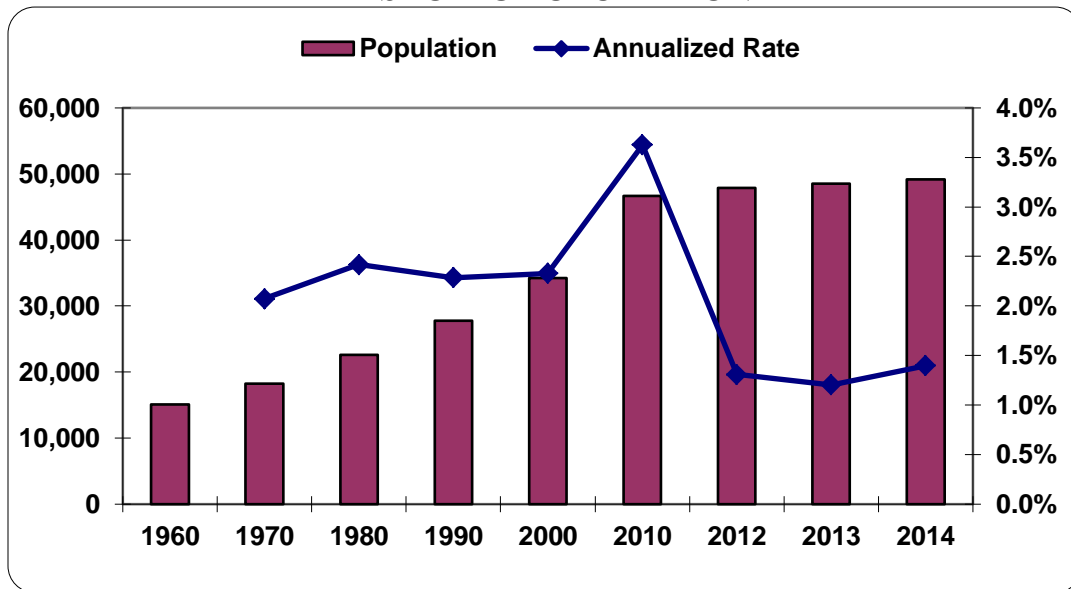


A railroad runs through the center of the Town of Culpeper, and a small airport is located in the northeast side of Culpeper County.

POPULATION & HOUSING

The population of the County includes 46,689 residents according to the 2010 U.S. decennial census. The population in the year 2000 was 34,262, which translates into a 36% growth in population over the last decade. The rate of population has increased as the estimated 2013 population is 48,488. Figure 3.2 shows the rise in historic population levels in the County since the 1960s. It should be noted that the Town of Culpeper accounts for about a third of the overall County population in recent years.

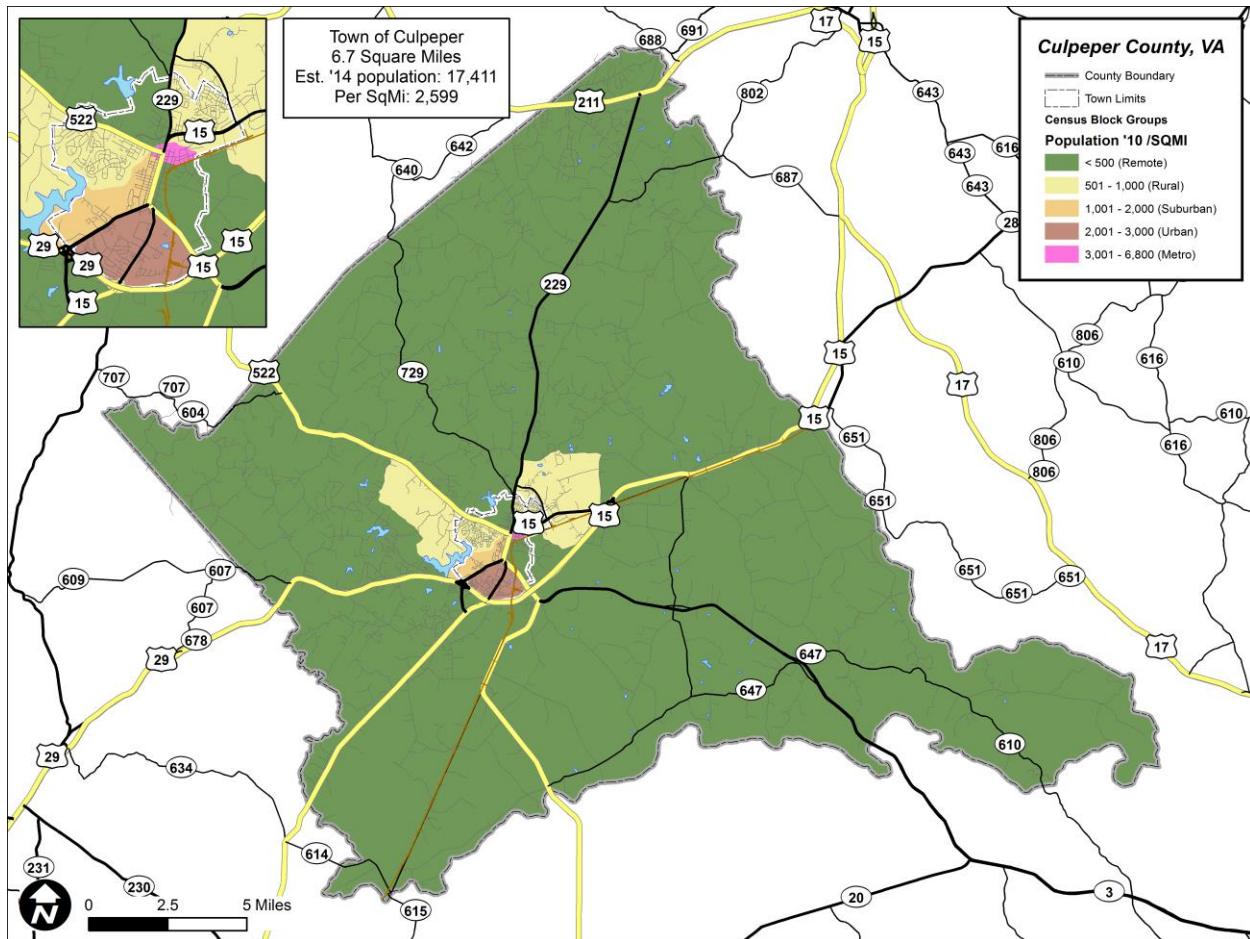
**Figure 3.2
HISTORIC POPULATION**



The numbers in Figure 3.2 represent residential population and do not account for the variation during the daytime hours for commuters, shoppers, and out-of-area employees. It is estimated that the County decreases in population by 10%, but the Town of Culpeper increases by 8% due to commuting patterns¹. Also, the residential population is not evenly distributed. It is understood that demand for emergency services correlates with areas of higher population. Figure 3.3 shows the concentration of residential population by census block group areas.

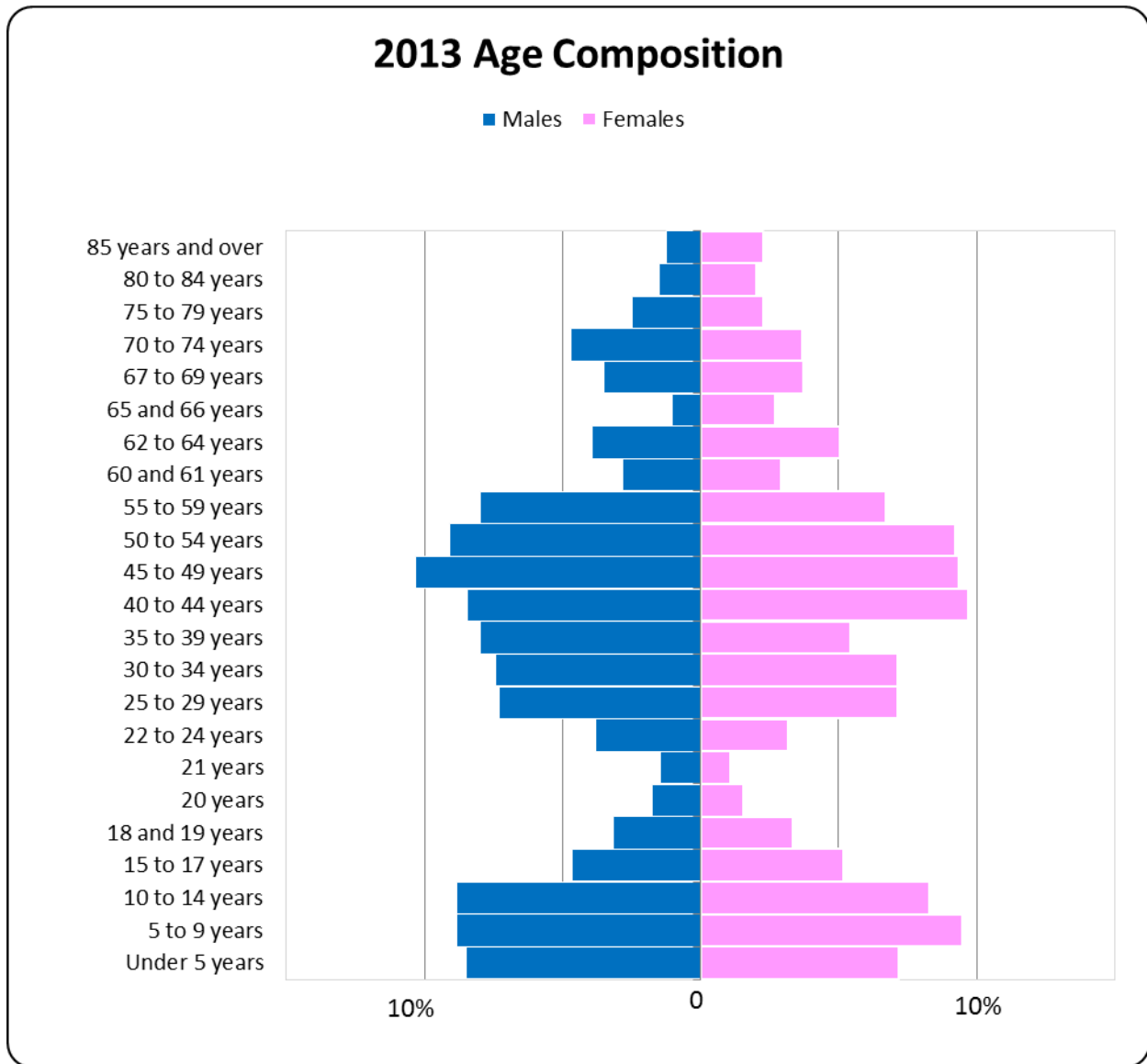
¹ U.S. Census Bureau

Figure 3.3
POPULATION DENSITY



The Town of Culpeper contains the highest concentration of residential population. Although general population levels play a role in the geographic distribution of demand for fire and medical services, it is important to examine the composition of the population since the aged and pediatric populations are more prone to serious medical emergencies and to succumb to smoke and fire due to their behavioral tendencies during a fire. Children often hide making an interior search by firefighters more difficult, while mobility issues limit the ability of the aged to escape. Figure 3.4 illustrates the levels of population by age group in Culpeper County.

Figure 3.4
CURRENT POPULATION BY AGE GROUP



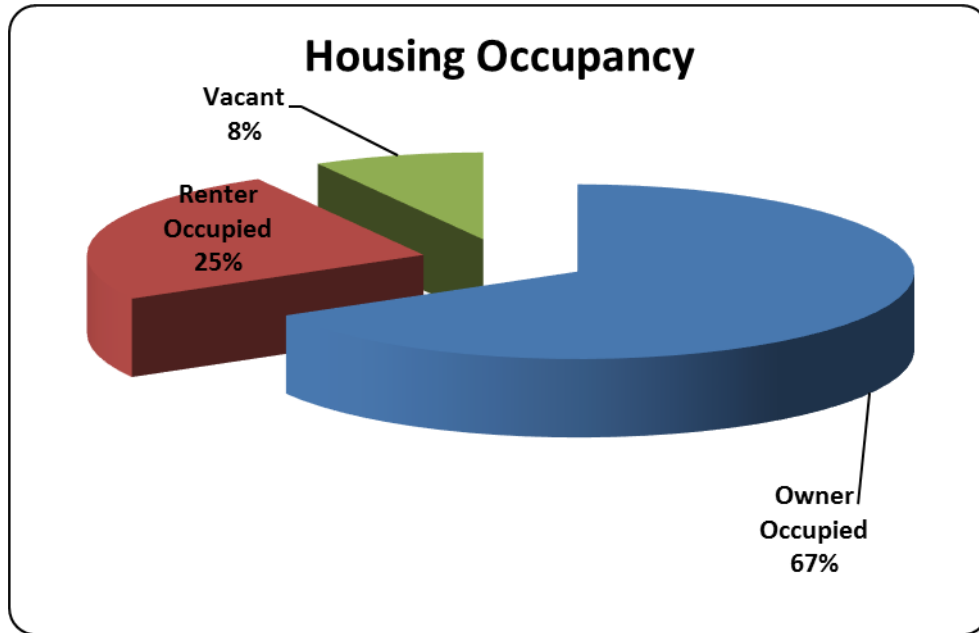
The median age is 39.1 compared to 37.6 for the Commonwealth of Virginia and 37.2 for the nation. Seven percent of the County’s population is less than five years of age, while 12% are over age 65. Population age ranges have stayed stable over the last few years as seen in Figure 3.5.

Figure 3.5
POPULATION CHANGE

Demographic Change- 2010 to 2013								
	Total Pop	Age <5	5 to 24	25 to 44	45 to 54	55 to 64	65 to 74	75 and up
2013 est.	47869	7%	27%	26%	16%	12%	8%	4%
2010	46381	7%	26%	29%	15%	12%	7%	5%
change	3%	0%	1%	-3%	1%	1%	1%	-1%

In Figure 3.6, housing is examined by occupancy types. It should be noted that a higher than average statewide rate of owner-occupied properties exists in the County. This is important because areas of lower vacancy and rental properties are typically reflective of better economic means that correlate with lower demand for emergency services.

Figure 3.6
HOUSING BY OCCUPANCY



The number of rental properties has increased since the last Census. The recent recession has increased the demand for rental housing in many markets. Vacant properties have decreased; this is also tied to improving economic capacity. Figure 3.7 details the housing changes in Culpeper County since 2010.

Figure 3.7
HOUSING OCCUPANCY CHANGES

Housing Information- 2010 to 2013				
	Housing Units	Owner Occupied	Renter Occupied	Vacant
2013 est.	17,803	11,865	4,478	1,460
2010	17,786	11,847	3,968	1,961
change	0%	0%	13%	-26%

RISKS

Transportation along several major roadways not only creates potential fatal collisions, but also the brings the risk of hazardous material spill from an incident involving a tractor trailer. This hazardous material release risk is also increased by freight rail traffic within the County limits. Being at the confluence of two rivers, the chance of severe weather and snow melt makes flooding a high probability in some areas of the County.

Aside from severe winter weather, the County also experiences summer storms that can produce tornadoes. The worst tornado was experience in 2001; it measured an F5 on the Fujita scale and caused over \$2 million in damages. Fortunately no fatalities were reported and just two people were injured. Culpeper County is also near a zone that can and has experienced an earthquake, most notably in 2011 with a magnitude 5.8.

FUTURE TRENDS

Culpeper County is expected to maintain a modest population growth pattern. The County, like most communities, plans for improvements to the airport facility, County offices, courts, schools and parks. A new connector between Route 729 and Route 522 is also planned. Connectivity such as this helps first responders reach incidents faster.

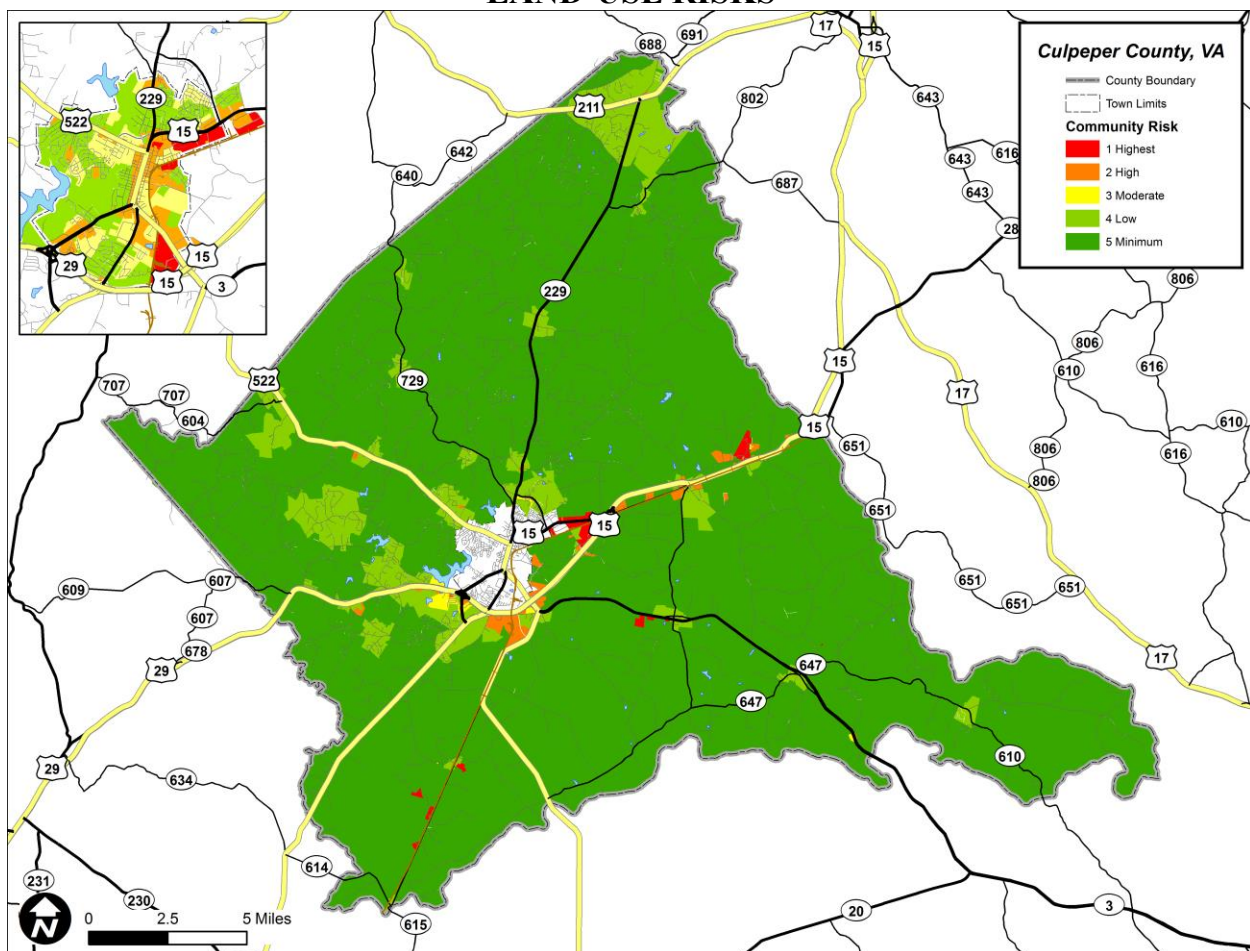
An established area around the current town limits of Culpeper serves as an urban service boundary where additional development is foreseen along with isolated spots in the rest of the County. Land use can create risk by bringing in more residents or by having a use that increases the risk of fire.

Current and future land uses within the County can be classified by level of risk in loss of life and economic damage. The following defines these levels of risk.

1. Highest — Refineries, large industry, hospitals, school dormitories, lumber yards, and propane storage facilities without built-in suppression or detection systems;
2. High — High-rise hotels and residential buildings, large shopping centers, and industrial complexes;
3. Medium — Commercial and industrial facilities with sprinkler systems, small shopping centers, and high-density, medium density residential buildings;
4. Low — Lower density Single-family dwellings
5. Minimum — Wide separation of single family dwellings and farm land.

In Figure 3.8, the land-use classifications were recategorized into the five risk levels described above.

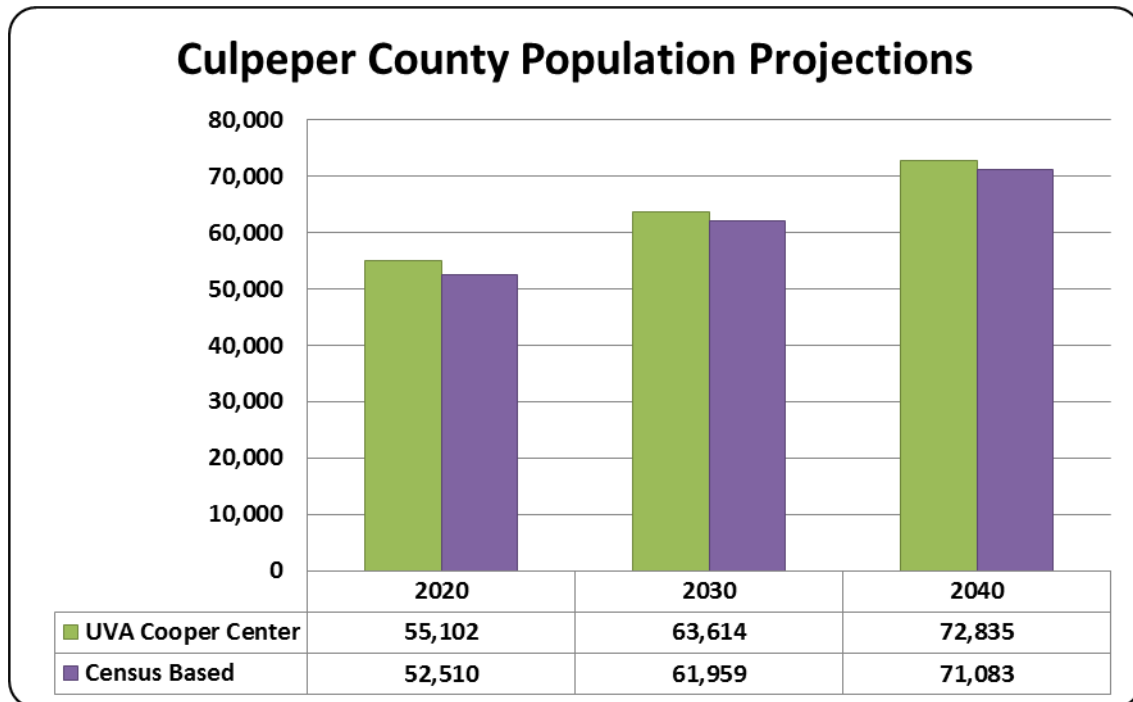
Figure 3.8
LAND-USE RISKS



The majority of the Culpeper County is classified as minimal to low risk according to the index. This is expected since the majority of land is residential in nature. Some higher risk areas along major thoroughfares can be seen in Figure 3.8.

The Study Team expects population growth to reflect the modest pace that has been experience over the last decade. Given this, Figure 3.9 provides two projections of population growth for Culpeper County. One projects the level of future population growth based Census levels over the past several decades. The other, and likely to be more accurate since it takes into account regional factors, is from the University of Virginia Cooper Center. This population forecast is funded by the state employment commission.

Figure 3.9
POPULATION PROJECTIONS



Since demand for emergency agencies is based almost entirely on human activity, it is important to have a population-based projection of the future size of the community.

CHAPTER FOUR FIRE STATION LOCATIONS

This chapter examines the locations of the fire stations within Culpeper County in relation to geographic distribution, response capability, and insurance rating recommendations. This chapter primarily deals with fire suppression services and equipment. The performance of the respective crews to respond to emergency incidents is assessed based on time travel and service demand patterns. Finally, related conclusions and recommendations are provided for consideration.

CFAI FIXED FACILITIES CRITERIA

The Study Team considered criteria from the Commission on Fire Accreditation International (CFAI) related to fire department fixed facilities as follows:

*Fixed facility resources are designed, maintained, managed and **adequate to meet the agency's goals and objectives.***

Performance Indicators

1. Space allocations are adequate for agency functions such as operations, fire prevention, training, support services and administration.
2. Buildings and grounds are clean and in good repair. Maintenance is conducted in a systematic and planned fashion.
3. Physical facilities are adequate and **properly distributed in accordance with stated service level objectives and standards of cover.**
4. Facilities are in compliance with federal, state and local regulations.

The CFAI items in bold are addressed in this chapter, while the remaining items are covered in a subsequent chapter.

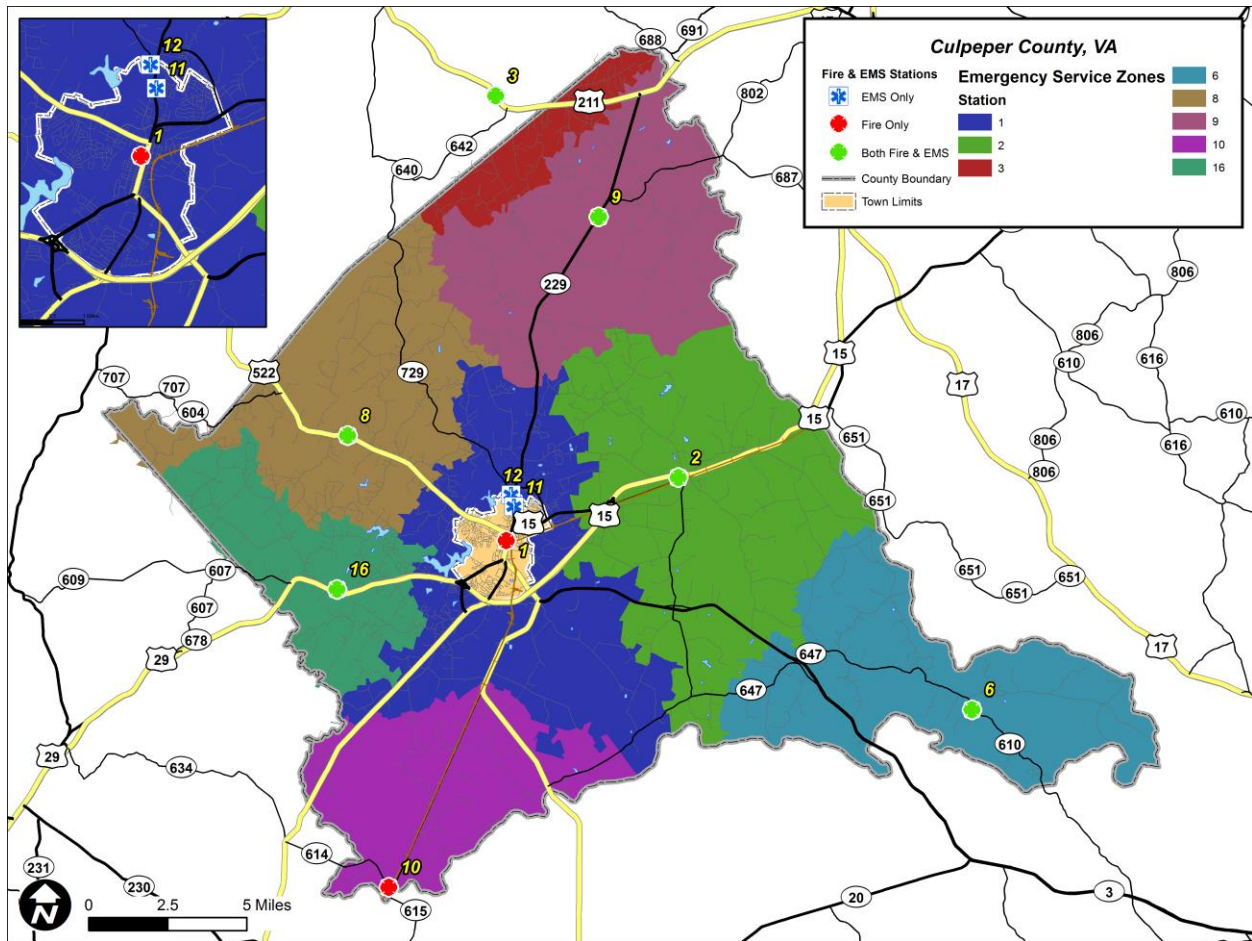
CURRENT FIRE STATION LOCATIONS

Culpeper County receives services from 10 emergency services agencies providing fire suppression, first response medical and emergency medical treatment/ambulance transportation services (EMS) from the following facilities:

- Station 1 – Culpeper Volunteer Fire Department
 - Fire Suppression Only
- Station 2 – Brandy Station Volunteer Fire Department
 - Fire Suppression & First Responder Medical
- Station 3 – Amissville Volunteer Fire & Rescue
 - Fire & EMS located outside of County limits with primary response area within Culpeper County
- Station 6 – Richardsville Volunteer Fire & Rescue
 - Fire & EMS
- Station 8 – Salem Volunteer Fire & Rescue
 - Fire & EMS
- Station 9 – Little Fork Volunteer Fire & Rescue Company
 - Fire & EMS
- Station 10 – Rapidan Volunteer Fire Department.
 - Fire Suppression Only
- Station 11 – Culpeper Volunteer Rescue
 - EMS Only
- Station 12 – Culpeper County Office of Emergency Services
 - EMS Only (24/7 career staff, countywide coverage)
- Station 16 – Reva Volunteer Fire & Rescue Company
 - Fire & EMS

Figure 4.1 displays the locations of the stations relative to the County, the fire response zone areas, and roadway network.

Figure 4.1
FIRE STATION DISTRIBUTION



STATION LOCATION ASSESSMENT

The location of an emergency services station for a specific community depends on the ability to travel within the geography, the demographics, and, specifically for the fire department, the distribution of commercial, industrial, and residential property. Nationally recognized benchmarks for locating a fire station will be discussed in the sections that follow.

ISO Criteria

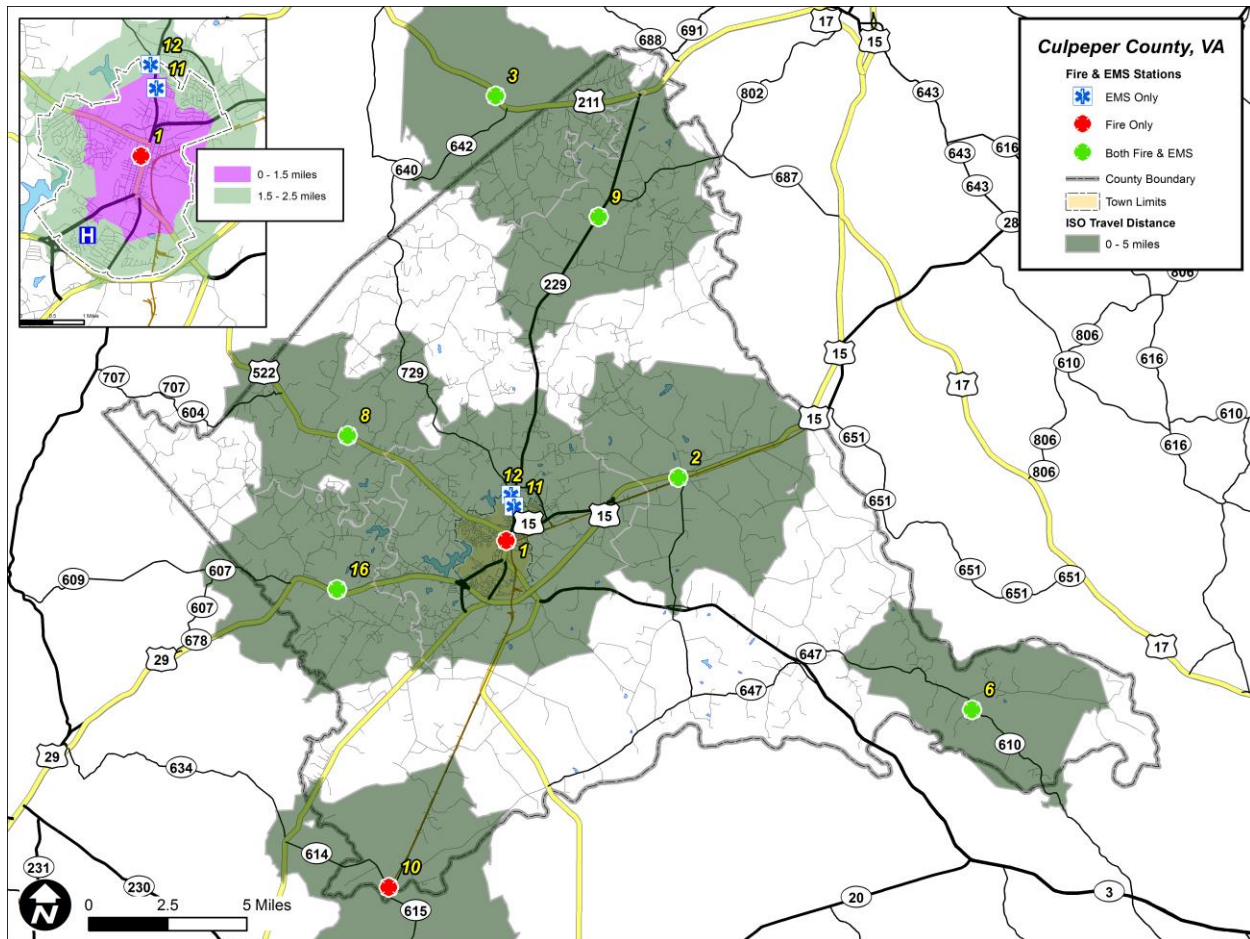
The Fire Suppression Rating Schedule utilized by the Insurance Services Office (ISO) in its evaluation of municipal fire suppression capabilities includes fire station location analysis with objective mileage-based criteria. Item 560 in the Fire Suppression Grading Schedule, reads as follows:

“...at least 50% of the built-upon area¹ of the County should have a first-due engine company within 1.5 miles and a ladder-service company within 2.5 miles.”

The ISO considers the optimum physical location of engine companies and ladder companies essential to earning maximum credits under the Fire Department Criteria in the Schedule. Because engine companies and ladder companies are placed in fire stations, it is the location of the fire station that becomes important to the evaluation process used by the ISO. The ISO only considers coverage as that within five miles of travel from a fire station, beyond that distance, no credit is applied to the rating criteria. These are very conservative estimates. The problem with using mileage alone is that speed capability of the road affects the time travelled; the ISO criterion does not take this into account. It should be strongly noted that ISO apparatus distance is only one of many criteria to which the ISO evaluates a department. Other criteria include equipment, testing, and dispatching. Nonetheless, Figure 4.2 shows the five-mile distance from a fire station. ISO does not affect EMS station placement.

¹ Uses hydrant locations as surrogate reference for built upon areas

Figure 4.2
ISO ENGINE DISTANCE



The inset map in Figure 4.2 shows the Town of Culpeper and the 1.5-mile engine company distance, as well as a 2.5-mile distance, that relate to ladder apparatus credit. Culpeper Fire has the only ladder truck in the County. Ladder Truck apparatus are able to reach higher buildings and larger-square-foot structures, such as “big box stores.” Fire departments typically position them near an area that contains many such structures.

Response Time Capability Criteria

The response time of fire apparatus to the scene of an emergency incident is an essential determining factor as to the magnitude of the fire or medical emergency that the fire department must handle upon arrival on the scene of the incident. The theory is the shorter the response time, the smaller the fire that must be extinguished.

Fire-Related Response Time Considerations

One of the key factors to consider in assessing response times to fires is the time from ignition to flashover. The instantaneous eruption into flames generates a tremendous amount of heat, smoke, and pressure, with enough force to push beyond the room of origin through doors and windows. The combustion process then speeds up because there is an even greater amount of heat to move to unburned objects.

The time from ignition until water is applied to a fire should be no longer than the six to nine minutes it takes for flashover to occur with a free-burning fire. Again, flashover is defined as the instant burning of an explosive mixture of heated air, smoke, and gases that flashes through openings around the fire area, such as doors and windows. This does not include a smoldering fire, which can burn for hours before breaking out into the free-burning stage.

Flashover is a critical stage of fire growth for two reasons. First, no living thing in the room of origin will survive, so the chances of saving lives drop dramatically. Second, flashover causes a quantum jump in the rate of combustion, and a significantly greater amount of water is needed to cool the burning material below its ignition temperature. More firefighters are needed for fire attack and there exists the likelihood of reduced fire safety. Figure 4.3² is a summary of the significance of flashover in the process of fighting fire.

**Figure 4.3
FLASHOVER COMPARISON**

SIGNIFICANCE OF FLASHOVER	
Pre-Flashover	Post-Flashover
Limited to One Room	May Spread Beyond One Room
Requires Smaller Attack Lines	Requires Larger, More Attack Lines
Search & Rescue Is Easier	Compounds Search & Rescue
Initial Assignment Can Handle	Requires Additional Companies

² Source: *Creating and Evaluating Standards of Response Coverage for Fire Departments, 5th Edition* - Summer 2008, CFAI

For these reasons, it is critical that fire suppression forces reach a fire as quickly as possible in order to initiate effective suppression efforts prior to flashover.

NFPA 1710 Guideline

There are a number of applicable NFPA standards and guidelines that include response time considerations important to labor and fire officials nationwide. NFPA 1710 (Standard for the Organization and Deployment of Fire Operations) response time-related provisions are described in the following sections.

NFPA 1710 is an industry benchmark for paid/career fire departments that describe the requirements for delivery of services, response capabilities, incident management, and strategy. This includes the following benchmarks related to call receipt and processing time, turnout time, and response (travel) time:

- Call receipt and processing time (time from 911 call pick-up to dispatch of an assignment) of 30 seconds on all calls.
- Turnout time (time from dispatch to being enroute to an assignment) of 80 seconds on fire suppression calls; 60 seconds for EMS calls.
- The fire department's fire suppression resources are deployed to provide for the arrival of an engine company within a four-minute travel time and/or the initial full alarm assignment within an eight-minute travel time to 90% of the incidents.
- The first responder medical or basic life support EMS resources are deployed to provide for the arrival of resources and care providers within a four-minute travel time and/or advanced level paramedic services within an eight-minute travel time to 90% of the incidents.

NFPA 1720 Guideline

The National Fire Protection Association (NFPA) has also issued a response performance standard for all or mostly volunteer staffed fire departments. Though not a legal mandate, NFPA 1720 identifies a target response time performance objective for fire departments and a target staffing standard for structure fires.

In recognizing that volunteer departments across the United States cover a variety of communities, the following recommended standards are classified according to population densities:

- Communities with populations greater than 1000 persons per square mile are deemed urban under the 1720 guidelines. Within these types of communities, NFPA 1720 recommends that 15 firefighters arrive at the scene of a structure fire within nine minutes of dispatch, 90% of the time.
- In communities that have 500-1000 persons per square mile in population, NFPA 1720 recommends a response time objective of 10 minutes from time of dispatch, 80% of the time with 10 firefighters.
- A 14-minute response time, 80% of the time with 6 firefighters is permissible for more rural communities with less than 500 persons per square mile.
- Minimally populated areas in excess of 8 miles from a fire station are considered remote and not subject to a response-time guideline, but the guideline recommends at least four firefighters arrive at the scene.
- This guideline does not differentiate between incident types (fire, EMS, etc), nor does it specify a turnout-time parameter.

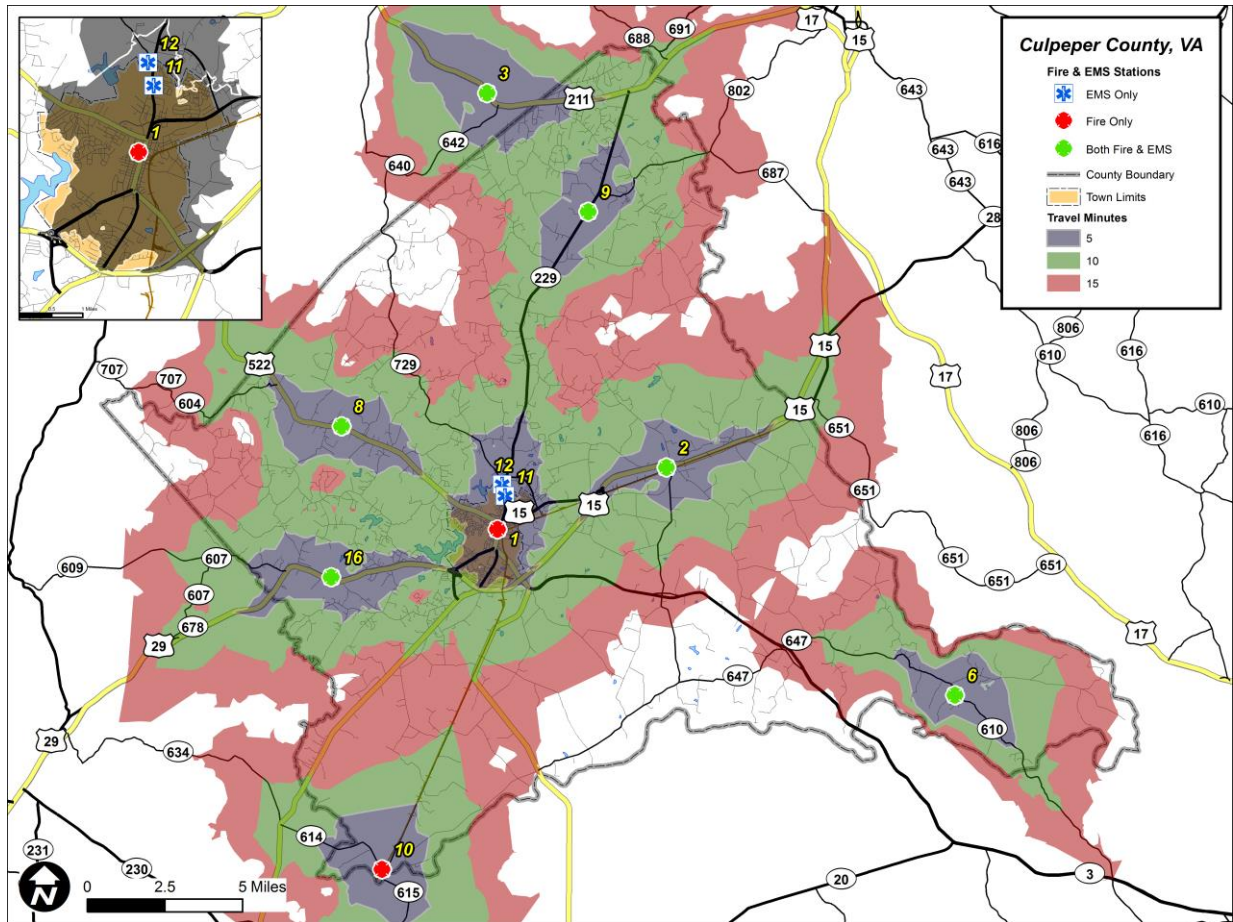
See also Chapter 3 for a population density map.

It should be noted that the various standards and criteria discussed in previous sections placed a high priority on both the effective delivery of fire service in the protection of life and property. Moreover, the safety of the firefighters and officers delivering the services and safety for the customer and stakeholder were important considerations in the development of these standards and to their application.

Not all requests for services to the fire department ought to be construed as requiring apparatus to respond emergently or within these short time constraints. These should be limited to the most critical emergencies in which they were designed.

Figure 4.4 models the travel time of apparatus from each of the current stations. The model utilizes the street network of the County and surrounding areas calculating the travel time extent via distance and speed capability of streets. Actual posted speed limits were utilized and time penalties were assessed for negotiating turns and intersections. This model assumes departure from the fire stations, which may not always be the case. It also does not take into account weather conditions, traffic congestion, construction, or detours. It does respect the one-way restrictions as they are in place.

Figure 4.4
TRAVEL TIME EXTENT



Certain areas of the County will require more time to reach than those areas that are naturally closer to the existing fire stations.

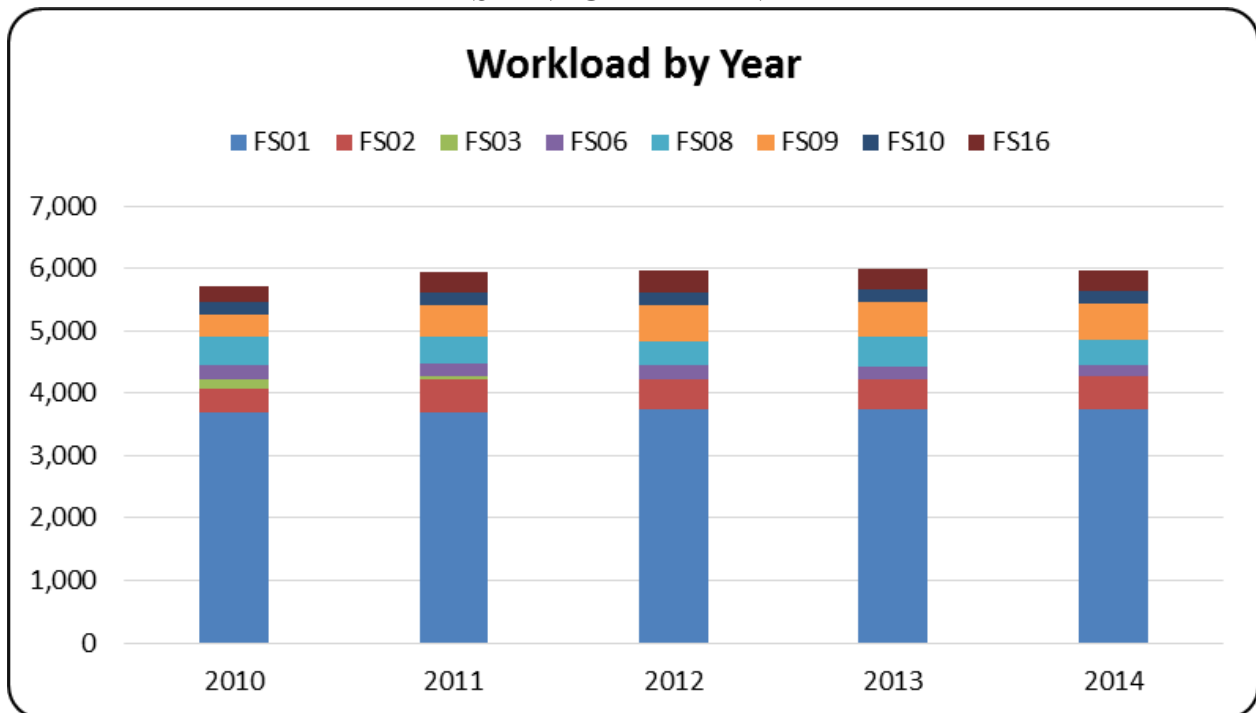
CURRENT SERVICE DEMAND ANALYSIS

Thanks to the preventive programs, enforcement of improved construction codes, and sprinkler systems, actual fires are fortunately fewer than in decades past, but remain a potential serious threat. The fire departments in Culpeper County typically responds to every perceived emergency outside of those involving the enforcement of law and civil order. Demand for the services of the fire department range from medical incidents, to rescues, to trees down on wires, to calls for trapped people or animals, to name a few.

Department Level

Records of fire and medical incidents within Culpeper County were acquired through an export of the County's emergency communication center's computer-aid dispatch (CAD) system from 2010 through 2014. Figure 4.5 shows the growth in service demand of fire-related calls experienced by each fire department zone over the five years of data.

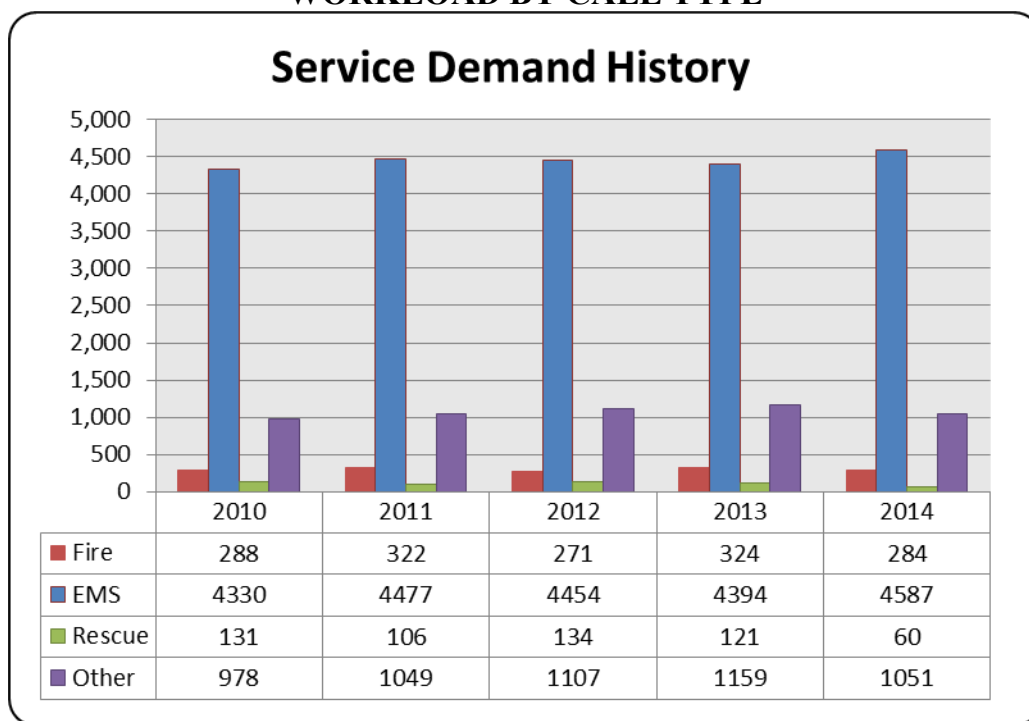
Figure 4.5
SERVICE DEMAND



The workload within each zone and overall has been stable. Since most of the population is concentrated within the FS01, Station 1 Emergency Service Zone (see Figure 4.1), which encompassing the Town of Culpeper, it is not surprising that this area generates the most service demand.

The call types discussed in the following analysis are categorized as they are reported or dispatched initially. Figure 4.6 illustrates the change in volume for categories of reported fire and all other categories of incidents (alarm, hazard, spill, medical, and all other).

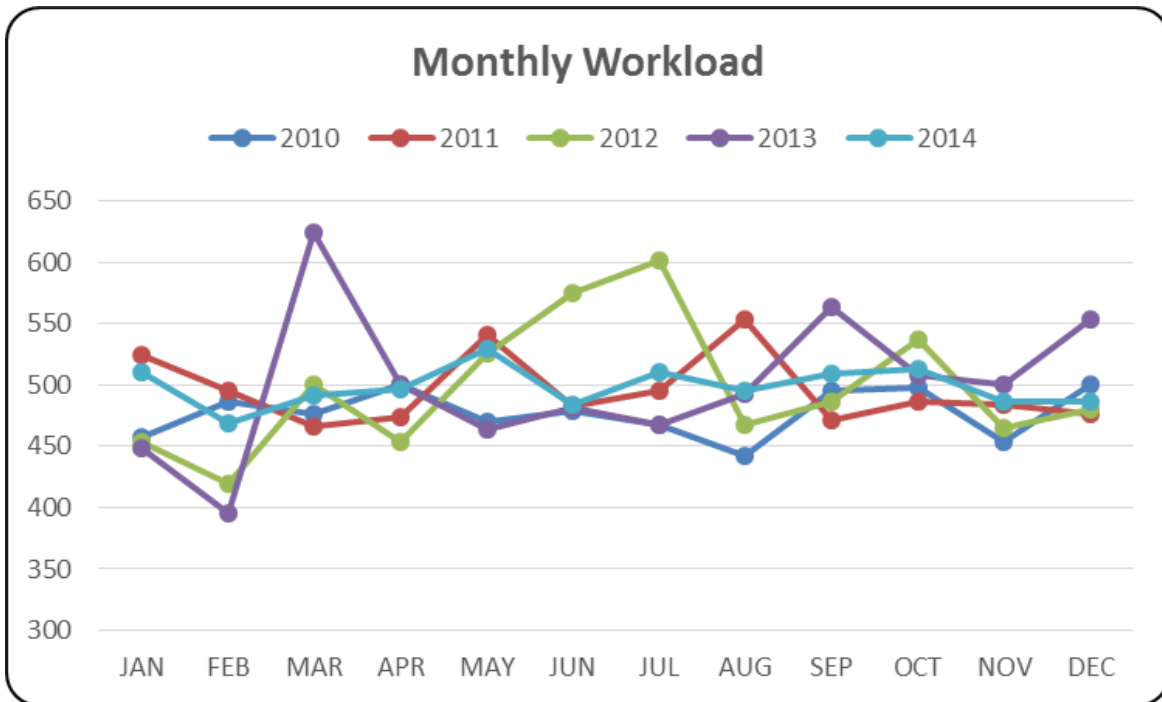
Figure 4.6
WORKLOAD BY CALL TYPE



Most dispatches for the fire department are for medical responses or rescue types. Many dispatches also result in either a false alarm or a “good intent” where someone might have seen or smelled smoke, but it was something not hazardous.

Examining the data more closely, changes in demand can be seen on a monthly basis. Figure 4.9 illustrates that service demand averages about 494 dispatches per month or 16.5 per day.

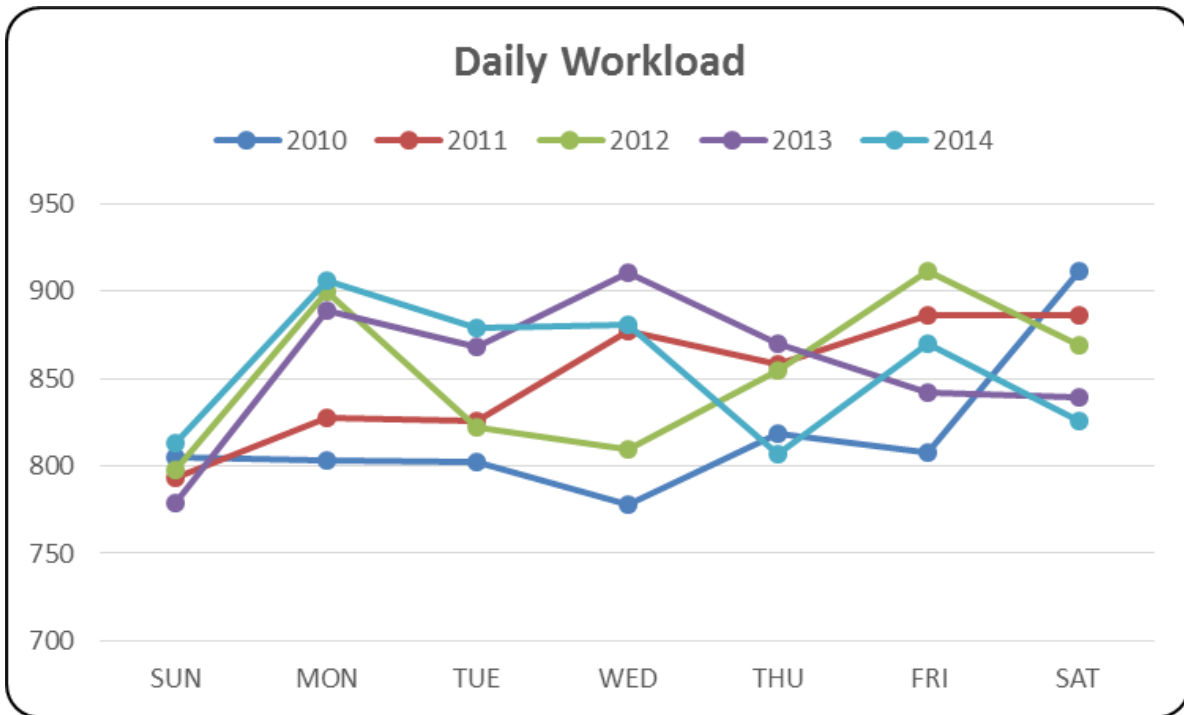
Figure 4.7
WORKLOAD BY MONTH OF YEAR



The workload by month does not show any discernable seasonal pattern and is within a band of 396 to 624 incidents per month. March, July, and October were the busiest months overall for the past five years.

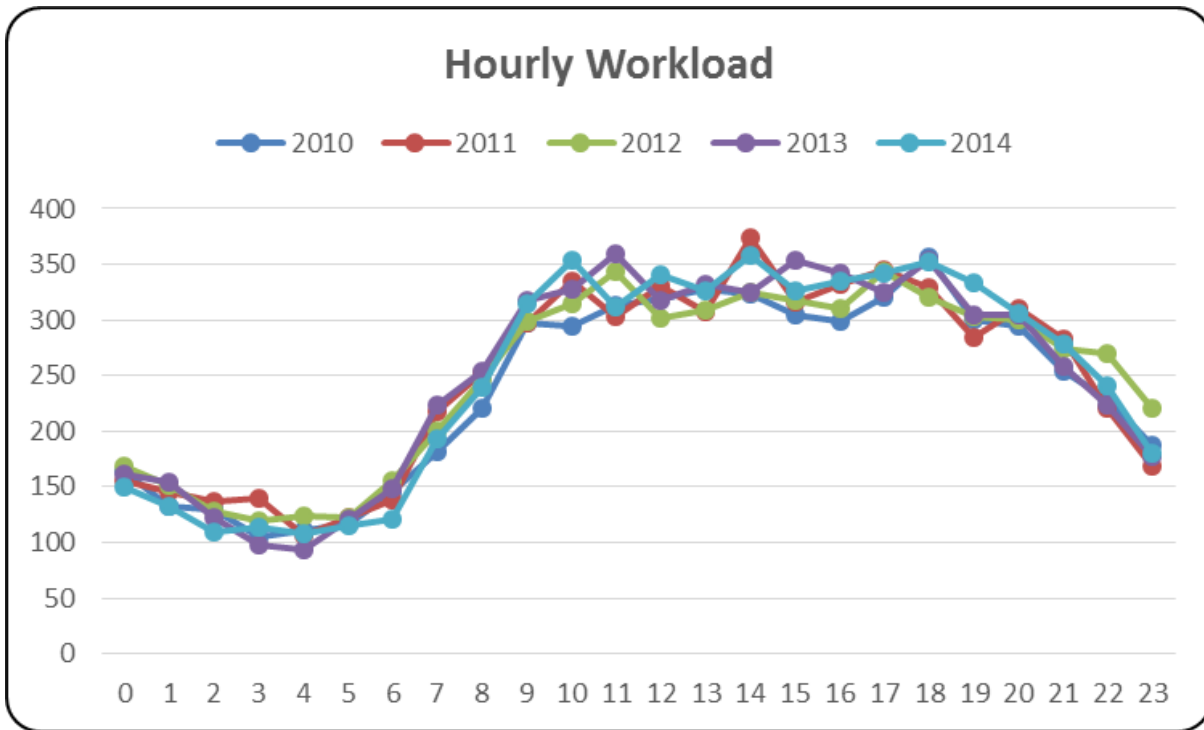
Figure 4.8 shows the service demand by the day of the week, which reveals that Mondays, Fridays, and Saturdays are consistently the busiest days of the week for the emergency crews in Culpeper County, and that the Sundays are generally slower.

Figure 4.8
WORKLOAD BY DAY OF WEEK



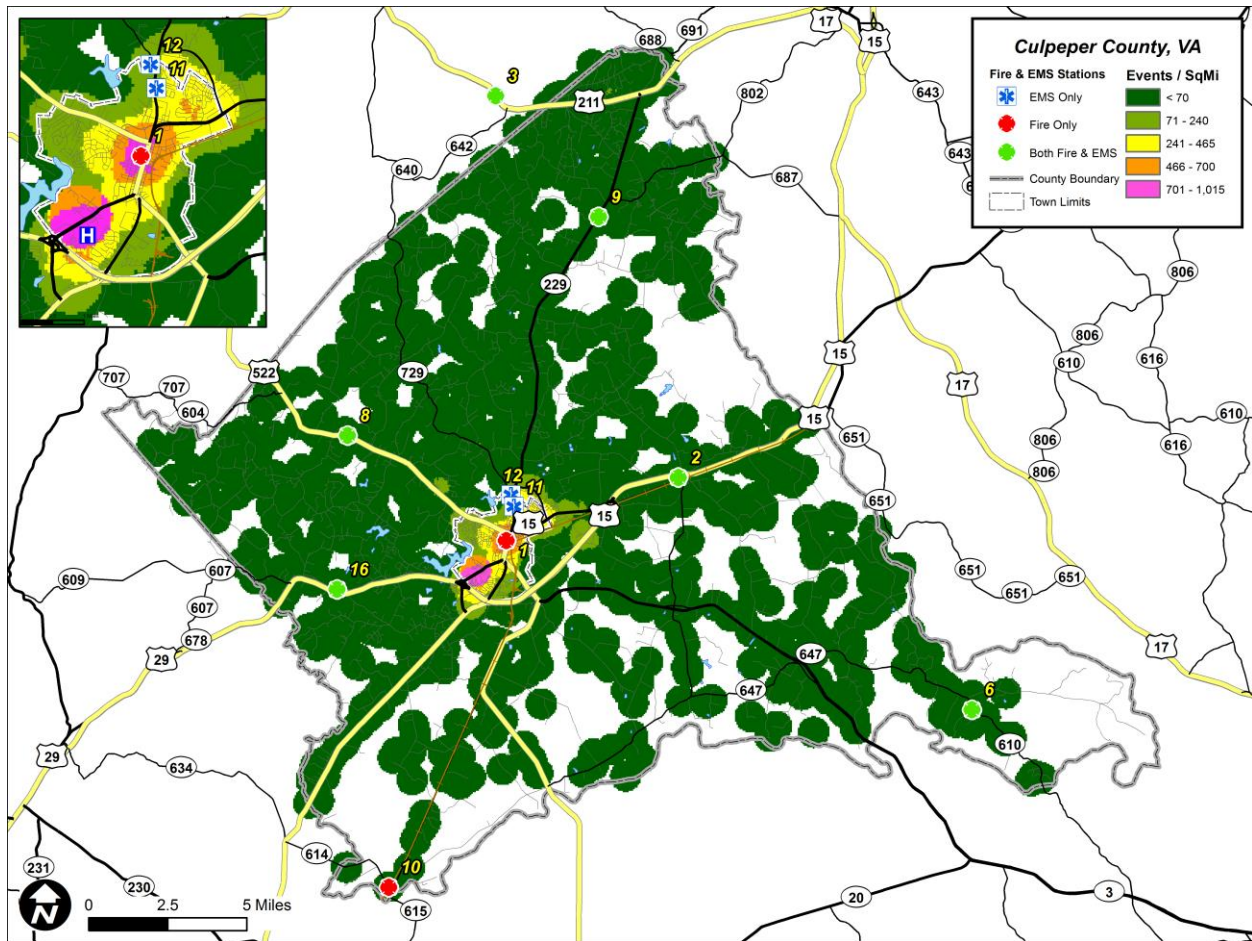
Next, the workload was examined on an hourly basis; it can be seen in Figure 4.9 that service demand consistently increases with daytime human activity. Not surprisingly, service demand volume surges beginning at 6AM and grows until about 10AM when it stays level until it begins to decline at 6PM.

Figure 4.9
WORKLOAD BY HOUR OF DAY



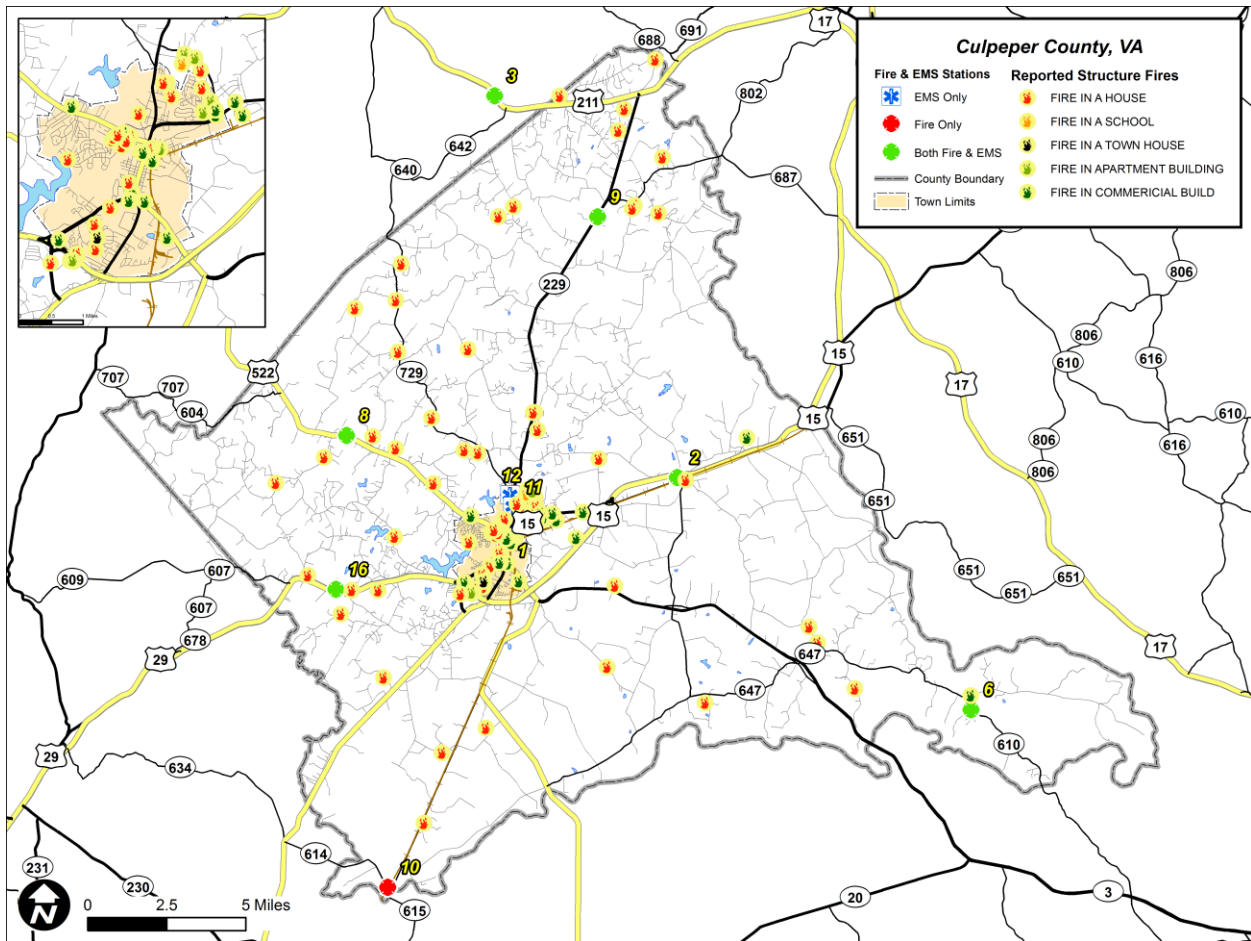
Demand for service is not typically distributed evenly within an area. There are areas where incident calls occur frequently and near each other, as well as other places where demand is less intense and the occurrences are further from each other. Service demand is typically higher in areas of higher population, not just residential, but as offices and shopping centers fill with people, as well. Figure 4.10 illustrates the level of demand for fire and rescue services over the five years in Culpeper County.

Figure 4.10
SERVICE DEMAND



It can be seen that the vast majority of incidents occur within the Town of Culpeper. The highest concentration of incidents is near Station 1 and frequent events were recorded at the Culpeper Health Center. The rest of the County has light demand in comparison correlating with population densities (see Chapter 2). Since this map shows the concentration of all incidents types (mostly emergency medical events) not just fires, the next map (Figure 4.11) pinpoints locations of structural fires over the last data year in the Culpeper County.

Figure 4.11
STRUCTURE FIRE INCIDENTS



Once again, the majority of building fires occurred within the Town of Culpeper and sporadically throughout the rest of the County.

Coverage of the service demand and highest risk properties are compared to modeled travel times Figure 4.12.

Figure 4.12
COVERAGE STATISTICS

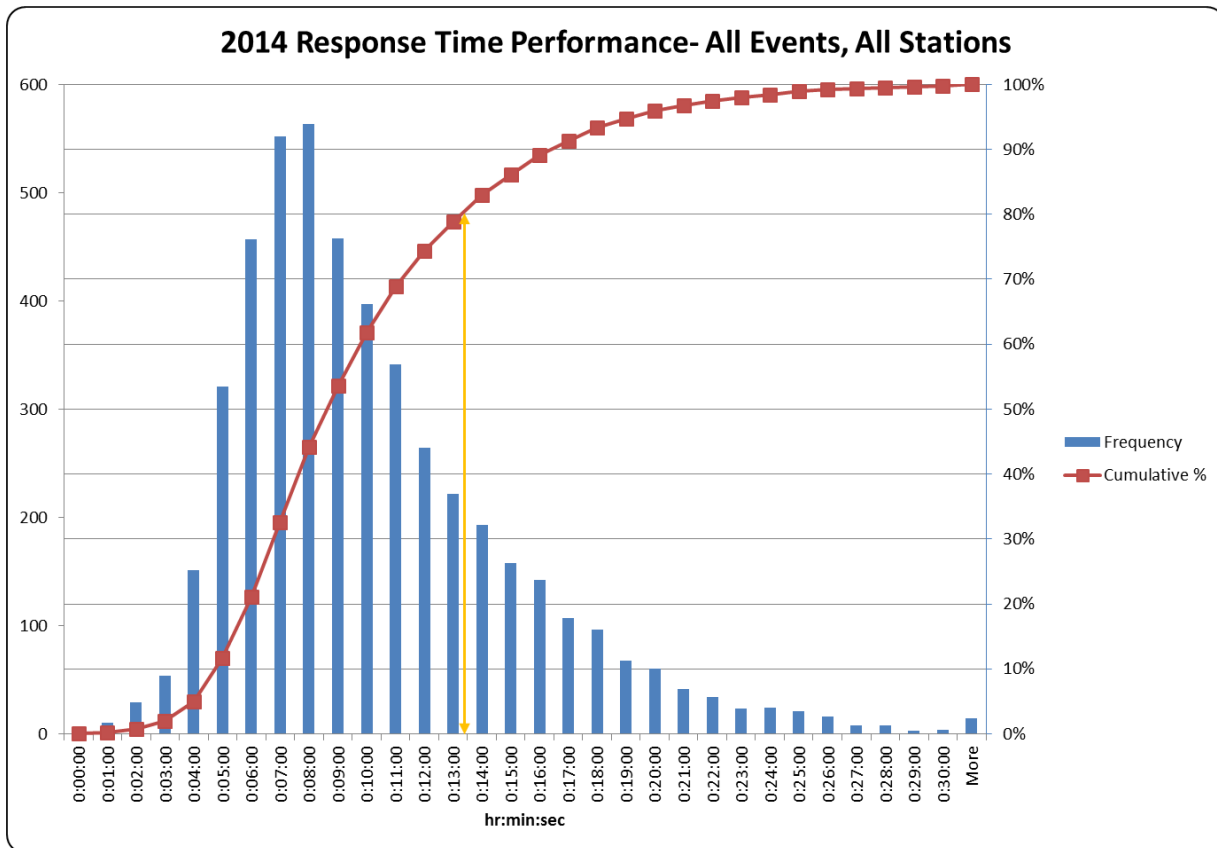
Minutes of Travel	Demand Coverage	Community Risk		
		Highest	High	Moderate
5	62%	58%	66%	45%
10	89%	79%	96%	86%
15	97%	100%	100%	100%

RESPONSE-TIME ANALYSIS

The most important measure of performance of any emergency service provider is how fast help arrives. Because most of the services within Culpeper County are volunteer, the Study Team used this guideline as a comparison in most cases; except when specifically concerning Station 12 (a career agency). Discussions of the reasons for and the specific parameters of the establishment of national response time guidelines from the NFPA 1720 have been outlined in an earlier subsection in this chapter. As a reminder, most of the County is considered rural, and the response-time benchmark is 14 minutes from dispatch for 80% of events. The Town of Culpeper can be considered urban under these guidelines, and the goal for response performance is 9 minutes for 90% of events.

There are very few areas outside of 8 miles travel distance from a station that would qualify as “remote” under NFPA 1720 guidelines, excluding it from recommended response time and staffing benchmarks. The largest area is along Route 647 between Route 3 and U.S. 522. The percentile measures mean that 80% or 90% of events are answered in these than the reported result. This can be a confusing statistic and also can be harsh upon small data sets. For this reason, we also report the average statistical measure. While it can be influenced by outliers in the dataset, it is often easily understood but also subject to wide skewing due to small datasets. Figure 4.13 illustrates the response time performance for the first arriving apparatus on emergency assignments using the CAD dataset for all events by all stations. Mutual aid to other areas was removed, as well as non-emergent events, such as public assists and standbys.

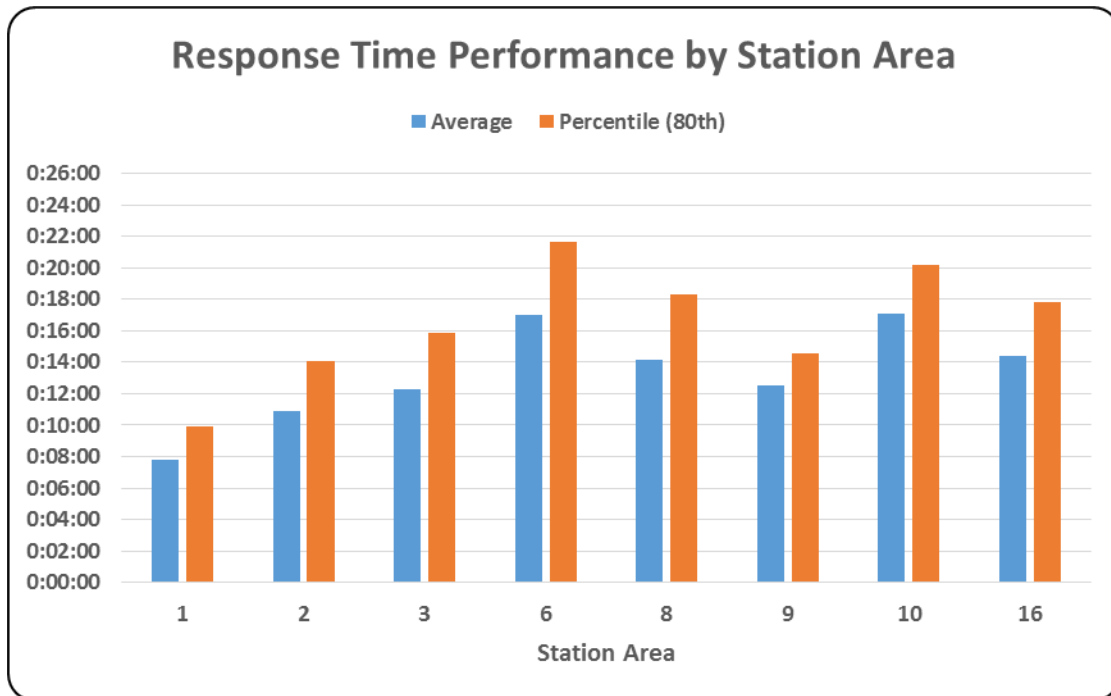
Figure 4.13
RESPONSE TIME PERFORMANCE



The average response time to emergency calls is 9 minutes and 45 seconds (0:09:45). At the 80th percentile, calls are reached in less than the 14 minutes recommended response time stated in the NFPA 1720 guideline (orange line on chart).

Examining the data further by station area in Figure 4.14 shows which area has a response performance result that meets or exceeds the NFPA 1720 guideline for response time.

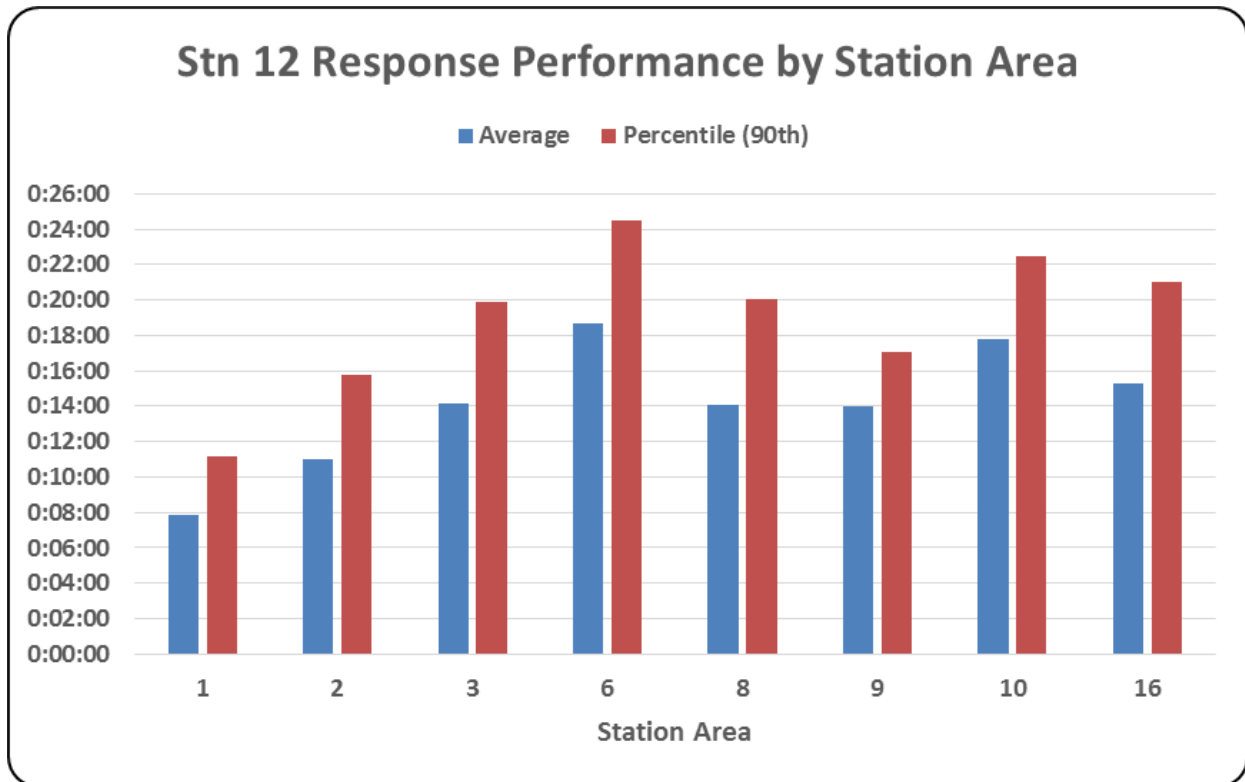
Figure 4.14
RESPONSE PERFORMANCE BY STATION AREA



The responsibility of the station area performance is the host agency, despite the fact that they may assist other agencies when they are unstaffed, such as EMS units. Depending on their location when dispatched, these units could have longer response time to more distant events.

Figure 4.15 specifically analyzes Station 12, a career staffed countywide resource and its response performance to the station areas at the more stringent 90th percentile performance measure.

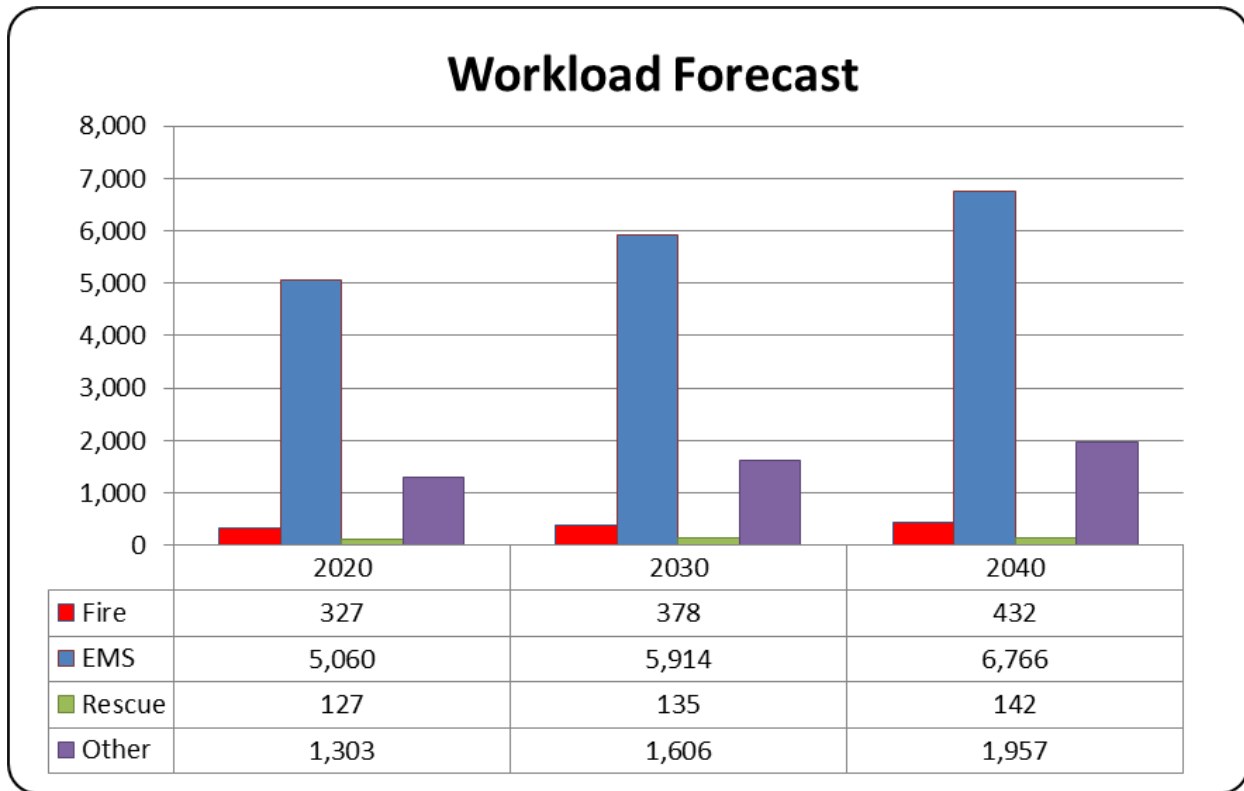
Figure 4.15
STATION 12 RESPONSE-TIME PERFORMANCE



It can be seen that the best response performance is in Zone 1 where Station 1 is based and has the most demand for services. Other areas vary in the level of response performance.

This section analyzed the current deployment of stations and service demand. Current and future population trends were discussed in the preceding chapter. Using these factors, projected workload based upon expected increases in population. Staffing apparatus within the existing stations will become more of a concern as population increases and generates more service demand as projected Figure 4.16.

Figure 4.16
WORKLOAD FORECAST



While fire-related events are expected to increase modestly, emergency medical assistance and other types of nonfire events are expected to grow more significantly.

Future Fire Station Locations

Culpeper County’s first Comprehensive Plan was adopted by the Culpeper County Board of Supervisors on September 1, 1964, and was entitled Future Land Use Plan for the Town and County of Culpeper. The Comprehensive Plan has been amended numerous times since 1964, with the 2010 plan serving as the most recent official policy guide for the County until the adoption of the 2015 Comprehensive Plan, which was adopted on September 1, 2015. The Comprehensive Plan is Culpeper County’s official policy guide for current and future land-use decisions. The Comprehensive Plan is considered long-range in nature and provides a picture of how Culpeper County wishes to develop over the next 5 to 20 years.

As a policy document, the Comprehensive Plan provides a means for the County's citizens and decision makers to determine the best methods or strategies for achieving the goals conceptualized in the Plan. The provision of fire and EMS services is a vital component of the Comprehensive Plan.

The following criteria are set out in the Comprehensive Plan to be used in determining appropriate sites for additional stations to provide a consistent level of service across the County.

Location Criteria

- Locate stations at points with fast, easy access to a major arterial. Possible sites should be located near two major arterials that offer both east-west and north-south travel.
- Locate new fire/rescue stations near village centers, where possible, based upon key site planning considerations such as access, safety and response time.
- Reduce response areas to a 3-mile radius for facilities within the areas of highest population density.
- Response areas in less populated areas should be a 5-mile radius. Short Term 2015– 2020

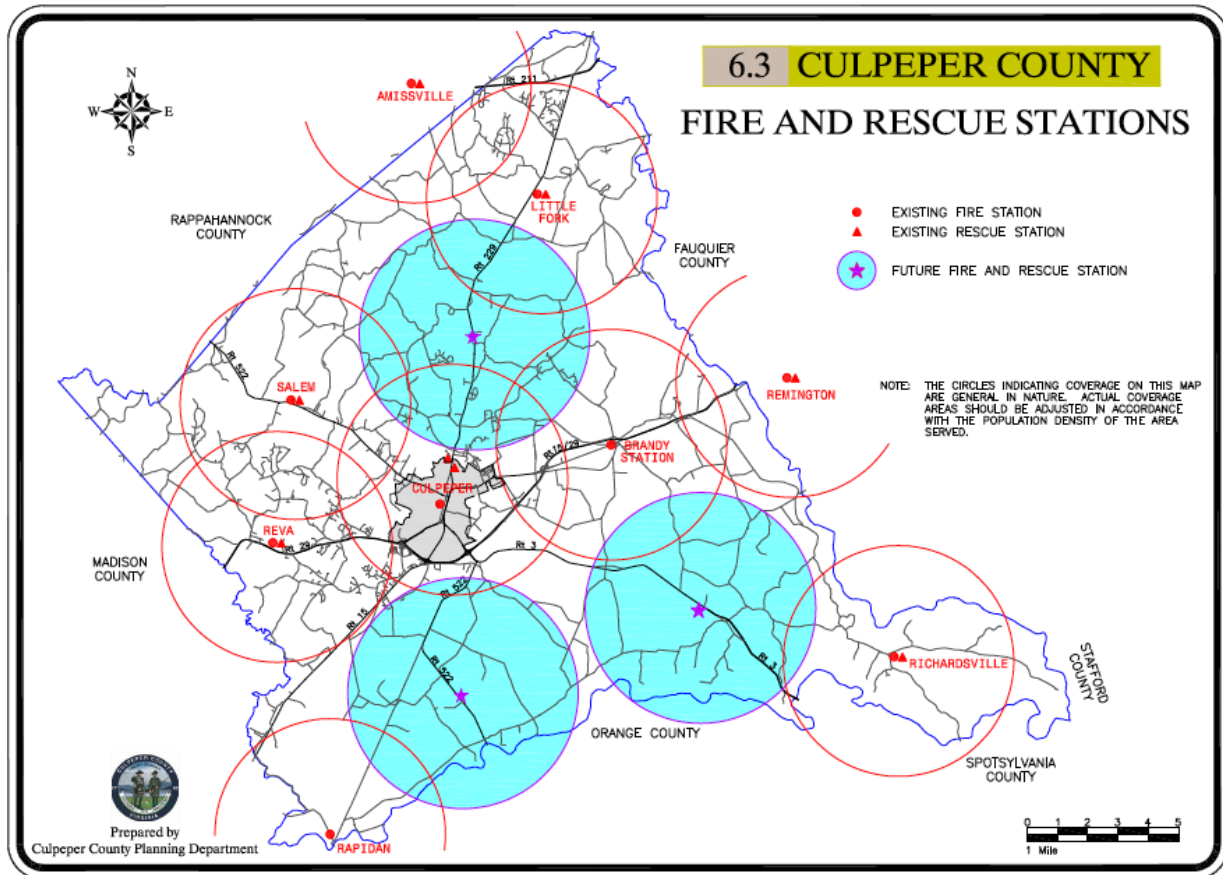
Short Term 2015 – 2020 Goals

- Begin to plan for, and consider land acquisition for future fire and rescue stations.
- Continue to evaluate the need for career personnel and increase existing staff as needed.
- Begin developing plans for a fire and rescue training center. Long Term 2020 and beyond

Long Term 2020 and Beyond Goals

- Reduce coverage areas to a 3-mile radius in village centers.
- Add new fire and rescue facilities as needed to accommodate smaller area coverage requirements and to keep the number of calls at each facility within a reasonable capacity.

Figure 4.17
CULPEPER COUNTY COMPREHENSIVE PLAN
FUTURE FIRE AND RESCUE STATION PROJECTIONS



The locations identified in the Comprehensive Plan fill in gap areas of ISO five-mile limit of coverage. These gap areas are considered “uncovered” by the ISO and have higher insurance rates. Certainly, these stations would be viewed favorably by the ISO reviewers.

However, to truly be effective in otherwise improving response-time performance, the stations would need to have trained personnel staffed or nearby to bring the apparatus to the scene of an emergency. More than likely, this will be a medical emergency due to our analysis of workload by event type. Staffing aside, the workload in these areas are not overwhelming and unless significant commercial or residential development³ is expected

³ Especially a senior care center or age-restricted community

in these areas to attract higher population, demand would be expected to stay modest, at best.

Given the expectation that population and workload to remain manageable in these areas, a comparison to the travel time capability of stations is in order. Currently 97% of countywide service demand can be reached within the NFPA 1720 parameters of a rural response that reflect most of the County. As seen in this chapter, the vast majority of the service demand is concentrated within the Town of Culpeper and near current resources.

SUMMARY

The locations of fire stations within Culpeper County are adequate to serve the region currently. However, the response performance has been lacking in comparison to national benchmarks. This points toward the staffing as the service demand is not high enough to warrant additional units. Staffing is discussed in detail in another chapter of this report.

Future fire stations ought to be considered based on changes that increase demand or risk; not solely upon insurance ratings. Substantial residential development as a result of market demand will also increase the workload of emergency services. Commercial development increases the risk to the community due to fire and loss, and proper fire resources are needed to reduce the risk of loss. Because of these factors, future stations will need to be considered and a corresponding reduction in insurance rates and improvement in response performance by responders will result.

It is recommended that a periodic review of response performance, service, demand, and community development be undertaken on a continual five-year basis to recognize the trends that point toward the need for an additional station when they occur and where they occur.

OPTIONS & RECOMMENDATIONS

- 4-1 Office of Emergency Management units should be deployed strategically to provide coverage to zones that do not have a staffed ambulance, but within proximity of the Town of Culpeper, where the most frequent demand exists.

- 4-2 Future fire stations should be considered based upon risk, population, and service demand as monitored on a five-year basis.

CHAPTER FIVE FIRE AND EMS APPARATUS

The selection and purchase of fire department apparatus and equipment are important components of any fire department's ability to provide service to its community. In a career fire department, the cost of purchasing and maintaining response vehicles is usually second to salaries and benefits. In a volunteer fire department, the cost of owning and operating an emergency response vehicle fleet may very well be the department's largest expenditure.

A fire department's selection and purchase process for emergency vehicles must be based on community needs. Careful research and planning are crucial in meeting service level objectives. Today's emergency response vehicles and equipment are very specialized and technical in nature and the selection and purchase of these vehicles must be taken seriously.

Fire departments must be knowledgeable about all applicable standards and laws that impact the design, performance, use, and maintenance of their vehicles and equipment. The selection and purchase of response vehicles and equipment must take into account several factors. The most important factor is the safety of the emergency responders and the public. One of National Fallen Firefighters Foundation's *16 Firefighter Life Safety Initiatives* states: "Safety must be a primary consideration in the design of apparatus and equipment." Another important factor is how a new vehicle or piece of equipment fits in and works with the previous purchases and future operational plans of the fire department. Making a poor decision when purchasing up to a \$750,000 or above response vehicle can have long-lasting effects on any fire department.

Finally, a fire department must provide training on the proper use of all its vehicles and equipment and must continually provide maintenance for the item purchased as described by the manufacturer.¹

¹ Tutterow, Robert, *Fire Protection Handbook, Fire Department Apparatus and Equipment*, 2008, National Fire Protection Association.

COMMISSION ON FIRE ACCREDITATION INTERNATIONAL (CFAI)

The Commission on Fire Accreditation International (CFAI) emphasizes the role fire, EMS, and support apparatus and vehicle acquisition and maintenance plays in an efficient, safe, and effective fire department. Progressive fire departments use this criterion, and others, as a benchmark for determining the best and safest service possible. The CFAI *Apparatus and Vehicles* and the *Apparatus Maintenance* Criterion Performance Indicators, as referenced by the Study Team, are provided below:

Criterion 6B: Apparatus and Vehicles

Apparatus resources designed and purchased to be adequate to meet the agency's goals and objectives.

Performance Indicators

1. Apparatus is located to accomplish the stated standards of response coverage and service level objectives.
2. Apparatus types are appropriate for the functions served, i.e., operations, staffs support services, specialized services and administration.
3. There is a replacement schedule for apparatus and other tools and equipment.
4. There is a program in place for writing apparatus replacement specifications.

Criterion 6C: Apparatus Maintenance

The inspection, testing, preventive maintenance, replacement schedule and emergency repair of all apparatus are well established and meet the needs for service and reliability of emergency apparatus.

Performance Indicators

1. The apparatus maintenance program has been established. Apparatus is maintained in accordance with manufacturer's recommendations, with activity conducted on a regular basis. Attention is given to the safety, health, and security aspects of equipment operation and maintenance.
2. The maintenance and repair facility is provided with sufficient space and equipped with appropriate tools.
3. A system is in place to ensure the inspection, testing, fueling, preventive maintenance, and emergency repair for all fire apparatus and equipment.
4. There are adequate numbers of trained and certified maintenance personnel available to meet the objectives of the established program.

5. There is adequate supervision to manage the program.
6. There is a management information system in place that supports the apparatus maintenance program and provides for analysis of the program.

Most of the applicable Criteria and Performance Indicators noted above will be addressed in the body of this chapter.

FIRE AND EMS APPARATUS IN CULPEPER COUNTY

We begin the review of fire and EMS apparatus in Culpeper County by noting the process by which data was collected and reviewed. During the week of June 15, 2015, the Study Team visited each of the nine fire and EMS stations in the County to meet with Chief officers and to look “first-hand” at the fleet of vehicles that deliver fire, rescue, and EMS services.

Information was collected on each vehicle regarding its type, year of manufacture, basic equipment carried, mileage, engine hours, how the vehicle was purchased, and the vehicle’s current valuation. All of that data is presented in this report on an individual department basis and then followed by general recommendations on a countywide basis.

In general, the Study team did not find anything extremely unusual regarding the type or amount of apparatus operated by the nine different fire and EMS departments—especially given the history of how the fire and EMS services developed over the years. Without any type of countywide fire rescue master plan, which many rural counties across the United States do not have, individual volunteer fire departments traditionally build their apparatus fleet based on the needs of their service areas.

Before review and discussion of the apparatus fleets begins, a review of apparatus nomenclature used by the nine fire/rescue/EMS emergency response agencies in the County is warranted.

An “engine” is a fire truck capable of carrying people, water, hose, ladders, and tools sufficient in quantity to initiate a fire attack operation. The engine is the workhorse of the fire service—almost every fire station in the United States houses at least one engine. On a typical structure fire, multiple engines are needed in order to provide the staffing and equipment resources. NFPA 1901 Standard for Automotive Fire Apparatus is the fire service industry standard for design and function of an engine.

In Culpeper County, the terms “wagon” and “pumper” basically mean the same thing as an “engine.” The individual departments choose the use of these terms. The Study Team found no specific decision-making process when it comes to the engine, wagon, and pumper nomenclature. However, the terms are basically synonymous for the purpose of this report. When an engine, wagon, or pumper is listed in the individual department inventory tables, then the fire pump and water tank capacities of those units are also listed.

A “rescue engine” is quite similar to an engine except that it carries additional equipment used for vehicle extrication operations. This equipment normally includes some type of hydraulic spreader, cutter, and ram in addition to cribbing and other rescue equipment. When dispatched to a report of a motor vehicle collision, a department operating a rescue engine will most likely run the rescue engine first on this call type in lieu of the regular engine.

A “tanker” is a fire truck that basically has a sole purpose of hauling large amounts of water to a fire scene to support firefighting operations. Brandy Station VFD, Richardsville VFDRS, Salem VFD, Little Fork VFRC, Rapidan VFD, and Reva VFRC all operate a tanker. Tankers generally range in size from 1,800 gallons to 3,500 gallons and may or may not be equipped with a fire pump. (All of the tankers operated in the Culpeper County are equipped with a fire pump.) Most tankers can only carry two personnel and the rigs are minimally equipped with firefighting tools and appliances. NFPA 1901 Standard for Automotive Fire Apparatus is the fire service industry standard for design and function of a tanker.

A “tower” is one of several types of fire department aerial devices used to provide access to structures over 35 feet in height and also used to provide elevated water streams for large-scale fire attack operations. Towers come in varying heights and are basically a very large extension ladder equipped with a work platform on the end. A tower may or may not be equipped with a fire pump and water tank. Besides the ladder and work platform, a tower is much like a huge toolbox carrying axes, saws, portable lighting, several smaller ground ladders, etc. A tower sometimes can carry upwards of eight personnel depending on department specifications. NFPA 1901 Standard for Automotive Fire Apparatus is the fire service industry standard for design and function of a tower.

A tower is one of the most expensive pieces of fire apparatus easily exceeding \$1 million new when fully outfitted with tools and equipment. There is only one tower in the County and it is operated by the Culpeper County VFD.

A “rescue” is also known in some locales as a “heavy rescue squad.” A rescue is often equipped much like a tower with the exception of having an aerial platform and ground ladder complement. In addition to the tools and equipment carried similar to the tower tool complement, a rescue will also carry specialized rescue equipment for handling a wide variety of rescue scenarios including vehicle extrication, machinery rescue, confined space rescue, and high-angle rescue. A rescue sometimes can carry upwards of eight personnel depending on department specifications. NFPA 1901 Standard for Automotive Fire Apparatus is the fire service industry standard for design and function of a heavy rescue squad.

Much like a tower, a rescue is also an expensive piece of fire apparatus—easily approaching \$750,000 (or more) when fully outfitted with tools and equipment. There are three rescues operated by departments in the County – Brandy Station VFD, Little Fork VFRC, and Reva VFRC.

A “brush truck” is normally a small, pick-up-style fire truck built for rugged off-road use fighting wildfires involving fields and woods. These brush trucks are most always four-wheel drive and carry a limited amount of water and a small fire pump. Most brush trucks carry no more than a crew of two personnel and basic tools and equipment to fight vegetation fires. In a rural county like the Culpeper, every fire station operates one—if not two—brush trucks due to the threat of wildfire. NFPA 1901 Standard for Automotive Fire Apparatus is the fire service industry standard for design and function of a brush truck (or initial attack vehicle).

A “service” vehicle is usually a smaller vehicle used primarily to provide additional staffing or equipment support at the scene of an emergency. These types of units often are a crew cab pick-up style vehicle outfitted with some type of compartment body to carry various tools and equipment. In some small communities, a fire department may use a service truck in lieu of an aerial device or heavy rescue squad to receive credit under the Insurance Service Office’s Fire Protection Rating Schedule.

A “utility” vehicle is generally an all-purpose emergency response vehicle that is used primarily to provide extra staffing on the emergency scene or to provide first-responder

EMS response. Utility vehicles generally carry a limited amount of fire and EMS equipment. A utility vehicle is often made available at the fire station for running errands (picking up supplies, repaired tools, etc.) or for students to drive to training courses. Utility vehicles are also used by some departments to tow “trailed” response equipment, such as boats and all-terrain vehicles.

A pick-up truck or an SUV is the most common type of vehicle used as a utility. Every fire station in the Culpeper County operates at least one utility vehicle.

An “ambulance” is a specialized vehicle designed to transport a sick or injured person to the hospital. When staffed with basic level emergency care providers (EMTs) the unit is usually called an ambulance. When staffed with advanced emergency care providers (paramedics) then that same vehicle is usually called a “medic unit.” Much like the engine being the workhorse of the fire department, the ambulance is the workhouse of EMS. A new, fully equipped medic unit can cost \$200,000.

The number of ambulances (and medic units) operated in a jurisdiction depends a lot on the population, land mass size, demand for service, and access to hospital facilities. In the Culpeper County, there are 16 ambulances (medics) operated by six different fire departments/agencies.

In the Culpeper County, a “response” unit is generally a pick-up or SUV type of unit outfitted with EMS equipment and used as a first-responder unit for EMS incidents. The response unit is much like a “utility”—it basically provides staffing and initial response equipment to handle EMS incidents until an ambulance or medic unit can arrive. Five departments/agencies operate response units in the County.

Both a utility and a response unit are a cost-effective approach to delivering staffing and initial response equipment to the emergency scene. These vehicles save wear on the much more expensive engines, towers, and rescues. The only real concern about a response or a utility unit is running it on an incident when an engine, tower, rescue, or ambulance really should have been the unit dispatched. Therefore, station personnel have to be disciplined enough to make the correct choice concerning incident types and apparatus response.

Six of the fire departments/agencies in the County operate at least one chief officer’s car. Often carrying the “Car” radio designation, these SUV or pick-up style vehicles are operated by the chief officers of the organizations, either on a full-time basis or on a Duty

Officer scheduled basis. The use of these types of vehicles is common in the volunteer fire service and is considered a “perk” by some chief officers as recognition for the amount of work and travel associated with the Chief position in the department.

In most cases, the chief officer cars are equipped with incident command related tools and equipment and serve as mobile command post at incident scenes. The cars allow the chief officers to respond directly to emergency incident scenes as well as attend non-emergency events such as meetings and training courses.

A “gator” is an all-terrain vehicle that is capable of more extreme off-road use than a brush truck or four-wheel-drive pick-up truck. A gator can be equipped to handle EMS incidents (patient stretcher) or it can be equipped to handle fields and woods fires (pump and water). The all-terrain vehicle has become increasingly popular in the rural areas because of its versatility and ruggedness. More and more rural fire and EMS agencies are acquiring these off-road units. In all cases, these vehicles are hauled by trailer to the incident scene – most often by a utility vehicle or response unit. Three fire departments in the County operate a gator.

Only one fire department in Culpeper County operates a boat. The Richardsville VFD operates a 16-ft Zodiac inflatable boat equipped with a 40 hp motor. The boat is used for rescue operations along the Rappahannock and Rapidan Rivers. The boat is hauled by trailer using one of the support units or the response unit.

Finally, one fire department (Salem VFD) operates a “canteen” unit. Purchased used from the Vienna (VA) VFD in Fairfax County, Canteen 8 provides food and drinks to emergency responders on the scene of working incidents. A fire service canteen unit is much like a current day “food truck” or lunch truck that has gained popularity in urban centers. A canteen vehicle generally carries supplies and simple kitchen equipment to prepare light snacks or meals as well as provide cold and hot drinks. Fire service canteen units are often staffed by auxiliary members or older members of a department who no longer engage in emergency response operations. A canteen unit is quite often a welcomed site on the scene of large emergencies, especially during times of inclement weather and long duration events.

CURRENT APPARATUS INVENTORIES

Figures 5.1 through 5.9 list the current apparatus inventories (as of June 17, 2015) of the nine fire/rescue/EMS departments/agencies in Culpeper County. Following each inventory listing is a discussion about the apparatus and apparatus-related items.

Valuation information about each vehicle was obtained from Armentrout Insurance Agency, Ltd., the insurance agent for the Culpeper County Volunteer Fire Rescue Association (CCVFRA). The valuation amount is based on current replacement costs for each vehicle.

Culpeper County Volunteer Fire Department

**Figure 5.1
CULPEPER COUNTY VFD APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Engine 1	Seagrave	1997	1,500 gpm	750 gal	35,108	3,729	New	\$100,000
Rescue Engine 1	KME	2007	1,750 gpm	500 gal	12,138	1,100	New	\$600,000
Pumper 1	Smeal	2005	1,750 gpm	750 gal	32,570	2,423	New	\$525,000
Tower 1	Crimson	2012			4,661	492	New/AFG	\$1,000,000
Brush 1	Ford/Skid	1975	250 gpm	250 gal	31,698		New	\$75,000
Car 1	Chevy Tahoe	2006			43,515		New	\$60,000
Command 1	Chevy Suburban	2015			674		New /Loeb Grant	\$60,000
Utility 1	Dodge Ram 2500	2014			10,478		New	\$60,000

The Culpeper County VFD operates a fleet of eight emergency response vehicles, none of which provide EMS response service. The single-station department is the only department that is located in a “town-like” setting with large structures and a municipal water system. The department operates the only aerial device in the County—Tower 1, a 100-ft Crimson aerial tower. The department provides vehicle extrication services using a rescue engine—Rescue Engine 1, a 2007 KME engine equipped with a variety of vehicle extrication and rescue equipment. The department is the only volunteer fire department in the County that does not operate a tanker.

The Study Team learned that Engine 1 (a 1997 Seagrave engine) is the next large piece of apparatus due for replacement. Engine 1 is in very good condition. Seagrave is a quality apparatus builder, the unit has low mileage, and the department has taken good care of the vehicle, therefore upon its disposal Engine 1 should be considered for use as a County-owned reserve engine. (More information on County-reserve apparatus is found later in this chapter.)

The remainder of the fleet is also in very good condition – with the exception of Brush 1, which is a 1975 brush truck. The 45-year-old vehicle does not meet current safety standards. While the vehicle appears mechanically and functionally sound, the Study Team recommends replacing the unit within the next 24 months with a newer model vehicle so that the crew is afforded the protection of modern vehicle safety systems.

Replacement/Purchase Process

According to Culpeper County VFD officials, the department has its own replacement plan that basically follows a 20-year replacement schedule for all large apparatus (engines and tower). In the case of the Culpeper County VFD, all of the current apparatus was purchased new.

When replacement time arrives, an apparatus committee is charged with designing apparatus specifications and soliciting apparatus manufacturers. The department's finance committee and board of directors review the proposed purchase and then department membership approves the purchase. The Study Team finds the department's replacement/purchase process typical for a volunteer fire department operation.

Financing

Perhaps the greatest struggle in a non-profit, volunteer-based system is the struggle to acquire funding for large purchases such as apparatus. With a new engine easily approaching \$600,000 in cost, fundraising efforts are critical. Unfortunately, more fundraising activities mean less time for training and more time burden on active members. That is why financial support from local government for apparatus purchases can be so important to the health of a small volunteer fire department.

All of the Culpeper County VFD's vehicles were purchased new using various combinations of cash, loans through local banks, local grants, and federal grants. Tower 1 and Command 1 were both purchased using grant funding. Tower 1 was purchased using a Federal Assistance to Firefighters Grant (AFG) and Command 1 was purchased through a Loeb Foundation grant, which is a local foundation based in Fauquier County.

Apparatus Maintenance

The Culpeper County VFD does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.). The Study Team learned that apparatus maintenance expenses are reimbursed through the CCVFRA's Budget and Finance Committee. Some of the individual departments do not have an operating budget for apparatus maintenance expenditures, instead they incur the expense and then submit it to the CCVFRA for expense reimbursement. The Study Team finds this process uncommon, as most fire departments establish an operating budget and then expend funds within the established budget guidelines.

Other than the unusual manner for expense reimbursement, the Study Team found no issues with the maintenance and repairs performed on the department's apparatus fleet.

Hose, Ladder, and Pump Testing

The annual service testing of fire hose, fire pumps, and aerial ladder devices is important because this testing is the recommended practice in fire service industry standards (NFPA) and is needed in order to achieve a good ISO rating.

The Study Team learned that hose, pump, and ladder testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The use of a vendor for this type of annual testing work is becoming more commonplace in the volunteer fire service because it reduces the time burden placed on volunteer personnel for non-emergency response activities. The Study Team found no issues with the annual testing of fire, fire pumps, and aerial ladder devices at this department.

Brandy Station Volunteer Fire Department

**Figure 5.2
BRANDY STATION VFD APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Engine 1202	Smeal	2008	2,000 gpm	1,000 gal	24,188	1456	Used	\$650,000
Wagon 1202	Pierce	1992	1,250 gpm	750 gal	56,441	3,365	New	\$600,000
Rescue 1202	SVI	2014	500 gpm	300 gal	4,578	201	New	\$646,326
Tanker 1202	S&S	1993	500 gpm	1,850 gal	40,324	3126	New	\$500,000
Brush 1202	GMC Chassis	1986	250 gpm	200 gal	25,024		New	\$125,000
Service 1202	Ford/LSI Rescue	1999			35,591		New	\$250,000
Response 1202	Chevy Tahoe	2004			56,601		Used	\$40,000
Car 1202	Ford Expedition	2000			69,032		Used	\$40,000
Utility 1202	Dodge Ram 2500	2006			42,004		New	\$75,000
Gator 1202	Kubota	2013	6 gpm	70 gal			New	

The Brandy Station VFD operates a fleet of ten emergency response vehicles, none of which provide EMS transport service. However, they do provide first-responder EMS service using light-duty vehicles (Response 1202). The department operates two engines (Engine 1202 and Wagon 1202) and provides vehicle extrication services using a heavy rescue squad – Rescue 1202. The rescue squad is a 2014 SVI rescue squad equipped with a variety of vehicle extrication and rescue equipment. The department also operates one small (<2,000 gallons) tanker.

With the exception of Brush 1202, a 1986 brush truck, the apparatus fleet is in good condition. The 29-year-old vehicle does not meet current safety standards. While the vehicle appears mechanically and functionally sound, the Study Team recommends replacing the unit within the next 24 months with a newer model vehicle so that the crew is afforded the protection of modern vehicle safety systems.

Replacement/Purchase Process

According to Brandy Station VFD officials, the department considers the CCVFRA’s Capital Improvement Forecast when replacing apparatus. In the case of the Brandy Station VFD, three vehicles in the current apparatus fleet were purchased “used” from other fire departments: Engine 1202, Response 1202, and Car 1202. In general, the Study Team is not in favor of purchasing used vehicles to serve as front-line response units. Used vehicles often come to the new owner with maintenance and repair issues that can include expired warranties and result in additional maintenance costs to the new owner.

The process for replacing apparatus at Brandy Station VFD is similar to the process at the Culpeper County VFD—an apparatus committee works on specifications and purchase recommendations, the board of directors reviews the process, and the general membership approves the purchase. The Study Team finds the department’s replacement/purchase process typical for a volunteer fire department operation.

Financing

All of the Brandy Station VFD’s vehicles were purchased using a combination of cash and loans through local banks. With the exception of Rescue 1202, all vehicle loans are paid off. Gator 1202 was purchased through a Loeb Foundation grant, which is a local foundation based in Fauquier County that provides financial support to local charitable organizations in the region. **The Brandy Station VFD should be commended for their pursuit of innovative funding sources for apparatus.**

Apparatus Maintenance

The Brandy Station VFD does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCVFRA for reimbursement. The Study Team found no issues with the maintenance and repairs performed on the department’s apparatus fleet.

Hose and Pump Testing

The Study Team learned that hose and pump testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The Study Team found no issues with the annual testing of fire hose or fire pumps at this department.

Richardsville Volunteer Fire Department & Rescue Squad

**Figure 5.3
RICHARDSVILLE VFD & RS APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Wagon 6	New Lexington	2004	1,750 gpm	750 gal	15,838	862	New	\$235,000
Tanker 6	New Lexington	1994	1,000 gpm	1,850 gal	17,976	1,194	New	\$150,000
Brush 6	Ford/CET Skid	2014	350 gpm	200 gal	3,109		New	\$70,000
Brush 6-1	GMC/Skid	1970	250 gpm	200 gal	36,095		Used	\$50,000
Ambulance 6-1	Ford/AEV	2002			47,948		New RSAF Grant	\$125,000
Ambulance 6-2	International/Road rescue	2015			4,216		New RSAF Grant	\$200,000
Response 6	Ford Expedition	2003			18,600		Used	\$19,000
Support 6	Ford 250 P/U	1994					Used	\$50,000
Support 6-1	Ford/Medic Master	1996			75,335		New	\$100,000
Gator 6	John Deere			50 gal			Used	
Boat 6	Zodiac (16ft)	2004						

The Richardsville VFD & RS operates a fleet of ten emergency response vehicles—two of which provide EMS transport service. The department operates one engine (Wagon 6) and provides vehicle extrication services using the same engine.

With the exception of Brush 6-1, a 1970 brush truck, the apparatus fleet is in good condition. The 45-year-old vehicle does not meet current safety standards. While the vehicle appears mechanically and functionally sound, the Study Team recommends replacing the unit within the next 24 months with a newer model vehicle so that the crew is afforded the protection of modern vehicle safety systems.

Replacement/Purchase Process

According to Richardsville VFD & RS officials, the department considers the CCVFRA’s Capital Improvement Forecast when replacing apparatus. In the case of the Richardsville VFD & RS, four vehicles in the current apparatus fleet were purchased “used” from other fire departments or automotive dealers: Brush 6-1, Response 6, Support 6, and Gator 6.

The process for replacing apparatus at Richlandville is quite similar to the process at the previous departments—an apparatus committee works on specifications and purchase recommendations and the board of directors reviews and approves the purchase.

Financing

All of the Richlandville's vehicles were purchased using a combination of cash, loans, and state grants. Both of the ambulances were acquired using support funding through the Virginia Rescue Squad Assistance Fund (RSAF) Grant Program. This grant program can be used for a variety of EMS equipment needs, including the purchase of vehicles. The grant is often awarded as an 80/20 grant where the State provides 80% funding and the EMS organization must provide the 20% matching funds. The RSAF grant program is an excellent means of financial support toward the purchase of EMS vehicles. It is this type of grant-funded support that really helps volunteer organizations operate vehicles that meet today's safety standards and response technology.

Apparatus Maintenance

The Richlandville VFD & RS does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCFVRA for reimbursement. The Study Team found no issues with the maintenance and repairs performed on the department's apparatus fleet.

Hose, Ladder, and Pump Testing

The Study Team learned that hose, ladder, and pump testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The Study Team found no issues with the annual testing of fire hose or fire pumps at this department.

Salem Volunteer Fire Department

Figure 5.4
SALEM VFD APPARATUS INVENTORY

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Engine 8	Pierce	1985	1,250 gpm	500 gal	132,400	981	Used	\$300,000
Wagon 8	Pierce	1995	1,250 gpm	1,000 gal	36,542	2,621	New	\$300,000
Pumper 8*	E-One	1987	1,250 gpm	750 gal	UNK	UNK	UNK	\$300,000
Tanker 8	Pierce	2001	750 gpm	2,100 gal	21,559	1,258	Used	\$250,000
Brush 8	Chevy/Skid	1984	250 gpm	300 gal	22,075		New	\$100,000
Rescue 8	Ford/Osage	2006			27,613		New	\$165,000
Support 8	Ford 350 P/U	2013			14,550		New	\$40,000
Canteen 8	Chevy 30 van	1977			23,987		Used	\$140,000

* Unit has been sold and not yet replaced.

The Salem VFD operates a fleet of eight emergency response vehicles, one of which provides EMS transport service and one of which provides canteen services. The department operates two engines (Engine 8 and Wagon 8) and provides vehicle extrication services using one of the engines.

During the Study Team’s site visit they learned that a third engine existed—Pumper 8—however, it was in the process of being sold and was no longer in service. According to the CCVFRA Capital Improvement Forecast document, Pumper 8 is slated to be replaced with Rescue Engine 8, although no time frame was provided in the document.

While the Salem apparatus fleet generally appears mechanically and functionally sound, the Study Team recommends replacing Engine 8 and Brush 8 in the near future because of their ages. Engine 8 is a 30-year-old engine that was purchased in 2013. Although it has a new motor in it, it is still a 30-year-old engine and should not be providing front-line service, if at all possible.

Likewise, Brush 8 is a 30-year-old vehicle and needs to be replaced due to its age. Apparatus safety features have improved so much over the last 10 years that operating 30-year-old units is not a “best” practice.

Replacement/Purchase Process

According to Salem VFD officials, the department considers the CCVFRA's Capital Improvement Forecast when replacing apparatus. In the case of the Salem VFD, three vehicles in the current apparatus fleet were purchased "used" from other fire departments: Engine 8, Tanker 8, and Canteen 8.

The process for replacing apparatus at Salem is quite similar to the process of the previous departments—an apparatus committee works on specifications and purchase recommendations, the board of directors reviews, and the membership votes and approves the purchase.

Financing

All of the Salem's vehicles were purchased using a combination of cash or low-interest loans. In the case of the tanker's purchase, a low interest Federal loan was used to finance the purchase of the used vehicle.

Apparatus Maintenance

The Salem VFD does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCVFRA for reimbursement. The Study Team found no significant issues with the maintenance and repairs performed on the department's apparatus fleet.

Hose, Ladder, and Pump Testing

The Study Team learned that hose, ladder, and pump testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The Study Team found no issues with the annual testing of fire hose or fire pumps at this department.

Little Fork Volunteer Fire & Rescue Company

**Figure 5.5
LITTLE FORK VFRC APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Engine 9	Pierce	1987	1,250 gpm	1,000 gal	97,858	7,876	Used	\$700,000
Rescue Engine 9	E-One	2000	1,500 gpm	600 gal	88,134	8,481	Used	\$700,000
Tanker 9	S&S	2005	1,250 gpm	3,500 gal	14,325	938	New AFG Grant	\$325,000
Rescue 9	E-One	1988			56,790	2,185	Used	\$300,000
Attack 9	Grumman	1983	250 gpm	300 gal	25,476		Used	\$100,000
Ambulance 9	Ford/Wheel Coach	2000			67,957		New RSAF Grant	\$200,000
Ambulance 9-1	Ford/Life Line	2009			28,389		New RSAF Grant	\$200,000
Ambulance 9-2	Ford	2002			43,350		Used	\$175,000
Chief 9	Ford F350 P/U	2015			13,930		New	\$72,000
Chief 9-1	Chevy Suburban	2003			123,553		Used	\$25,000
Utility 9	Ford	1999			130,000		Used	\$60,000
Utility 9-1	Ford	1998			143,374		Used	\$60,000
Gator 9		2003				166	New-Donation	

The Little Fork VFRC operates the largest apparatus fleet in the County with thirteen vehicles, eight of which were purchased used from other fire departments. Three of the vehicles provide EMS transport service. The department operates two engines—Engine 9 and Rescue Engine 9. Vehicle extrication services are provided using the rescue engine and a heavy rescue squad known as Rescue 9. The department also operates a Large Animal Rescue Team that is well equipped and well known for its rescue of large animals (horses, cattle, etc.) from precarious situations.

While Little Fork VFRC’s apparatus fleet generally appears mechanically and functionally sound, the Study Team recommends replacing Attack 9 (with a brush truck) in the near future because of its age. Attack 9 is a 32-year-old vehicle and should be replaced because of today’s improved safety standards and equipment technology.

The other concern of the Study Team is the lack of indoor storage space for the fleet. Currently, the heavy rescue squad is stored outside unprotected in the parking lot and one of the ambulances was stored the same way on the day of our site visit. Long-term outdoor storage of fire, rescue, and EMS units—with the exception of staff vehicles—is a

poor business practice that exposes the apparatus to increased maintenance costs and increased security threats.

Replacement/Purchase Process

According to Little Fork VFRC officials, the department considers the CCVFRA's Capital Improvement Forecast when replacing apparatus. In addition to operating the largest fleet of emergency apparatus in Culpeper County, Little Fork VFRC operates the largest fleet of vehicles that were purchased used.

The process for replacing apparatus at Little Fork VFRC is quite similar to the process at the previous departments—an apparatus committee works on specifications and purchase recommendations, the board of directors review the recommendations, and the membership votes and approves the purchase.

Financing

All of Little Fork VFRC's vehicles were purchased using a combination of cash, loans, or State and Federal grants. Two of Little Fork VFRC's ambulances were purchased using Virginia RSAF grants, and the tanker was purchased through a Federal Assistance to Firefighters Grant. As noted previously in this report, the use of these type of matching grants is an excellent way for small community volunteer fire departments to acquire new apparatus with reduced financial burden.

Apparatus Maintenance

Little Fork VFRC does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCVFRA for reimbursement. The Study Team found no significant issues with the maintenance and repairs performed on the department's apparatus fleet.

Hose, Ladder, and Pump Testing

The Study Team learned that hose, ladder, and pump testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The Study Team found no issues with the annual testing of fire hose or fire pumps at this department.

Rapidan Volunteer Fire Department

**Figure 5.6
RAPIDAN VFD APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Rescue Engine 10	Crimson	2006	1,500 gpm	750 gal	13,076	683	New	\$700,000
Pumper 10	Grumman	1983	1,000 gpm	500 gal	44,359		Used	\$450,000
Tanker 10	Pierce	1999	1,250 gpm	1,250 gal	33,812	1,764	New	\$450,000
Brush 10	Chevy/CET Skid	2006	250 gpm	200 gal	8,141		New	\$80,000
Support 10	Chevy 2500 P/U	2013			12,429		New	\$75,000
Car 10	Chevy Suburban	2004			UNK		Used	\$75,000

The Rapidan VFD operates a fleet of six emergency response vehicles, none of which provides EMS transport service. The department operates two engines (Rescue Engine 10 and Pumper 10) and provides vehicle extrication services using the rescue engine. Two of the department vehicles were purchased used.

While the Rapidan apparatus fleet appears mechanically and functionally sound, the Study Team recommends replacing Pumper 10 in the near future because of its age. The 32-year-old engine was purchased about 10 years ago from the Brandy Station VFD and although it still passes annual performance testing, much has changed in just the last 10 years regarding apparatus safety and technology advancements.

Replacement/Purchase Process

According to Rapidan VFD officials, the department tries to follow the CCVFRA’s Capital Improvement Forecast when replacing apparatus. The Study Team learned that the department is hoping to accelerate the replacement of the tanker, which may include the renaming of the current Tanker 10 to Engine 10 and the disposal of Pumper 10.

The process for replacing apparatus at Rapidan is similar to the process at the previous departments—an apparatus committee works on specifications and purchase recommendations, the board of directors reviews, and the membership votes and approves the purchase.

Financing

All of Rapidan’s vehicles were purchased using a combination of cash or low-interest USDA loans. None of the vehicles were purchased using grant funding.

Apparatus Maintenance

The Rapidan VFD does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCVFRA for reimbursement. The Study Team found no significant issues with the maintenance and repairs performed on the department’s apparatus fleet.

Hose, Ladder, and Pump Testing

The Study Team learned that hose, ladder, and pump testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The Study Team found no issues with the annual testing of fire hose or fire pumps at this department.

Culpeper County Volunteer Rescue Squad

**Figure 5.7
CULPEPER COUNTY VRS APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Ambulance 11-3	Ford/AEV	2012			13,863		New RSAF Grant	\$173,147
Ambulance 11-5	Ford/Wheeled Coach	2000			86,201		UNK	\$125,000
Ambulance 11-9	International/Braun	2006			55,868		New RSAF Grant	\$160,000
Response 11	Ford F250 P/U	2012			12,798		New	\$69,500
MCI 11	Haulmark Trailer	2002			NA			\$9,000

The Culpeper County VRS operates a fleet of five emergency response vehicles, three of which provide EMS transport service and one of which is a response support trailer for mass casualty incidents.

The Culpeper VRS apparatus fleet appears mechanically and functionally sound. The Study Team recommends replacing Ambulance 11-5 in the near future because of its age and mileage.

Replacement/Purchase Process

According to Culpeper County VRS officials, the department considers the CCVFRA's Capital Improvement Forecast when replacing apparatus. In the case of the rescue squad, none of the vehicles were purchased used.

The process for replacing apparatus at the Culpeper County VRS is quite similar to the process at the previous departments—an apparatus committee works on specifications and purchase recommendations, the board of directors review and the membership votes and approves the purchase.

Financing

Four of the rescue squad's vehicles were purchased using a combination of cash or Virginia RSAF grants. The Study Team was unable to determine how the purchase of Ambulance 11-5 was financed.

Apparatus Maintenance

The Culpeper County VRS does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCVFRA for reimbursement. The Study Team found no significant issues with the maintenance and repairs performed on the department's apparatus fleet.

Office of Emergency Services

**Figure 5.8
OFFICE OF EMERGENCY SERVICES APPARATUS INVENTORY**

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation*
Medic 12	International/Horton	2013/2007			41,913		Used	
Medic 12-1	International/Horton	2013/2007			43,991		Used	
Medic 12-2	International	2012			48,947		New	
Medic 12-3	Ford/Osage	2000			110,009		Used	
Medic 12-4	Ford/Horton	2001			90,082		Used	
Response 12	Chevy Tahoe	2011			28,968		New	
OES 1	Chevy Tahoe	2014			13,000		New	
OES 2	Ford Explorer	2007			87,165		New	
Training Coord	GMC Yukon	2000			92,498		Used	

**The Study Team was unable to obtain valuation data for OES vehicles.*

The Office of Emergency Services (OES) operates a fleet of nine emergency response vehicles, five of which provide EMS transport service. In addition to the transport units, the department operates a response unit and three staff cars. Two of the transport units (Medic 12 and Medic 12-1) were purchased used and had the patient transport “box” removed and placed on a new 2013 vehicle chassis. None of the purchases involved the use of grant funds.

The apparatus fleet generally appears mechanically and functionally sound. Medic 12-3 and Medic 12-4 are 15-years-old and 14-years-old respectively and are approaching time for replacement due to age and mileage.

Replacement/Purchase Process

According to OES officials, the department does not have a written, apparatus replacement plan and because OES is a County agency, they are not included in the CCVFRA Capital Improvement Forecast Plan. Any apparatus purchase must use the County’s procurement process.

Financing

All OES’ vehicles were purchased using cash— no financing or grant funding was used.

Apparatus Maintenance

OES does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) Apparatus maintenance expenses are paid through funds allocated in the annual budget process. No apparatus maintenance expenses are reimbursed through the CCVFRA.

Reva Volunteer Fire & Rescue Company

Figure 5.9
REVA VFRC FIRE AND EMS APPARATUS INVENTORY

Unit	Manufacturer	Year	Pump	Tank	Miles	Hours	Purchased	Valuation
Engine 16	S&S	2006	1,000 gpm	650 gal	9,499		New	\$350,000
Wagon 16	Pierce	2004	1,500 gpm	1,000 gal	20,444	1,300	New	\$450,000
Tanker 16	S&S	2001	1,250 gpm	3,000 gal	26,342	478	New	\$275,000
Brush 16	Ford 350 (Skid)	2004	250 gpm	250 gal	12,404		Used	\$60,000
Rescue 16	Pierce	1990			64,048	10,906	Used	\$16,000
Ambulance 16-3	Ford/AEV	1998			96,384		New RSAF Grant	\$150,000
Ambulance 16-4	International/Horton	2008			14,470		New RSAF Grant	\$178,000
Response 16	Ford 250 P/U	2011			17,776		New	\$4,500
Utility 16	GMC Yukon	2001			157,874		Donation	\$30,000
Car 16	Ford Explorer	2000			95,876		Used	\$25,000

The Reva VFRC operates a fleet of 10 emergency response vehicles, two of which provide EMS transport service. The department operates two engines (Engine 16 and Wagon 16) and provides vehicle extrication services using a heavy rescue squad—Rescue 16. Three of the department vehicles were purchased used and one was received as a donation.

The Reva apparatus fleet appears mechanically and functionally sound, and the Study Team learned that Ambulance 16-3 is the next vehicle in line to be replaced according to the CCVFRA Capital Improvement Forecast. The ambulance is 17-years-old and is approaching 100,000 miles.

Replacement/Purchase Process

According to Reva VFRC officials, the department tries to follow the CCVFRA's Capital Improvement Forecast when replacing apparatus. The process for replacing apparatus at Reva VFRC is also very similar to the process at the previous departments—an equipment committee works on specifications and purchase recommendations, the board of directors reviews and the membership votes and approves the purchase.

Financing

The department's two ambulances were both purchased using Virginia RSAF matching grants. Engine 16 was purchased through a Federal Assistance to Firefighters Grant, and the remaining vehicles were purchased using cash or loan.

Apparatus Maintenance

The Reva VFRC does not employ a mechanic or maintenance staff. All maintenance work done on the emergency vehicle response fleet is completed by regional service centers for large apparatus and local service vendors for the lighter vehicles (SUV, pick-up truck, etc.) The department submits apparatus maintenance expenses to the CCVFRA for reimbursement. The Study Team found no significant issues with the maintenance and repairs performed on the department's apparatus fleet.

Hose, Ladder, and Pump Testing

The Study Team learned that hose, ladder, and pump testing is handled by a third-party vendor and is completed in compliance with the recognized standards. The Study Team found no issues with the annual testing of fire hose or fire pumps at this department.

APPARATUS REPLACEMENT SCHEDULE AND PROCESS

To maximize firefighter capabilities and minimize risk of injuries, it is important that fire apparatus be equipped with the latest safety features and operating capabilities.

Significant progress has been made in upgrading functional capabilities and improving the safety features of fire apparatus in recent years. In Culpeper County, 25% of the emergency apparatus fleet is 15-years-old or older and 35% of the entire fleet is comprised of vehicles that were purchased used from another agency.

The current edition of the *NFPA Handbook* states “In general, a 10- to 15-year life expectancy is considered normal for first-line pumping engines. In some types of service, including areas of high fire frequency, a limit of only 10 years may be reasonable for first-line pumpers.”

While currently there appears to be no official apparatus replacement plan schedule or funding process, the CCVFRA does have a Capital Improvement Forecast document that most of the departments use in their planning process. The CCVFRA plan uses the following replacement cycle recommendations:

- Engine – 20 years
- Tower – 20 years
- Rescue – 20 years
- Tanker – 20 years
- Brush Truck – 12 years
- Ambulance – 12 years
- Response/Service/Utility/Staff Vehicles – 12 years.

The Study Team finds the current replacement plan (CCVFRA Capital Improvement Forecast) sufficient for the departments at this time; it presents a reasonable approach to the replacement of expensive assets that are critical to mission delivery. Regarding the CCVFRA Capital Improvement Forecast and apparatus replacement, the Study Team has several recommendations. First, this type of planning should continue because it allows for a long-term view of critical assets in terms of quantity and costs. Second, the planning process should move to incorporate a budget process instead of a forecast, and this budget process should move to include County funding support for the purchase of fire, rescue, and EMS apparatus. The Study Team believes that if the volunteer fire departments are going to continue to survive, then some relief is needed in terms of fundraising efforts for apparatus purchase.

The CCVFRA must work with the County to implement an apparatus purchase and replacement plan that addresses both the short-term (< 3 years) and the long-term needs of the departments serving the County. The CCVFRA’s Capital Improvement Forecast is an excellent starting point. The Study Team recommends that if County funding is used to support the purchase of apparatus, then mutually agreement upon controls should be enacted and they should be performance based. For example, if a department wishes to use County funding to purchase a second ambulance then that department must first be able to show adequate staffing and response of the first ambulance.

The CCVFRA must work with the County to develop baseline replacement-cost funding for all of the various apparatus breeds, and that funding must be established and distributed using the budgetary process. Much of the work is already completed now in the CCVFRA Capital Improvement Forecast document; the values just need to be agreed upon.

Using a budgeted replacement process, if a department wishes to purchase a new engine to replace an existing engine that is “up for replacement” and the new CCVFRA/County apparatus replacement plan allocates \$550,000 for an engine, then that is the amount of funds allocated to the department for its use. If the department wishes to purchase a new engine costing \$600,000, then they can do so using their own department funds to finance the difference.

The Study Team also recommends that the CCVFRA/County Apparatus Replacement Program include minimum design and equipment specifications for each breed of apparatus vehicle. Departments must meet these minimum specifications when planning the purchase of replacement vehicles if County funding is to be used.

Finally, the Study Team recommends that the CCVFRA/County Apparatus Replacement Program deter the purchase of used vehicles for any type of front-line emergency response service. All purchase of used vehicles should require additional scrutiny by the County and the CCVFRA and should only be considered in emergent situations, such as the sudden unexpected total loss of a critical vehicle.

Fleet Expansion

The expansion of the apparatus fleet will need to be discussed if additional stations are constructed as presented in Chapter 4 of this report. The Study Team recommends that the opening of any new station there should include the purchase of new apparatus for that station. While the Team recognizes that existing apparatus could be relocated, the better practice is to include funding for new apparatus in the funding process for the new station. If funding is earmarked far enough in advance, the acquisition of apparatus should not be a problem.

Reserve Apparatus

Currently, there is no “designated” reserve apparatus fleet in Culpeper County. Each individual department/agency operates several different types of apparatus and in most cases can handle coverage when one vehicle is placed out of service for repairs. As the move to more direct County-based funding and support in the apparatus replacement programs at the individual departments occurs, consideration should be given to the creation of a reserve apparatus fleet. This reserve fleet would be available for use by all nine departments/agencies in the County based upon need and basic loaner-use guidelines.

As noted earlier in this chapter, the Culpeper County VFD will soon be replacing Engine 1, a 1997 Seagrave engine. The engine is in good condition, and the Study Team feels that it would be a good (and easy) choice for the first County-owned reserve engine. The engine would not necessarily need to be fully equipped, although equipment such as hose, tools, ladders, and appliances would be helpful. One issue would be storage and maintenance of the engine, but that could be worked out with the CCVFRA using stations that have bay space.

The Study Team also recommends the creation of a reserve ambulance fleet comprised initially of one or two reserve ambulances available for use by any of the County departments/agencies in a manner similar to the reserve engine program. The reserve ambulances would not need to be fully stocked with EMS supplies, however, the units should have the basic equipment such as a cot, back boards, etc. Initially, two older units that are replaced in the departments could be moved to the reserve program, but in the long term, it would be best to purchase new ambulances for the program. In some locales, manufacturer demo units are purchased for use as reserve ambulances.

APPARATUS AND EQUIPMENT MAINTENANCE

A properly maintained and tested emergency response vehicle will provide the agency with a safe, ready-to-use vehicle with a minimum of unscheduled down time. Compliance with the NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*, will provide the department with a comprehensive emergency response vehicle maintenance, inspection, testing and replacement program.

The need to have fully-inspected, tested, and maintained emergency response vehicles (and equipment) is unprecedented. Nationally, recent emergency response vehicle accidents and lawsuits have brought to the forefront the need for a professionally maintained fleet. A poor preventative maintenance (PM) program, no PM program at all, and/or unqualified technicians is a recipe for disaster. Any of these issues may lead to unsafe vehicles, increased maintenance costs, and reduced apparatus lifespan.

Other than the unusual manner by which operating and maintenance expenses are reimbursed through the CCVFRA, the Study Team found no real deficiencies in the repair and maintenance of the current countywide apparatus fleet. As the future of fire, rescue, and EMS services develops and grows in the County, there may arise the need to develop County-funded service contracts with various preventive maintenance service providers. But until such time, the Study Team recommends the continued use of local and regional service centers for apparatus maintenance and repair.

Testing and Certifications

One of the important areas of apparatus and equipment preventive maintenance is the testing and certification of apparatus and equipment performance. Annual pump testing is perhaps the most common and well-known type of performance verification testing that occurs in the fire service, although there are others. Some performance testing results (pump test, aerial ladder test, and hose test) are used by the Insurance Services Office (ISO) in its rating of community fire protection services. Therefore, it is important for fire departments to comply with ISO requirements, whenever feasible.

The Study Team was pleased to find all departments participating in hose, pump, and ladder testing. These testing services were coordinated at the County level in cooperation with the CCVFRA, and they have a huge impact on improving compliance with applicable standards, while reducing the workload placed on volunteer personnel. The Study Team recommends the continued practice of scheduling and coordinating the annual hose, pump, and ladder testing at the County level.

SUMMARY

In summary, the nine departments/agencies that provide fire, rescue, and EMS services to the citizens of Culpeper County do so using a fleet of more than 75 emergency response vehicles. While there may appear to be some redundancy in vehicle types and uses, the

fleet does not seem askew for the services provided. The fleet is also well maintained given its size. The one troubling area is the continued purchase of used vehicles to serve as front-line response units. Hopefully, the use of used vehicles will soon be replaced by a cooperative County-CCVFRA program that allows for a well-organized approach to County-funded apparatus replacement purchases.

The financial support received through County government will be critical to the successful purchase and operation of emergency response apparatus. Appropriate controls will need to be put into place to ensure responsible use of those finances. The Study Team believes this can occur, for it occurs in many jurisdictions around the United States.

OPTIONS & RECOMMENDATIONS

- 5-1 The Culpeper County VFD should replace Brush 1 within the next 24 months due to its age and lack of current safety technology.
- 5-2 The Brandy Station VFD should replace Brush 1202 within the next 24 months due to its age and lack of current safety technology.
- 5-3 The CCVFRA should discontinue the practice of reimbursing for vehicle operating and maintenance expenses based on receipts and move to an annual operating expense budget requirement for each department, whereby the individual departments spend within their operating expense allocations.
- 5-4 Departments should stop purchasing used vehicles to serve as front-line emergency response apparatus.
- 5-5 The Richardsville VFRC should replace Brush 6-1 within the next 24 months due to its age and lack of current safety technology.
- 5-6 The Salem VFD should replace Engine 8 and Brush 8 within the next 24 months due to age and lack of current safety technology.
- 5-7 The Little Fork VFRC should replace Attack 9 within the next 24 months due to its age and lack of current safety technology.

- 5-8 The Rapidan VFD should replace Pumper 10 within the next 24 months due to its age and lack of current safety technology. Consideration should be given to renaming Tanker 10 as Engine 10 and purchasing a new tanker (2,500 gallons or larger).
- 5-9 The Culpeper County VRS should replace Ambulance 11-5 within the next 24 months due to its age and lack of current safety technology.
- 5-10 The County OES should replace Medic 12-3 and Medic 12-4 within the next 24 months due to age and lack of current safety technology.
- 5-11 The Reva VFRC should replace Ambulance 16-3 within the next 24 months due to its age and lack of current safety technology.
- 5-12 The CCVFRA and the County should take the current Capital Improvement Forecast program and continue that planning process and expand it as needed to create more uniform guidelines.
- 5-13 The CCVFRA and the County should move the Capital Improvement Forecast into an Apparatus Replacement Program that uses a recognized budget process and includes County funding.
- 5-14 The CCVFRA and the County should enact mutually agreed upon performance-based controls for the use of County funding in the Apparatus Replacement Program.
- 5-15 The CCVFRA must work with the County to develop baseline replacement cost funding for all of the various apparatus breeds and that funding must be established and distributed using the budgetary process.
- 5-16 The CCVFRA/County Apparatus Replacement Program should include minimum design and equipment specifications for each breed of apparatus vehicle. Departments must meet these minimum specifications when planning the purchase of replacement vehicles if County funding is to be used.
- 5-17 The CCVFRA/County Apparatus Replacement Program should deter the purchase of used vehicles for any type of front-line emergency response service. All pur-

chases of used vehicles should require additional scrutiny by the County and the CCVFRA and should only be considered in emergent situations such as the sudden unexpected total loss of a critical vehicle.

- 5-18 The County should include the purchase of new apparatus when planning for the construction of any new additional fire, rescue, or EMS station.
- 5-19 The County and the CCVFRA should implement a reserve apparatus program starting with a reserve engine and one or two reserve ambulances. These reserve units would be owned and maintained by the County and available for loan to all nine departments/agencies on an as need basis to provide coverage
- 5-20 The County and CCVFRA should consider the purchase of Culpeper County VFD's Engine 1 as the first engine in the reserve apparatus program.
- 5-21 Until such time that County service agreements are needed, the CCVFRA and the local departments should continue to use local and regional service centers for apparatus maintenance and repair.
- 5-22 The County and the CCVFRA should continue to fund, schedule, and coordinate the annual hose, pump, and ladder testing for all departments.

CHAPTER SIX FIRE AND RESCUE TRAINING

This chapter includes sections on training standards, regulations, programs, and certifications at the national, state, county, and local level, including the process by which fire and rescue training is conducted in Culpeper County and in the volunteer fire departments that serve the County. This chapter does not address EMS training, as that topic is covered in Chapter Seven – Emergency Medical Services

OVERVIEW OF FIRE SERVICE TRAINING

The main objectives of the fire service are to prevent injury and the loss of life and to protect property and the environment. Emergency response personnel providing these services must be fully qualified to safely and effectively perform a wide range of practical skills. These responders must have a broad knowledge base that allows them to adapt quickly to the many different scenarios faced by modern day emergency services providers. While “on-the-job” experiences are important for gaining knowledge, most knowledge and skills must first be obtained through some type of training program. In all fire departments, effective training is the key to safe and successful emergency operations and service delivery effectiveness.

Training in the fire service over the past 15 years has undergone many changes primarily because of the manner in which information is developed, exchanged, and updated in today’s technology environment. The fire, rescue and emergency medical situations that responders encounter are often more complex in the post-9/11 environment and, therefore, responders in all public safety agencies must prepare for more large-scale, catastrophic types of incidents in addition to the traditional fire, rescue, and EMS incidents of times past.

The past decade has seen society place more emphasis on environmental concerns that also pose a challenge to the emergency services and their approach to fire and hazardous situations. Personnel safety has become a primary concern, and technology has evolved to provide firefighters with more effective protective clothing and equipment. Fire service line-of-duty deaths are more closely analyzed than ever before and have resulted in new, safety-directed training standards and emergency scene operating guidelines.

Nationally, the rate of firefighter injuries and fatalities remains fairly high even with all the advances in technology; thus, the emphasis on firefighter safety and survival. Fire departments across the United States have worked on refocusing some of their training efforts to “saving their own” from life-threatening situations and on returning to the basics of fire fighting. Fire service professionals realize that a fire department’s commitment to training is an indicator of that department’s commitment to excellence—because the two values rely on each other.

Fire service personnel receive their training and education in many different ways and from many different sources. Traditionally, fire service training falls into one of three categories: training courses, company level drills (a.k.a. in-service training), and formal education classes. Training courses normally address three areas: new or entry-level employee training, skills maintenance training (refreshers and recertification), and career development training (promotion requirements).

Training courses are generally structured classes conducted by an individual skilled and certified in the adult education process. Training courses usually cover a specific subject area either in its entirety or in a sequential format (e.g., Fire Fighter I and Fire Fighter II). Examples of subjects that are covered in training courses for fire personnel include recruit firefighting, advanced firefighting courses, first responder and emergency medical technician courses, pump operations, aerial ladder operations, rescue techniques, hazardous materials, emergency vehicle driver training, company officer training, and incident command courses.

The reinforcement and maintenance of critical job skills and the updating of new information or practices usually occur through in-service training or company level drills. Company drills are planned practice sessions that are usually conducted by a company officer covering a specific topic or practice of a manipulative skill. Examples of company drills include the practice of hose layouts, ladder raises, and knot tying.

An aggressive, well-planned company drill training program is very important to department readiness. Because so much of a firefighter's job requires the use of manipulative skills, it is necessary to regularly reinforce those skills to ensure that they are performed effectively, efficiently and safely each and every time those skills are needed.

Formal education courses are generally the responsibility of community colleges and other institutions of higher learning. Formal education is traditionally focused at the collegiate level and involves academic subject areas. These academic courses are designed to assist fire service personnel in performing their jobs, as well as providing career development in preparation for promotion.

Fire science and emergency medical services degree programs are now available from the associate's to the master's degree levels; there are even a few universities in the United States that have bestowed doctorate degrees in similar areas of study. In the Culpeper, Virginia, region Germanna, J. Sargeant Reynolds, and Northern Virginia Community Colleges offer two-year, fire science degrees.

The current trend in many career fire departments is to require the successful completion of college-level coursework as pre-requisite training for promotion. Volunteer fire departments have traditionally lagged behind in the college requirement and recognition of collegiate level coursework for promotion. Nationally, most volunteer fire service chief officers are still elected into office by their department's membership.

NATIONAL TRAINING STANDARDS AND PROGRAMS

Over the course of the last three decades, more and more demands have been placed on emergency responders to increase their level of service; this means that the level of training has had to increase as well. Movement began in the early 1970s to provide structure and organization to the fire service training process. Those efforts resulted in the development of nationally recognized standards to serve as the basis for fire service training programs.

National Professional Qualifications System

In 1972, the Joint Council of National Fire Service Organizations founded the National Professional Qualifications System in an effort to help guide the fire service toward training professionalism through training accreditation and certification. Certification arose over a concern that fire service training was becoming very imbalanced between various jurisdictions; almost to point of becoming inadequate in some instances. As a

result, a nine-member National Professional Qualifications Board (Pro Board) was established by the Joint Council to direct the new accreditation and registry system.

In order to develop a system of nationalized training for firefighters, the Pro Board requested that the National Fire Protection Association (NFPA) delegate to their technical committees the development of clear standards for use in the certification process. As these standards were developed, they were reviewed, edited, and updated by fire service professionals throughout the United States.

The new NFPA standards were adopted as the basis for the Pro Board certification program. Today, NFPA professional qualifications training standards are the foundation of most fire service training programs in North America and are recognized as the “standards of practice” in the fire/rescue training area.

As this push to develop professionalism in the fire service continued, a National Board on Fire Service Professional Qualifications was established in 1990 to accredit training organizations and to certify individuals meeting the NFPA training standards. Today, the National Board on Fire Service Professional Qualifications accredits agencies in 35 states—including Virginia.

Fire departments with a commitment to the national certification process gain the respect, reputation, and prestige associated with an organization dedicated to professionalism. It is generally recognized in the fire service that departments that teach and certify their personnel to the professional standards will no doubt become stronger entities both in their communities and among fellow departments.

National Fire Academy

In 1975, the National Fire Academy (NFA) was established in Emmitsburg, Maryland, as part of the United States Fire Administration (USFA) for the purpose of developing and delivering fire service training programs on a national basis. Much of the work done by the NFA has been in the areas of executive officer development, fire department operations planning and organizational management. Through its courses and programs, the NFA works to enhance the abilities of fire and emergency services and allied professionals to deal more effectively with fire and related emergencies — both natural and man-made.

The NFA’s delivery systems are diverse. Courses are delivered at the resident facility in Emmitsburg and throughout the nation in cooperation with state and local fire training organizations, colleges, and universities. In an effort to make training affordable, a travel expense and lodging stipend is made available to students attending resident NFA courses in Emmitsburg.

Currently, the NFA has a four-year program for the development of senior fire officers. The Executive Fire Officer (EFO) program consists of four, two-week resident programs: Executive Development, Executive Analysis of Community Risk Reduction, Executive Analysis of Fire Service Operations in Emergency Management, and Executive Leadership. Following each course, the EFO candidate must submit an original research paper before being allowed to take the next course. Upon completion of the four-year program, the EFO student is awarded the Executive Fire Officer Program certificate.

The NFA also offers courses at the college and university levels for staff and command officers, technical specialists, and executive fire officers. To reach the mass of the fire service population the NFA has developed a “train-the-trainer” program to “hand off” its training courses to state and local agencies.

STATE TRAINING PROGRAMS

Fire and emergency services training programs in Virginia are available through the Virginia Department of Fire Programs (DFP). DFP is the State’s comprehensive training and education system for fire and rescue services. Codified in Title 9.1 Chapter 2 of the Code of Virginia, the Department of Fire Programs plans, researches, develops and delivers various fire and rescue training programs throughout the State.

DFP offers a wide variety of training courses and seminars using a regional approach. The State is divided by DFP into seven regions (divisions) –Culpeper County is located in Division 2.

DFP is considered one of the top State-run fire/rescue training programs in the United States today. DFP’s programs and instructors are well-respected in the training field and the organization has often been considered a model system – especially in the area of Pro Board training and certifications.

In addition to the programs delivered by DFP, a number of Virginia counties operate their own training academies that are accredited through the State and can deliver their own certification-based training programs. In general, the counties that operate their own training academies also have a career firefighter contingent that drives the demand for local level training services. Prince William, Loudon, and Fairfax counties are examples of county-staffed and operated fire/rescue training academies that deliver DFP courses.

Virginia – National Pro Board Certifications

DFP supports and complies with the National Board on Fire Service Professional Qualifications (Pro Board) requirements. DFP has been an accredited Pro Board agency since 1982. The agency was re-accredited in 2013 at 26 different levels of professional qualifications certifications. According to DFP's 2014 Annual Report, over 6,700 certifications were issued in 2014 throughout the State.

Instructor Training

One of the most important components of any training program is instructor training and certification. In Virginia, DFP is the certifying agency when it comes to fire and rescue instructors. DFP requires that all of its instructors be certified in accordance with the national standards in order to instruct DFP programs. DFP uses a combination of full-time and part-time instructors to deliver its training programs. Several DFP part-time instructors reside in the Culpeper County and are members of the local volunteer fire departments.

The Study Team feels that the Virginia has a strong, state-level training and certification program that is well organized and operates with professionalism. Virginia is commended for its efforts in developing, implementing, and operating such a quality program.

CULPEPER COUNTY TRAINING

Fire and rescue training services in Culpeper County are delivered using a combination of different processes and training service providers. The County does not own or operate a fire/rescue training facility and is not in the “business” of conducting fire/rescue training courses using a training academy format. The County does employ a full-time Training

Coordinator who is responsible for coordinating the schedule and delivery of DFP courses in the County. The Training Coordinator reports to the Culpeper County Volunteer Fire Rescue Association and to the Director of the Office of Emergency Services.

For live fire training, students and instructors often travel to Orange, Fauquier, or Spotsylvania counties. These jurisdictions each operate a training structure (burn building) dedicated to live fire training. The Orange County facility appears to be the facility used most by the departments in Culpeper County.

This absence of a stronger training “function” at the county level is not uncommon for Virginia counties of similar size and make-up to Culpeper County. As discussed earlier in this chapter, DFP is the lead agency charged with the responsibility of providing fire and rescue training throughout the State for career and volunteer fire and rescue personnel. Culpeper County is part of DFP’s Division 2 (Clarke, Culpeper, Fauquier, Frederick, Madison, Orange, Page, Rappahannock, Rockingham, Shenandoah, Spotsylvania, Stafford, and Warren counties) and receives almost all of its fire and rescue training course services directly from the State institution.

The Study Team finds that the local volunteer fire departments’ dependence on DFP for their training needs is adequate and appropriate at the present time. The only matter of concern relating to the use of DFP for training course delivery is the lack of intermediate and advanced level training courses offered and delivered in the County. For example, a review of FY2013, FY2014, and FY2015 DFP course delivery and completion data for the Culpeper County (provided to the Study Team by the Training Coordinator) showed no delivery of any Fire Officer I or higher level course. Entry level training course (Firefighter I and II, Hazardous Materials Awareness and Operation, and Emergency Vehicle Operations) delivery and completion data appear to be on target for the size of the County’s fire/rescue service. It is course delivery at the intermediate and advanced levels that is lacking.

The concern over the limited delivery of intermediate and advanced level training programs in the County is that the service providers must travel to other jurisdictions to complete this training — or not complete the training at all. There will always be a need for more entry-level training programs than officer training programs simply because of the rank structure in the local fire departments and the number of folks serving in those

officer positions. However, delivering no training course programs at the officer level is problematic and does not promote professional growth of the officer corps. The DFP fire officer programs meet national standards and accreditations and the service providers in Culpeper County should take full advantage of what the State training agency has to provide.

Other than the limited offering of intermediate and advanced level training courses noted above, the Study Team finds the relationship between the volunteer fire departments, the Training Coordinator and DFP to be a stable one, and the Study Team recommends that the County and the individual departments continue to utilize DFP as the primary provider for their fire and rescue training needs.

Training Coordinator

Up until 2007, the Training Coordinator position was a “volunteer” position that reported to the CCVFRA. In 2007, the Training Coordinator position became a full-time County employee position under the Officer of Emergency Services. Today, the Training Coordinator is responsible for scheduling various DFP courses for the volunteer fire departments in the County, as well as assisting with other training needs as they arise throughout the year.

Regarding the Training Coordinator position, the Study Team found three areas of concern. First, during the course of this study, the person serving as the Training Coordinator retired from the position after serving in it for 20 years (volunteer and paid). Most of the work done by the Training Coordinator over the years involved fire and rescue training. The Training Coordinator has been involved some in basic level EMS training, but for the most part his workload has been focused on fire and rescue training related items.

The Study Team recommends that the Office of Emergency Services revise the Training Coordinator position description to require Virginia EMS Education Coordinator certification and assign the Training Coordinator the responsibility for overseeing all fire, rescue, and EMS training course scheduling and delivery throughout the County. This responsibility includes the creation and maintenance of a training record system that compiles course completion and certification records for all fire, rescue, and EMS service providers in the County.

Second, the Study Team recommends that the Training Coordinator position report only to the Director at the Office of Emergency Services. This does not mean that the Training Coordinator cannot interact with the CCVFRA or participate on CCVFRA committees or workgroups, but it does mean that the Training Coordinator takes direction from “one boss.” In the future, as the Office of Emergency Services expands in size and scope, the title of Training Coordinator should transition to Training Officer in order to align more with traditional fire and EMS service terminology.

Finally, the County rents office space for the Training Coordinator; this office space is located at the Salem VFD. The Study Team learned that the Training Coordinator’s previous office space was located in the Town of Culpeper and the space was not conducive as an effective work site. The Training Coordinator’s office was then relocated to the Salem fire station, which was sufficient for the previous Training Coordinator. However, the location of the Training Coordinator’s office should now be re-evaluated.

The Study Team recommends that Training Coordinator’s office be relocated to the Office of Emergency Services facility and all associated office technology be upgraded to facilitate the proposed creation and management of a County-based personnel training record system.

Training Officers

Each of the volunteer fire departments in the County has a member who serves as the department’s Training Officer. In most all cases, the Training Officer is a line officer (lieutenant, captain, or chief officer) in the department who is appointed to the Training Officer position by the Fire Chief. Few departments have the duties of the Training Officer outlined in any type of formal document (bylaw, policy, etc.)

In most all cases, the department Training Officer reports directly to the Fire Chief and is responsible for overseeing the department’s training activities. These activities typically include company level drills, training course scheduling, and training record management.

The Study Team found varying levels of training and experience among the departments’ Training Officers, although a number of them have some experience as fire service instructors and some serve as part-time instructors for DFP. The Study Team found no

issue with the current process by which department Training Officers are selected or appointed – the process is typical of most volunteer fire departments and appears to be working fine at this time.

Training Facility

Culpeper County does not own or operate a fire/rescue training facility. With the exception of Little Fork VFRC, every volunteer fire department in the County has the ability to host the basic DFP courses—meaning that they have training room or meeting room space where 15 to 20 students can sit to receive didactic instruction. As expected, not all of these training rooms meet today’s standards in terms of size, comfort, and technology support, but they can be used for small group instruction. Accommodations for some of the more complex practical skill applications are minimal (live fire training, aerial ladder work, etc). Departments needing access to a fire/rescue training practical skills facility often utilize training centers located in Fauquier, Orange, or Spotsylvania counties.

A number of jurisdictions in Virginia have found it convenient and cost effective to build and operate a training facility that supports the local fire, rescue, and EMS departments’ training needs in terms of classroom and practical skills space, such as Fauquier, Orange and Spotsylvania.

Another popular and cost-effective resource sharing trend involves the construction of a public safety training center that can be shared by local law enforcement and fire/rescue agencies. These types of shared-use training centers work well in volunteer fire service areas because law enforcement can use the facilities during the weekdays and fire/rescue can use the facilities at nights and on weekends when most volunteer members are available to attend training classes.

The Study Team believes there is no immediate need for the construction of a fire/rescue training facility in Culpeper County; the present demand does not justify the cost. However, given the expected growth of the County in terms of population and service delivery needs, the Study Team recommends that the County—in conjunction with the CCVFRA—evaluate the future training facility needs in terms of classrooms, practical skill space, and logistical support. The Study Team recommends that this evaluation be completed by FY2020 by which time there should be more clear direction as to the needs

of the County and its public safety providers. The Study Team recommends that the evaluation should consider a public safety training center complex shared between fire/rescue, EMS, and law enforcement agencies.

Because site selection and land acquisition are quite often the most complicated steps of a public safety training center project, the Study Team recommends that the County and the CCVFRA begin now to evaluate land parcels for such a project. The Study Team is not implying the immediate purchase of land for a training center, but is emphasizing the need to conduct a preliminary search of land parcels that “fit” the needs of a public safety training center complex (30 to 50 acres – preferably with public utilities).

The Study Team also recommends that the County and the CCVFRA work with the Virginia Fire Services Board and the respective Fire Service Grant program regarding the Burn Building Grant Program and the future construction of a public safety training center in the County.

Until such time that improvements are made to fire station training rooms, the Study Team recommends that the County and the CCVFRA work with Culpeper County Public Schools to establish a relationship whereby school facilities (specifically classrooms and auditoriums) can be used as needed to host fire, rescue, and EMS training courses and programs.

Training Standards

The Study Team believes that training standards and requirements are critical to the success of emergency scene operations when multiple response agencies are involved, such as is the case in Culpeper County. In terms of interoperability, minimum training standards allow for smoother integration of different departments on the emergency scene. Such standards can also “boost” public confidence in the fire/rescue/EMS system because standards ensure that operational leaders of the emergency services departments have met minimum training and experience requirements.

Unfortunately, a review of CCVFRA and local department documents produced few training standards and requirements for the volunteer fire departments in the County. The Study Team found limited training and certification requirements (above entry-level coursework) for most all of the line officer positions in the departments and most of the

line officers are still elected to their position by the department membership. In all cases, the qualification requirements for the officer positions resided in the department bylaws and in most cases, only the chief officers had duties and responsibilities identified.

The Study Team wishes to note that the lack of training and certification requirements for line officers is common in smaller, rural volunteer fire departments across the United States. The history of many rural fire departments goes back to a group of local folks who saw a need for a fire department (usually after a large loss fire), and they got together to create one. Over time, the members who were most active eventually became department officers with or without much formal training – mainly because such training was not accessible in those days in the rural areas. Absent a strong administrative membership, the department bylaws often became the authoritative document in the local volunteer fire department – and thus the requirements for officer positions still often live in those bylaws. The Study Team believes that as public safety services continue to move forward in the Culpeper County, it is time for a more organized approach to training and certification requirements for all officers.

Because of the expected growth of the County and the increased demand for emergency services, the Study Team is concerned that training standards vary between the individual volunteer fire departments. Because these departments routinely operate with each other and within each other's response areas, the Study Team suggests countywide training and certification standards are needed for the officer ranks. Using the concept of minimum training standards, the Study Team has several options and recommendations outlined for the future.

The Study Team feels it important to note that they are well aware of the concerns over the amount of training already needed in order to function in the existing system. However, the Study Team is a strong supporter of professional standards for all fire/rescue and EMS agencies, regardless of their career or volunteer affiliations.

The Study Team also understands that training standards cannot be “made overnight” without offering members a chance to comply, which means that the members must also have access to the training courses. Given the lack of officer-level training courses delivered in the County, the implementation of training standards must occur simultaneously with the increased delivery of intermediate and advanced level training courses. Therefore, the Study Team is proposing the officer training standards be

implemented using a phased-in approach. The first set of standards should have a sunset date of no more than three years from time of implementation. The second set of standards should go into effect on the sunset date of the first set of standards.

Officer Training Standards –Phase I (3 years)

The Study Team recommends the following Officer Training Standards—Phase I (minimum training and experience requirements) for all fire and rescue officers in the County of Culpeper:

Rank	Training Requirements	Experience Requirements
Chief	<ul style="list-style-type: none"> • Fire Officer I • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as a chief officer in a Culpeper County fire department
Assistant or Deputy Chief	<ul style="list-style-type: none"> • Fire Officer I • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as an operational officer in a Culpeper County fire department
Captain	<ul style="list-style-type: none"> • Fire Fighter II • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as a lieutenant in a Culpeper County fire department
Lieutenant	<ul style="list-style-type: none"> • Fire Fighter II • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	2 years experience as a Firefighter II in a Culpeper County fire department

The Phase I training standards can be met through the completion of DFP training programs or through Pro Board certification and reciprocity. The Phase I training standards expire three years from implementation, at which time Phase II training standards go into effect.

Officer Training Standards –Phase II (2 years)

The Study Team recommends the following Officer Training Standards—Phase II (minimum training and experience requirements) for all fire and rescue officers in the County of Culpeper:

Rank	Training Requirements	Experience Requirements
Chief	<ul style="list-style-type: none"> • Fire Officer II • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, ICS400, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as a chief officer in a Culpeper County fire department
Assistant or Deputy Chief	<ul style="list-style-type: none"> • Fire Officer II • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, ICS400, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as an operational officer in a Culpeper County fire department
Captain	<ul style="list-style-type: none"> • Fire Officer I • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as a lieutenant in a Culpeper County fire department
Lieutenant	<ul style="list-style-type: none"> • Fire Officer I • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	2 years’ experience as a Firefighter II in a Culpeper County fire department

The Phase II training standards can be met through the completion of DFP training programs or through Pro Board certification and reciprocity.

The Study Team’s recommended Officer Training Standards are considered basic level changes for a system such as Culpeper County, which is ready to “move to the next level.” The Study Team believes that all chief officers should be trained to at least the Fire Officer II level because of the expectations and complexity of the chief officer position in today’s all-hazards approach to the delivery of emergency services. The Study Team believes that all junior officers (captains and lieutenants) should be trained to at least the Fire Officer I standard for similar reasons.

Next to law enforcement, EMS is the most frequently delivered public safety service in Culpeper County, and the Study Team feels that the officers of the fire departments need to be trained and certified to at least the EMT-Basic (EMT-B) level. These officers lead their crews on emergency scenes and often must serve as incident commanders. Being trained and certified to the EMT-B level allows them to have a basic understanding of emergency medical care, while at the same time being able to direct subordinates effectively at EMS-related incidents.

In terms of hazardous materials training, the Study Team recommends Operations level training for all officers. Emergency incidents—fire, rescue, or EMS related—often involve the release or presence of hazardous materials and the Study Team recognizes the Operations level of training as the “standard of care” for emergency responders. The majority of fire/rescue personnel in the United States are trained to the Operations level of hazardous material response, and the Study Team finds that the present officer requirements in Culpeper County are deficient in this area.

In reference to the increase in incident command training (NIMS), the Study Team finds that the current officer training requirements fail to address the Federal government mandate that requires incident command training for all personnel. At a minimum, the Study Team recommends that all chiefs complete the NIMS ICS300 and ICS400 Courses—and the prerequisites—so that they can meet the Federal mandate and be able to integrate and be interoperable at the command level throughout Culpeper County and across county lines.

Finally, the Study Team's recommends the completion of the basic vehicle rescue and basic technical rescue training for all officers serving in departments that operate heavy rescue squads or deliver vehicle extrication services. The Study Team believes that this training is very important because the delivery of rescue services requires specialized knowledge and skills and by requiring this training of the officers, the departments will improve their level of professionalism and most likely their level of service delivery.

Because DFP provides all of the basic training course delivery for the County's volunteer fire departments, and because all of the basic DFP courses meet or exceed the national certification standards, the Study Team is not requiring Pro-Board certification for fire until such time that requisite courses for those certifications are readily available in the County. Otherwise, the candidate pool for officer ranks could be restricted officers. The Study Team recommends simple verification of course completion for compliance with the Officer Training Standards.

Training and Certification Standards Committee

As stated above, there are no current CCVFRA standards addressing officer training and experience requirements. In order to develop, implement, and enforce the proposed Officer Training Standards, the Study Team recommends the creation of a Training and Certification Committee under the CCVFRA. This committee would be responsible for all of the training and certification related standards and would report directly to the leadership of the CCVFRA and possess the ability to suspend a department officer from emergency scene operational authority if that department officer fails to meet the applicable training and certification standard.

The Study Team suggests a three-year phase-in plan for implementation of the proposed Officer Training Standards. In the first three years, all existing officers and personnel desiring to serve as officers must complete coursework to comply with the Phase I requirements. At the end of Phase I, all officers must comply with the Phase II training and experience requirements or have their emergency scene operational authority removed by the CCVFRA.

The Study Team believes that the practice of "grandfathering" existing officers to avoid additional training requirements should not be permitted. However, equivalency for "like" training should be permitted using the DFP equivalency and Pro Board process.

The Study Team also recommends that both now and in the future, all training standards developed by the Training and Certification Standards Committee be made applicable to all fire, rescue, and EMS providers in Culpeper County regardless of affiliation.

Firefighter Training

In the traditional fire department setting, firefighter training begins with the introduction of new personnel to the basics of fire and rescue operations through the recruit training process. Recruit training differs from state to state and from jurisdiction to jurisdiction depending on local standards and requirements. In most career fire/rescue systems, the recruit training process depends on the size of the department and the proximity to a formal training center.

In volunteer fire/rescue systems, new member (probationary) training can vary greatly based upon the department's rules and regulations, any county or state regulations, and the level of access to entry-level training programs. Some volunteer departments have stringent training requirements for new members; other departments may require little to no training.

As was the case with the officer training requirements, there are differences among all of the fire departments in the County in terms of how new members receive training and how they are "checked off" to ride emergency apparatus. Basically, all of the departments have some form of "check-off" program or packet that must be completed by the new members before they can be eligible for active member status. The problem is that each department's requirements vary some and, therefore, new members can receive different training depending upon which department they join.

The Study Team did find a "red hat, red helmet, or red stripe" program in place at all of the fire departments regarding the requirements for members who have not yet completed Fire Fighter I training to ride fire apparatus on emergency incidents. In simple terms, each department has a program that allows probationary members to ride fire apparatus in a non-minimum staffing position after completing some level of in-station training. The probationary members are issued protective clothing and some type of red helmet marking that indicates to personnel working the scene of an emergency incident that the member is not allowed to enter a burning structure or hazardous environment where breathing apparatus use would be needed.

In a volunteer service provider system there is some value to allowing probationary members to participate during emergency incidents as long as strict guidelines are in place and enforced and the probationary members are not permitted to count as minimum staffing. Because of the limited offerings of entry level training courses at the County level, a new member voted into membership in February may not be able to start a Fire Fighter I course until September and that course may not finish until December. With a “red helmet” program, a probationary member can begin riding emergency apparatus (hopefully with a preceptor) and can assist crews in a limited manor on the emergency scene while learning about the job of a firefighter and while keeping interest in the department.

The Study Team recommends that the Training and Certification Standards Committee (CCVFRA) immediately develop and implement a minimum training standards policy/program that clearly identifies the training requirements for probationary (new) members and that apply the requirements equally and equitably to all departments in the County. At a minimum, these standards must address the training requirements needed to ride on emergency apparatus as a crew assistant and as part of the minimum staffing crew.

The Study Team recognizes that one of the biggest difficulties in volunteer fire, rescue, and EMS departments is keeping the interest level up for new members. The first hurdle often faced in this process is, “What does a department do with a member that just got voted in but can’t complete Fire Fighter I training until next year?” The Study Team feels it is important to be able to allow that new member to ride on the apparatus in an “assistant” capacity until such time that formal coursework has been completed and the member can serve as minimum staffing. Thus, in the case of Culpeper County, the Study Team suggests that the CCVFRA’s Training and Certification Standards Committee establish minimum training standards for the positions of Crew Assistant and Minimum Staffing Crew Member to include:

- Firefighting/Rescue
 - Crew Assistant
 - Must complete training on the use of personnel protective equipment (PPE);
 - Must be trained to the Hazmat Awareness level;
 - Must be trained in CPR/AED; and
 - Must complete an orientation to the department’s equipment, apparatus, and standard operating procedures.

- Minimum Staffing Crew Member
 - Must have been trained to the Crew Assistant level;
 - Must be trained to the Fire Fighter I level; and
 - Must be trained to the Hazmat Operations Level.

Driver Training

Of all the services provided by a fire, rescue, or EMS department, only two positions really provide great exposure to liability: a provider of emergency medical care and the driver of an emergency vehicle. In both cases, training needs to be extensive, well documented, and recertified on a regular schedule.

As with all other aspects of training thus far discussed, driver training programs and procedures also vary among the seven volunteer fire departments. Although all departments had some form of driver “check-off” procedures, none were compliant with the requirements set forth in NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications.

The Study Team urges the CCVFRA Training and Certifications Standards Committee to develop and implement an emergency vehicle driver training and certification standard that is NFPA 1002 compliant and is applied equally and equitably to the individual fire departments. As with the Officer Training Standards discussed earlier in this chapter, the Emergency Vehicle Driver Standard should be phased in over a three- to five-year period to allow existing emergency vehicle drivers the opportunity to comply the new requirements.

Incident Command Training

Incident command training is critical to the success of incident management. If emergency responders expect to have positive outcomes at the incidents to which they respond, then those responders must be well-trained and well-versed in incident command. Fire department incident command has grown well past the days of the fire chief standing in the front yard of a burning home with nothing but his helmet and his portable radio in his hand. Today’s incidents can challenge even the most seasoned

incident commander and all incident commanders must be able to command and operate in an era of “inter-operability.”

Without training and certification in incident command, fire departments are exposing their organizations to great liability and the potential for disastrous outcomes. For nearly every firefighter line-of-duty death that has occurred on the fire ground over the last ten years in the United States, investigative findings have listed ineffective (or absent) incident command and poor crew accountability as common contributing factors to those deaths.

The Study Team did not learn of any State or local regulation requiring that fire service chief officers be trained in the practice of incident management (command). However, Presidential Directive 5 issued in February 2003 requires all emergency response agencies across the nation to be trained in and implement the National Incident Management System (NIMS) in order to be eligible to receive future federal funding for Homeland Security initiatives.

As described earlier in this chapter, there is a need for the development and implementation of officer training standards. The Study Team recommends that the CCVFRA immediately require all chief officers to complete the NIMS ICS 300 incident command training and all captains and lieutenants to complete the NIMS ICS 200 incident command training. The Study Team recommends that the CCVFRA establish a deadline of no longer than 18 months for all officers to comply with this mandate—at which time the Study Team recommends the removal of incident command authority from those officers who have not met the requirement.

The Study Team also recommends that the County and the CCVFRA examine the nationally recognized Blue Card Command Training Program and consider implementation of the command training program for all chief officers in the County. The Blue Card program helps prepare incident commanders to manage the “every day” type of incidents using fire department standard operating procedures and NIMS practices.

Skills Maintenance Training

One of the most important parts of a fire department training program is the continued maintenance of skills and knowledge. “In-service” training, as it is commonly called, generally covers a wide area of topics including such items as basic firefighting skills, emergency vehicle driving, and government mandated hazardous materials refresher training.

When developing a company drill training program, the Fire Suppression Rating Schedule used by the Insurance Services Office (ISO) should be considered. The Schedule is actually a manual that is used by ISO to review the firefighting capabilities of individual fire departments. One section of the Schedule reviews a fire department’s training functions and assigns points (credits) based upon certain training items. The following list shows examples of the training required by ISO for all fire department personnel for whom credit points are allotted:

- 16 hours of company-level training per member per month
- 12 hours of continuing education for officers per year
- 12 hours of driver/operator training per driver per year
- 6 hours of hazardous materials training per member per year

Each of the departments in the County has a designated drill night per month (or week) where members get together to participate in some type of organized training activity. As noted earlier in this chapter, all of the departments have a designated Training Officer who is most likely an officer in the department. These Training Officers may or may not have completed instructor training. In a few of the departments, the Training Officer seems to just be the coordinator of drills for the department and in a few other departments it seems that the Training Officer function is shared among a couple individuals.

A review of the drill topics and drill attendance records submitted to the Study Team finds that almost all of the departments appear to be engaged in regular department level training activities and that attendance varies, but is not unusual for these size volunteer organizations.

Drill Attendance

Through interviews, the Study Team noticed that it appears that department drill attendance requirements vary from department to department and that some topics were sometimes repeated in lieu of more complex activities. While these items could not be completely confirmed, the Study Team does believe that regular attendance at department level drills should be a requirement of maintaining active member status.

The Study Teams recommends that the CCVFRA establish a required, minimum attendance level for active members at company drill training sessions. This requirement should be applied equally and equitably to all departments. Should an active member fail to meet this minimum training standard, then that member should be placed in a “provisional” (non-minimum staffing) status until the training is completed.

Inter-Operability Training

In terms of multiple company operations and mutual aid inter-operability training, it was apparent to the Study Team that a limited number of these activities occur. The Study Team was pleased to find that Companies 1 and 2 (Culpeper County Volunteer Fire Department and the Brandy Station Volunteer Fire Department) are working to train together once a month. The goal of their ‘In Station Training Drills’ is to have members participate in a joint training drill the fourth Thursday night of each month.

The Study Team learned that on occasions, members from other fire departments in the County attend the Company 1 and 2 joint training drills. The Study Team applauds the efforts of the two departments and encourages more of this type of mutual aid training.

The Study Team also learned of organized, company-level training provide through the Office of Emergency Services. The joint training sessions are open to all of the departments in the County and are run one weeknight a month. The Study Team learned that attendance by non-OES personnel at these drills is very low.

The Study Team believes that multi-agency training events are important to the development of teamwork and to reinforce the concept of emergency scene discipline at the company level. The Study Team urges the CCVFRA to require the departments to host, deliver, and/or participate in meaningful, multi-department drills at least six times a

year and that these drills focus on the various emergency response activities that require multiple units to work together in order to mitigate an incident.

Training Certifications

The Study Team found that even though Virginia is a long-standing participant in the National Board on Fire Service Professional Qualifications program, the use of the program varies among the County's volunteer fire departments. It appears that some members do not apply for certifications even though they have completed the coursework needed for eligibility.

The Study Team is not overly concerned with the lack of Pro Board certifications among department members because almost all of the basic fire and rescue training courses delivered in the County are DFP courses that meet or exceed the national standards. In most every case, when a student completes a basic DFP course such as Fire Fighter I, Fire Fighter II, Fire Officer I, etc., they have met the national standard, and their course certificate is proof of their completion.

When a department member achieves a particular certification it certainly represents their commitment, dedication, and hard work in a particular area of study and practical skill. Because the Study Team believes in the professional standards certification process and because Virginia has one of the model certification systems in the nation, the Study Team suggests that professional certification be used in the recruitment and retention of volunteer fire, rescue, and EMS service providers in Culpeper County.

The Study Team recommends that the CCVFRA consider implementing some type of training certification award system that provides an award to the department members who pursue and attain Pro Board certification through completion of DFP training courses. The award system could use a sliding scale system to provide one-time financial awards (cash, gift cards, saving bonds, etc) to members meeting all of the training requirements for the various Pro Board certifications. At a minimum, the Study Team suggests that the following certifications be considered in the certification awards program:

- Fire Fighter I, II;
- Fire Officer I, II, III, and IV;
- Fire Apparatus Driver/Operator (FADO) Pump, and Aerial;

- Rescue Technician – Vehicle Rescue I/II;
- Rescue Technician – Machinery Rescue I/II
- Rescue Technician – Confined Space Rescue I/II;
- Rescue Technician – Trench Rescue I/II;
- Rescue Technician – Rope Rescue I/II;
- Fire Instructor I, II, and III.
- Public Fire Educator I/II

For EMS, the Study Team recommends a similar, training certification awards program for the BLS and ALS certifications obtained through the Virginia Office of Emergency Medical Services (VOEMS). Because the VOEMS certifications require a renewal process for each level of certification, the Study Team suggests that the program consider providing awards based upon the certification renewal process.

Training Records

Training records and documentation are vital in the delivery of emergency services for they are the means that provider qualifications are verified. The Study Team found that the keeping and maintenance of training records varied between all of the volunteer fire departments in the County. The Study Team also found that none of the fire department training records are kept electronically. This is not unusual – the Study Team has found similar situations before when multiple provider agencies exist in a single, governmental jurisdiction. However, this does not mean that the findings are acceptable.

Because all of the fire departments in the County are expected to work together in a “seamless” manner on emergency scenes, the standardization of training records and the process by which those records are stored and maintained is very important. As stated above, there currently is no standard use of a record-keeping system. The departments all have some form of “paper-based” training record system; there just is not a standard manner in which department level training records are created or stored.

The Study Team recommends that the County provide a training recordkeeping system for use by all of the fire departments. The system should be electronic based and should comply with NFPA 1401: Recommended Practice for Fire Service Training Reports and Records, 2012 Ed. The system should have data entry points at each fire/EMS station so that department Training Officers can enter and retrieve training data directly from the

system. The training data entry and recordkeeping program must be able to manage and support the following types of training-related information:

- The entry and retrieval of individual member training course completion documentation – and perhaps even the imaging (scanning) of training certificates;
- The entry and retrieval of individual member recertification documentation;
- The entry and retrieval of company drill attendance and topic documentation;
- The retrieval of individual member training records (training transcript); and
- The retrieval of training topics and hours of attendance data (e.g. 230 hrs of driver training in 2015).

Funding

The Study Team found no issues with the current process by which training courses are funded in the County. In FY2015, funding for training was budgeted at \$56,000 through the Office of Emergency Services. Those funds were used by the Training Coordinator to support the delivery of fire, rescue, and EMS training courses throughout the County. In FY2015, using the \$56,000 allotment, there were 17 fire/rescue/EMS courses delivered in the County – 5 of those courses were funded through DFP, 11 were funded using County training funds, and 1 was funded through a joint funding effort from both DFP and the County.

With the implementation of the officer and firefighter minimum training standards discussed earlier in this chapter, the funding process for DFP courses will need to be evaluated further so that the required courses in the minimum training standards can be delivered regardless of class enrollment size. Therefore, the Study Team recommends that CCVFRA and the Training Coordinator begin working immediately to develop a budget to support the implementation of the minimum training standards. During Phase I implementation of the Officer Training Standards, the Study Team recommends the guaranteed delivery of at least one Fire Officer I course, one Fire Fighter II course, and one Vehicle Rescue – Level I course per year in addition to the normal course offerings.

SUMMARY

The main objective of the fire service is to prevent injury and loss of life and to protect property and the environment. Training is a key element to successful emergency scene operations and organizational effectiveness. Training in the fire, rescue, and EMS disciplines is also a career-long venture starting with recruit and basic training programs and working up to more sophisticated, advanced training and participation in higher education opportunities. In between formal training programs and educational courses, there has to be ongoing reinforcement of knowledge and skills that applies to all ranks.

It is very apparent from speaking with the members and officers of the volunteer fire departments in Culpeper County that the organizations are committed to providing good service to their customers. It is also important for the organizations to remember that their own members and employees are customers as well. Like many other fire departments across the United States, there are training shortfalls in the County, but none so critical that they cannot be overcome in relatively short order and with everyone's cooperation.

OPTIONS AND RECOMMENDATIONS

- 6-1 The County and the individual volunteer fire departments that serve within it should continue to utilize DFP as the primary provider for their fire and rescue training needs.
- 6-2 The Office of Emergency Services should revise the Training Coordinator position description to require Virginia EMS Education Coordinator certification and assign the Training Coordinator the responsibility for overseeing all fire, rescue, and EMS training course scheduling and delivery throughout the County.
- 6-3 The Training Coordinator should report only to the Director at the Office of Emergency Services.
- 6-4 The title of Training Coordinator should be changed to Training Officer in order to align with more traditional fire service terminology.
- 6-5 The Training Coordinator's office should be relocated to the Office of Emergency Services facility and all associated office technology should be upgraded to

facilitate the proposed creation and management of a County-based personnel training record system.

- 6-6 The County, in conjunction with the CCFVRA, should evaluate the future training facility needs in terms of classroom and practical skill space and logistical support. This evaluation should be completed by FY2020. At which time there should be more clear direction as to the needs of the County and its public safety providers.

- 6-7 The County/CCVFRA’s fire/rescue training facility evaluation should consider a public safety training center complex shared between fire/rescue and law enforcement agencies.

- 6-8 The County and the CCFVRA should begin now to evaluate potential land parcels for a future public safety training complex.

- 6-9 The County and the CCFVRA should work with the Virginia Fire Services Board and the respective Fire Service Grant program regarding the Burn Building Grant Program and the future construction of a public safety training center in the County.

- 6-10 The County and the CCFVRA should work with Culpeper County Public Schools to establish a relationship whereby school facilities (specifically classrooms and auditoriums) can be used as needed to host fire, rescue, and EMS training courses and programs until such time that department training rooms are upgraded or a training center is constructed.

- 6-11 The CCFVRA Training and Standards Committee (new) should implement the following Officer Training Standards using a two-phase approach:

Officer Training Standards –Phase I (3 years)

Rank	Training Requirements	Experience Requirements
Chief	<ul style="list-style-type: none"> • Fire Officer I • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as a chief officer in a Culpeper County fire department

Assistant or Deputy Chief	<ul style="list-style-type: none"> • Fire Officer I • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as an operational officer in a Culpeper County fire department
Captain	<ul style="list-style-type: none"> • Fire Fighter II • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as a lieutenant in a Culpeper County fire department
Lieutenant	<ul style="list-style-type: none"> • Fire Fighter II • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	2 years' experience as a Firefighter II in a Culpeper County fire department

The Phase I training standards can be met through the completion of DFP training programs or through Pro Board certification and reciprocity. The Phase I training standards expire three years from implementation, at which time Phase II training standards go into effect.

Officer Training Standards –Phase II (2 years)

Rank	Training Requirements	Experience Requirements
Chief	<ul style="list-style-type: none"> • Fire Officer II • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, ICS400, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as a chief officer in a Culpeper County fire department

Assistant or Deputy Chief	<ul style="list-style-type: none"> • Fire Officer II • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, ICS400, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as an operational officer in a Culpeper County fire department
Captain	<ul style="list-style-type: none"> • Fire Officer I • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as a lieutenant in a Culpeper County fire department
Lieutenant	<ul style="list-style-type: none"> • Fire Officer I • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	2 years' experience as a Firefighter II in a Culpeper County fire department

The Phase II training standards can be met through the completion of DFP training programs or through Pro Board certification and reciprocity.

- 6-12 The CCVFRA should not require Pro-Board certification for fire officers or fire fighters until such time that requisite courses for those certifications are readily available in the County. Otherwise, the candidate pool for officer ranks could be restricted.

- 6-13 The CCVFRA should create a Training Standards and Certification Committee responsible for all of the training and certification related standards. The Committee should report directly to the leadership of the CCVFRA and possess the ability to suspend a department member from emergency scene operational authority if that department member fails to meet the applicable training and certification standard.

- 6-14 The CCVFRA and the newly created Training and Certification Standards Committee should develop a three-year phase-in plan for implementation of the

proposed Officer Training Standards. In the first three years, all existing officers and personnel desiring to serve as officers must complete coursework to comply with the Phase I requirements. At the end of Phase I, all officers must comply with the Phase II training and experience requirements or have their emergency scene operational authority removed by the CCVFRA.

- 6-15 The CCVFRA should not allow the practice of “grandfathering” existing officers to avoid additional training requirements. Equivalency for “like” training should be permitted using the DFP equivalency and Pro Board process.
- 6-16 Both now and in the future, all training standards developed by the Training and Certification Standards Committee should be made applicable to all fire, rescue, and EMS providers in the County of Culpeper regardless of affiliation.
- 6-17 The CCVFRA should immediately develop and implement a minimum training standards policy/program that clearly identifies the training requirements for probationary (new) members and that applies equally and equitably to all departments in the County. At a minimum, these standards must address the training requirements needed to ride on emergency apparatus as a crew assistant and as part of the minimum staffing crew.
- 6-18 The CCVFRA’s Training and Certifications Standards Committee should establish minimum training standards for the positions of Crew Assistant and Minimum Staffing Crew Member to include:
- Firefighting/Rescue
 - Crew Assistant
 - Must complete training on the use of personnel protective equipment (PPE);
 - Must be trained to the Hazmat Awareness level;
 - Must be trained in CPR/AED; and
 - Must complete an orientation to the department’s equipment, apparatus, and standard operating procedures.
 - Minimum Staffing Crew Member
 - Must have been trained to the Crew Assistant level;
 - Must be trained to the Fire Fighter I level; and
 - Must be trained to the Hazmat Operations Level.

- 6-19 The CCVFRA’s Training and Certifications Standards Committee should develop and implement an emergency vehicle driver training and certification standard that is NFPA 1002 compliant and that is applied equally and equitably to the individual fire departments. The Emergency Vehicle Driver Standard should be phased in over a three- to five-year period in order to allow existing emergency vehicle drivers the opportunity to comply with the new requirements.
- 6-20 The CCVFRA should immediately require all chief officers to complete the NIMS ICS 300 incident command training and all captains and lieutenants to complete the NIMS ICS 200 incident command training. The CCVFRA should establish a deadline of no longer than eighteen (18) months for all officers to comply with this mandate. At which time the CCVFRA should remove incident command authority from those officers who have not met the requirement.
- 6-21 The County and the CCVFRA should examine the nationally recognized Blue Card Command Training Program and consider implementation of the command training program for all chief officers in the County.
- 6-22 The CCVFRA should establish a required, minimum attendance level for active members at company drill training sessions. This requirement should be applied equally and equitably to all departments. Should an active member fail to meet this minimum training standard, then that member should be placed in a “provisional” (non-minimum staffing) status until the training is completed.
- 6-23 The CCVFRA should require the departments to host, deliver, and or participate in meaningful, multi-department drills at least six times a year and have those drills focus on the various emergency response activities that require multiple units to work together in order to mitigate an incident.
- 6-24 The CCVFRA should consider implementing some type of training certification award system that provides an award to the department members who pursue and attain Pro Board certification through completion of DFP training courses. At a minimum, the following certifications should be included in the certification awards program:
- Fire Fighter I, II
 - Fire Officer I, II, III, and IV

- Fire Apparatus Driver/Operator (FADO) Pump, and Aerial
- Rescue Technician – Vehicle Rescue I/II
- Rescue Technician – Machinery Rescue I/II
- Rescue Technician – Confined Space Rescue I/II
- Rescue Technician – Trench Rescue I/I
- Rescue Technician – Rope Rescue I/II
- Fire Instructor I, II, and III.
- Public Fire Educator I/II

6-25 The County should provide a training recordkeeping system for use by all of the fire departments. The system should be electronic based and should comply with NFPA 1401: Recommended Practice for Fire Service Training Reports and Records, 2012 Ed. The system should have data entry points at each fire/EMS station so that department Training Officers can enter and retrieve training data directly from the system. The training data entry and recordkeeping program must be able to manage and support the following types of training-related information:

- The entry and retrieval of individual member training course completion documentation – and perhaps even the imaging (scanning) of training certificates;
- The entry and retrieval of individual member recertification documentation;
- The entry and retrieval of company drill attendance and topic documentation;
- The retrieval of individual member training records (training transcript); and
- The retrieval of training topics and hours of attendance data (e.g., 230 hrs of driver training in 2015).

6-26 The CCVFRA and the Training Coordinator should begin work immediately to develop a budget to support the implementation of the minimum training standards. During Phase I implementation of the Officer Training Standards, the guaranteed delivery of the following courses should occur: at least one Fire Officer I course, one Fire Fighter II course, and one Vehicle Rescue – Level I course per year in addition to the normal course offerings.

CHAPTER SEVEN EMERGENCY MEDICAL SERVICES

This chapter includes an overview and history of emergency medical services (EMS) in the United States and the Commonwealth of Virginia. The primary goal of pre-hospital EMS is to deliver the appropriate service and care needed as rapidly as possible to affect a positive outcome. This chapter provides an assessment of EMS delivery in Culpeper County as it relates to the individual departments and the system's ability to respond to medical and trauma emergencies, EMS training, and recommendations for improvement and future direction.

OVERVIEW

In the United States, one of the most basic services that a local government must ensure that are made available to its citizens is the delivery of quality emergency medical care. The actual delivery of such care is only one component of a complete EMS system. In general, an EMS system is complex and consists of those organizations, resources and individuals from whom some action is required in order to ensure a timely and appropriate medical response to medical emergencies. The basic goal of an EMS system is to provide on-scene treatment and then transport patients to a definitive care medical facility in a timely manner so that the patients suffer no further harm from their ailments or injuries.

The responsibilities of an EMS system have expanded over the years to include prevention of medical and trauma emergencies through public education and preparedness and training in initial self-help. In the past, the primary role of pre-hospital EMS was to transport a patient to a health care facility, such as an emergency department or specialty care unit. However, today the focus is changing to treat and release or treat and refer to a provider or facility other than an emergency department. Pre-hospital EMS continues to evolve as the health care system in the country changes and community demographics change.

Traditionally, there are 13 recognized essential elements of the pre-hospital component of an EMS system:

1. Prevention and early recognition;
2. Bystander action and system access;

3. Call taking and dispatching function;
4. Telephone protocols and pre-arrival instructions;
5. First responder dispatch;
6. Ambulance dispatch;
7. First responder services;
8. Ambulance services—basic and advanced life support;
9. Direct on-line medical control;
10. Transport;
11. Receiving facility interface;
12. Off-line medical control; and
13. Record keeping and evaluation.

Emergency medical care can be delivered through a variety of methods, which include: contracting the service through a private ambulance company; delegating the service to a volunteer agency in the community; providing direct service through government employees; or any combination of the above.

As EMS in the United States has evolved, so have the different models or profiles of organizational structures for the delivery of the service. In the early 1980s, the United States Fire Administration published *Fire Service/EMS, A Program Management Guide*. This publication identified 28 different profiles for the delivery of EMS. Twenty-six of the profiles included participation of the fire department in some aspect of the pre-hospital EMS system. Each profile has its own particular strengths and weaknesses. The profiles, identified over 30 years ago, still accurately portray fire-service-based EMS today. The original profiles identified in the *Management Guide* are built around five primary variables:

1. Dual-role vs. cross-trained vs. “civilian” providers;
2. Career only vs. career and volunteer vs. volunteer-only organizations;
3. First responder vs. EMT vs. paramedic certifications;
4. Transporting units vs. non-transporting units; and
5. Engine or truck company first response vs. no engine or truck company first response.

These variables can be combined into 52 different methods of EMS delivery; it is most likely that every variable has been tried and is probably in service today somewhere in the United States. The variables also can be pieced together as necessary to meet the needs and resources of a particular community. Many jurisdictions have started out with

one profile and transitioned to another as their communities have changed and EMS systems have grown and resources shifted.

The combination of these variables can be classified into one of four main categories of pre-hospital emergency medical service delivery:

1. *Third-Party Service.* EMS services are delivered by a separate public safety agency that usually holds equal status with other agencies in the community, such as the fire department and police department. Career, volunteer, or a combination of career and volunteer personnel may provide these third-party services.
2. *Hospital-based Service.* EMS services are delivered from a medical facility, normally a local or regional hospital. Personnel delivering the services are usually hospital or health care system employees and hospital funding commonly supports the services.
3. *Private Service.* A privately owned company for a fee, on a for-profit basis, delivers EMS services. A local government would most likely enter into a written agreement with the private ambulance company identifying the level of services provided and cost of said services.
4. *Fire Department-based Service.* EMS services are delivered by fire department personnel (career, volunteer, or combination). Fire department personnel are trained as EMS care providers and are equipped to provide care and transport for sick and injured patients.

As mentioned, the majority of pre-hospital emergency care in the United States is provided by the fire service. In Culpeper County, EMS is provided by volunteer fire-rescue departments, volunteer rescue agencies and career EMS personnel employed by the Culpeper County government working together in an integrated system. There are several fire departments in Culpeper County, which do not provide direct EMS services, but respond on vehicular incidents and may be called upon to assist on medical calls.

HISTORY OF EMS

Modern EMS has only been in existence over the last 40 years. During the first half of the 20th century, many ambulance services were operated by community funeral homes. Not only were the hearses used to transport deceased persons to funeral homes, but they were also used to transport sick and injured persons to a hospital. In many cases, the funeral

home attendants had little first-aid training, and the funeral homes were simply in the ambulance business because their vehicles were large enough to carry long stretchers.

After World War II, a number of civilian rescue squads and ambulance services began to emerge in the United States. While well intentioned, often times the rescue personnel were untrained, poorly equipped, unorganized and unsophisticated, and the systems were unregulated. In addition, few training standards for personnel or programs were in existence.

In 1966, the National Academy of Science's National Research Council published a white paper that described the inadequacies in emergency health care. The paper was titled "Accidental Death and Disability: The Neglected Disease of Modern Society." It exposed the facts about a clear lack of a systems approach to EMS delivery. Also in 1966, the Highway Traffic Safety Act established the U.S. Department of Transportation and awarded that agency the authority and responsibility to improve EMS education, including the development and implementation of training standards. Since then the National Highway Transportation Safety Administration (NHTSA) has developed EMS training standards and educational curriculum guidelines through processes securing input from all agencies involved in the delivery of EMS.

As pre-hospital care started to become more sophisticated with the introduction of national standards for training of emergency medical technicians (EMT) and paramedics, fire department involvement in EMS grew throughout the United States. In 2014, it was estimated that more than 61% of all fire departments in the United States were involved in providing some level of emergency medical service.

In a review of statistics of fire departments that provided EMS services to their communities, at least 50% percent, and sometimes as high as 80% to 90% percent, of their total emergency incidents handled each year are EMS-related. For a fire department to deliver quality EMS service, local government officials, fire department leadership, and EMS care providers must all embrace the importance of the service and must all understand the demands that a quality EMS program places on departmental resources.

THE IDEAL CHAIN OF SURVIVAL EVENTS

In the "ideal" EMS system, the public is educated and aware of when it is appropriate call and activate the EMS system. They would also have taken training in what to do before

an ambulance arrives. When someone is threatened with a life-threatening medical emergency, such as a heart attack, he/she would first encounter a family member or bystander who is CPR trained and who also recognizes the signs and symptoms of the medical emergency. The bystander or family member would activate the local EMS system through a 911 call and would initiate basic first aid and CPR care, if indicated. If there were an automated external defibrillator (AED) available, the bystander or family member would have access and initiate its use in a cardiac arrest situation.

The emergency medical dispatch (EMD) trained 911 call taker or dispatcher would rapidly assess the situation and provide nationally recognized pre-arrival care instructions via telephone, while emergency responders were being dispatched. These pre-arrival instructions would continue until the arrival of the trained emergency responders at the emergency scene. The EMD uses a system of priority dispatching, which includes call screening so that the closest most appropriate emergency unit(s) is dispatched. Sometimes the closest unit is a piece of fire apparatus staffed with trained emergency care personnel.

Some 911 centers around the country have implemented nurse triage programs to offer an alternative for individuals who call with non-emergent health concerns. They are afforded the opportunity to speak to an emergency communications nurse who can assess their condition and offer alternative solutions for care and transport if it is determined that activation of the EMS system is not medically warranted.

In recent years new technology has made it possible to incorporate CPR-trained citizens into the chain of survival. A smart phone app called PulsePoint can connect this trained citizen with the victim of sudden cardiac arrest. The app, which is available for free from iTunes and Google Play, can be integrated into the 911 services in a jurisdiction. When the emergency dispatchers receive a call that someone is possibly experiencing a cardiac arrest, they activate an alert via the PulsePoint app to users at the same time they dispatch the appropriate emergency units. PulsePoint is one of several subscription services available to enhance the delivery of the emergency services to the victim's side.

The alert notifies the app user of emergencies in public places within a quarter mile of their location. They are directed to the patient's location and the nearest AED. They can administer a shock to the heart and hopefully convert the fatal heart rhythm to a rhythm compatible with life prior to arrival of paramedics. There are other similar programs like

AED Link being implemented in Louisville, KY, that provides for getting AEDs and help to victims of sudden death concurrent with ambulance dispatch.

With priority dispatch the closest first-due emergency unit capable of providing the care needed for the situation is dispatched. This could be a fire apparatus, basic life support unit, advanced life support unit or quick response vehicle (QRV) depending on the nature of the call and the system resources.

It is not unusual for citizens to question why fire apparatus is dispatched to medical calls especially when sent at the same time with a basic or advanced life support unit. Fire apparatus dispatch has been the “standard” in most EMS systems dating back to the late 1970s. Many dispatch protocols call for fire apparatus to be dispatched when the incident is:

- Determined to be potentially critical as determined by dispatch screening,
- When the fire unit is the closet emergency unit to an incident,
- When determined that additional personnel may be required for lifting or to expedite care and transport,
- Located in an area where an emergency care unit is not available, and
- When requested by the responding emergency care unit.

Staffing of emergency care units will vary according to the state licensing agency’s requirements for the number of basic life support (BLS) and advance life support (ALS) requirements. NFPA 1710, Standard on Fire Department Deployment and Operations, recognizes this and also provides direction for ALS response. The standard, in addition to American Heart Association recommendation, is that a minimum of two ALS responders and two BLS responders arrive on the scene within the response times established for ALS delivery (within 480 seconds [90% of the time] if BLS with AED arrives within 240 seconds).

The first emergency response personnel to arrive on the scene would be trained at least to the EMT-B (Basic) level and equipped with a first-aid bag, oxygen delivery equipment, and an AED. If the incident were a critical care situation, concurrently or within a few minutes trained paramedics would arrive with ALS equipment capable of providing cardiac monitoring, intravenous medication therapy, and advanced airway management techniques. Using standing medical protocols, the patient would receive a 12-lead electrocardiogram, lifesaving medications, and other cardiac therapies in order to diagnose and treat the medical emergency.

The patient would be stabilized, loaded into a transport unit, and begin a short trip to a definitive care facility capable of handling cardiac emergencies. While enroute to the care facility, if possible, the crew would consult via radio or telephone with emergency care physicians to obtain orders for further pre-hospital interventions. The patient would be transported to the closest hospital that could best manage the specific condition, such as heart attack, stroke or trauma. The patient would arrive at the care facility having received appropriate ALS care within the delivery time criteria established by the American Heart Association and other national specialty organizations.

The patient's care would be transferred to the emergency room staff and an accurate and clearly written or electronic transfer report would be provided. The patient care report should have captured the assessment and care provided by any and all providers on the scene. The transfer would be seamless and timely and the care providers would ready their equipment for the next response with minimal delay.

In the emergency department or back at their station, the care providers would finalize any reports and file them using a computer-based data collection system. If providers completed more than one patient care report there must be a mechanism to link the reports or consolidate information. The data would be used for billing, state reporting, and departmental analysis of service delivery, patient quality assurance and EMS system master planning—in addition to simply documenting the incident.

Finally, a quality assurance staff member, following Medical Director guidelines, would review the care provider's written report for accuracy and protocol compliance and then send a customer service survey to the patient within 30 days of the incident. Any variances in treatment from established protocols would be referred to the system Medical Director to determine remedial actions.

As stated previously, how all these system components arrive in the time required is really a complex process that varies from community to community throughout the United States. When multiple agencies are required to provide the system components listed above, inter-agency cooperation and coordination are paramount to successful patient outcome. Should one component fail, then the system fails to provide the best care.

The Seattle/King County EMS system is one of the most recognized, effective fire-based EMS programs in the United States. It has the best lifesaving rates among large

jurisdictions. It provides first responder services via BLS trained firefighter/EMTs and firefighter paramedic ALS units. *Success of the system is credited to the blended fire department/ambulance service, a strict policy of measuring the performance of the system, and strong leadership. It also has to be noted that the area has one of the strongest citizen CPR training programs in the country with a large percentage of the population being trained to implement lifesaving CPR in witnessed cardiac arrest situations.* Data showed that from 2001 through 2008 the survival from a witnessed cardiac arrest due to heart disease increased from 36% to 49%. The 2014 EMS Annual Report to the Seattle/King County Council reported that the cardiac arrest survival rate reached 62.3%. This is the highest “save” rate documented for pre-hospital EMS. Seattle/King County EMS system is a regional multijurisdictional program. What makes it distinctive from other systems is that it is (1) medically based, (2) regional, and (3) uses tiered out of hospital response.

It is obvious in review of the ideal EMS system that a number of resources are needed that may not be available in rural areas. Rural areas face challenges that more urban areas take for granted. There are greater distances to travel in responding to incident scenes and transporting to medical facilities; they experience fewer calls and, therefore, may not get to utilize their life-saving skills on a frequent basis; and they often lack the resources and funding required for their service and agency. Often times the people they serve have greater expectations than they are able to meet. This occurs often in growing rural communities; new residents expect an ambulance to arrive within the same short time as they did in the urban or suburban areas where they previously lived.

In a conference on EMS in Rural America held by state legislators in 2007, Dr. Michael Rotondo discussed that although 20% of the nation’s population lives in rural areas; the death rate from trauma in rural areas is almost 60%. Other facts presented at the conference were:

- The risk of a rural victim dying in a motor vehicle crash is 15 times higher in a rural area than urban area.
- Injury related deaths are 40% higher in rural communities than urban areas.
- 87% of rural pediatric trauma deaths did not survive to reach the hospital.

In discussions about EMS in rural areas, the focus has been primarily on motor vehicle crashes. Rural area populations are also confronted with the same medical and other type injuries that are experienced in urban and suburban areas. The influence of time on outcomes is the same for rural, urban and suburban area; in incidents like sudden cardiac

arrest and injuries with hemorrhagic bleeding, when emergency care is delayed outcomes are not as positive.

At the 2007 conference on rural EMS, it was felt that there are ways to improve rural EMS. Dr. Chris Tilden stated that the areas that need to be addressed are “the ‘three Rs’—(1) recruitment and retention, (2) reimbursement, and (3) restructuring of the EMS system.”

EMS IN VIRGINIA

Culpeper County is part of a very sophisticated statewide EMS system. The Virginia Office of Emergency Medical Services (OEMS) is designated by the Code of Virginia to license EMS agencies, certify providers and inspect and permit EMS vehicles. OEMS offers technical assistance and other resources that EMS agencies, leaders and localities need to support and provide EMS in their communities.

The OEMS website states that the “Office of Emergency Medical Services (OEMS) is responsible for planning and coordinating an effective and efficient statewide EMS system. Our programs and services are designed to assure quality pre-hospital patient care, from when the call is received by the 911 center to the delivery of the patient to the trauma center or hospital.”

Following a model implemented in many states, Virginia’s EMS system is divided into 11 geographical regions each with a Council. The councils are incorporated as non-profit, tax-exempt agencies and are an integral part of Virginia’s comprehensive EMS system. Culpeper County is a member of Rappahannock Emergency Medical Service, Inc. Its mission statement is:

“The Rappahannock Emergency Medical Services Council, Incorporated, exists to facilitate the development and continued operation of a high quality dedicated and coordinated emergency response and preparedness system for the Planning District 9 & 16 region.”

EMS Levels of Training and Certification in Virginia

The Commonwealth of Virginia implemented EMS training programs in 1971 when it recognized the first Emergency Medical Technician (EMT) course. Since then, the

Virginia's EMS agency has been progressive in the development of training programs, which are based on the Virginia EMS Education Standards derived from the National EMS Education Standards.

As is the case in most states, pre-hospital EMS in Virginia is divided into two levels of care: basic life support (BLS) and advanced life support (ALS).

The basic life support programs offered in Virginia include:

- Emergency Medical Responder/First Responder (EMR/FR)
- Emergency Medical Technician (EMT)

The advanced life support level courses include:

- EMT- Enhanced
- Intermediate
- Paramedic
- EMT Enhanced to Intermediate Bridge
- Intermediate to Paramedic Bridge
- Registered Nurse to Paramedic Bridge Program

In addition the state offers an EMS Coordinator program.

Basic Life Support Levels in Virginia

Emergency Medical Responder/First Responder — An individual trained to handle immediate life threats and injuries until more highly trained personnel are available. This training is a minimum of 63 hours for those who are likely to be the first medical personnel on the scene of an accident, fire or medical emergency. These are usually firefighters, police officers, school bus drivers and industrial workers.

Emergency Medical Technician (EMT) — An individual trained to function independently in a medical emergency. The EMT is capable of:

- Recognizing the nature and seriousness of the patient's condition or extent of injury to assess what treatment is needed.
- Administering appropriate emergency care to stabilize the patient's condition.
- Lifting, positioning and handling the patient in a way to minimize discomfort and further injury.

In Virginia, EMT training is a minimum of 144 classroom and skills instruction and 10 hours of clinical/field experience. Individuals certified as EMTs must recertify every four (4) years.

Advanced Life Support Levels in Virginia

EMT-Enhanced — These individuals take an additional 102 classroom and skills instruction and 48 hours of clinical rotation in order to perform more advanced skills. Certification is good for three years and individuals must be recertified based on successful completion of 36 hours of specified continuing education.

EMT – Intermediate — These individuals are trained to a mid-level of advanced life support. This advanced life support training enhances the individual’s ability to manage airways and ventilation, more advanced patient assessment and the ability to handle more acute medical and trauma situations. This training is an additional 272 hours of instruction plus 68 hours of clinical instruction and 10 hours of patient contact on an ALS unit. These individuals must recertify every three years by attaining 48 hours of specified continuing education.

Paramedic — Individuals taking this program can become certified at the highest level of pre-hospital advanced life support. They are provided instruction in pre-hospital environments, preparatory skills, airway management, advanced ventilation techniques, patient assessment, trauma care, medical patient treatment, obstetrical/ gynecological conditions, pediatric patients, neonatal care, psychiatric and behavioral emergencies, special conditions, and assessment based management. This training and education expands on the skills and subjects contained in the Enhanced and Intermediate courses with a minimum of 781 hours of instruction, 136 hours of which are extensive clinical rotations. Paramedics must recertify every 3 years based on completion of 72 hours of continuing education.

The Virginia EMS system also has programs to license EMS agencies; permit EMS vehicles; accredit EMS training and education programs; and addresses medical quality assurance and funding for EMS training, equipment and supplies and local agency support.

EMS IN CULPEPER COUNTY

Organizational Overview

The EMS system in Culpeper County is provided by a combination and integration of services. The providers include:

- Culpeper County Rescue Squad, Inc.
- Volunteer fire departments
 - Brandy Station Volunteer FD, Inc. – First responder service: Automatic External Defibrillators (AED) on all apparatus.
 - Little Fork Volunteer Fire and Rescue Company, Inc. – Operates ALS equipped and licensed BLS transport units. All other vehicles carry AEDs.
 - Reva Volunteer Fire & Rescue Company, Inc.- Ability to provide BLS and ALS
 - Richardsville Volunteer Fire Dept.- Offers both BLS and ALS services
 - Salem Volunteer Fire & Rescue Company, Inc. – BLS services
- Career service under the direction and supervision of the Culpeper County Office of Emergency Management Services.

Two volunteer fire departments in Culpeper County—Culpeper County Volunteer Fire Department, Inc., and Rapidan Volunteer Fire Department, Inc.—do not provide EMS response services. However, these companies do respond to vehicular collisions, fire suppression situations , and provide helicopter landing zone support.

EMS AGENCIES IN CULPEPER COUNTY

Culpeper County Volunteer Rescue Squad, Inc. (Company 11)

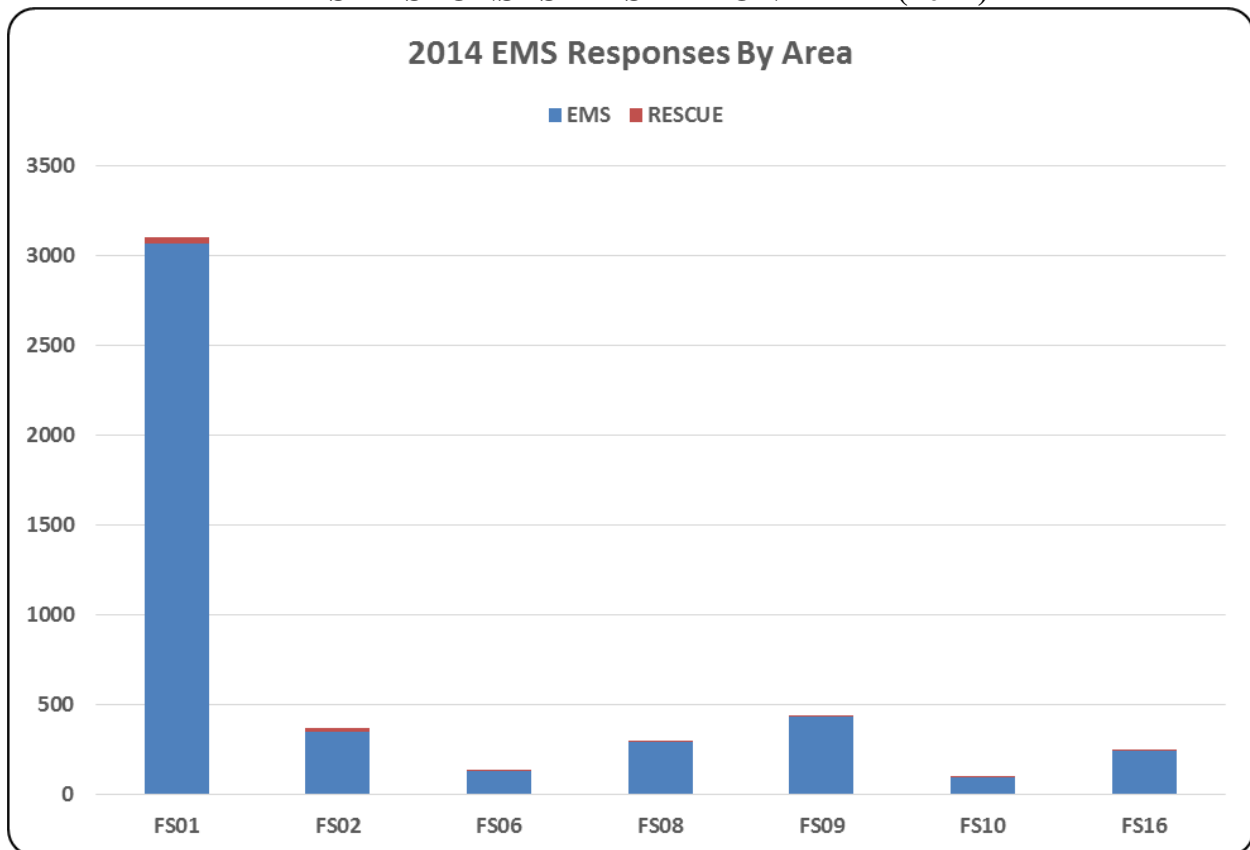
The Culpeper County Volunteer Rescue Squad (CCVRS) is the only volunteer agency in Culpeper County totally dedicated to providing emergency medical services. Founded in 1942, the CCVRS has grown and advanced in membership and the levels of service available from their members. While the CCVRS started out being housed with the Culpeper County Volunteer Fire Department, it now has its separate quarters at another site, but still within a location that provides for good response to the Town of Culpeper and its primary response area.

The CCVRS membership, which currently is approximately 23 members, consists of individuals with EMS training ranging from CPR (required for drivers), EMT-Enhanced, and EMT Intermediate to fully certified Paramedics. In addition to staffing ambulance/Medic units, the members of Company 11 staff a quick response vehicle and disaster response unit.

During interviews, members of the CCVRS discussed the challenge of staffing on a 24/7 basis. They are able to respond to approximately 60% to 70% of the calls they are dispatched. They cited that it is a partnership of the career and volunteers that ensure response to every incident in their area.

Figure 7-1 illustrates that the majority of EMS calls are received from the Town of Culpeper, which is served by the CCVRS.

Figure 7.1
EMS RESPONSES BY STATION AREA (2014)



Culpeper County Emergency Services (Company 12)

In the late 1990s as the population grew and the call volume for medical and trauma emergencies increased, it became apparent that there was a need for additional help to support EMS responses in a timely manner. A small full-time EMS staff was hired to support and supplement the response of the volunteer departments to EMS incidents. The full-time EMS providers were hired as employees under the direction and supervision of the Culpeper County Office of Emergency Management Services (OEMS). Initially the career firefighter/EMTs were assigned to a volunteer station during daytime hours when volunteers were at their day jobs and less available to respond.

The daytime EMS coverage worked very well, and it eventually became apparent that the same type of support was need around the clock. Additional positions were secured and funded in order to ensure reliable EMS coverage on a 24-hour basis.

Today the OEMS provides EMS coverage with trained and certified experienced staff in conjunction with all of the volunteer organizations in the County. As one of their senior staff said, they have a 382-square-mile response area. The career staff works a 42-hour work week schedule consisting of 24 hours on, 48 hours off, 24 hours on, 96 hours off.

With the number of career staff available, they are capable of staffing two ALS units along with a supervisor first response unit on a 24/7 basis. An EMS Lieutenant and four EMTs at the Intermediate or Paramedic levels staff each shift. There is an EMS Captain of Operations who works primarily daytime, weekdays. With countywide response, the career staff averages 10 to 12 calls per 24-hour shift with as many as 21 on busy shifts.

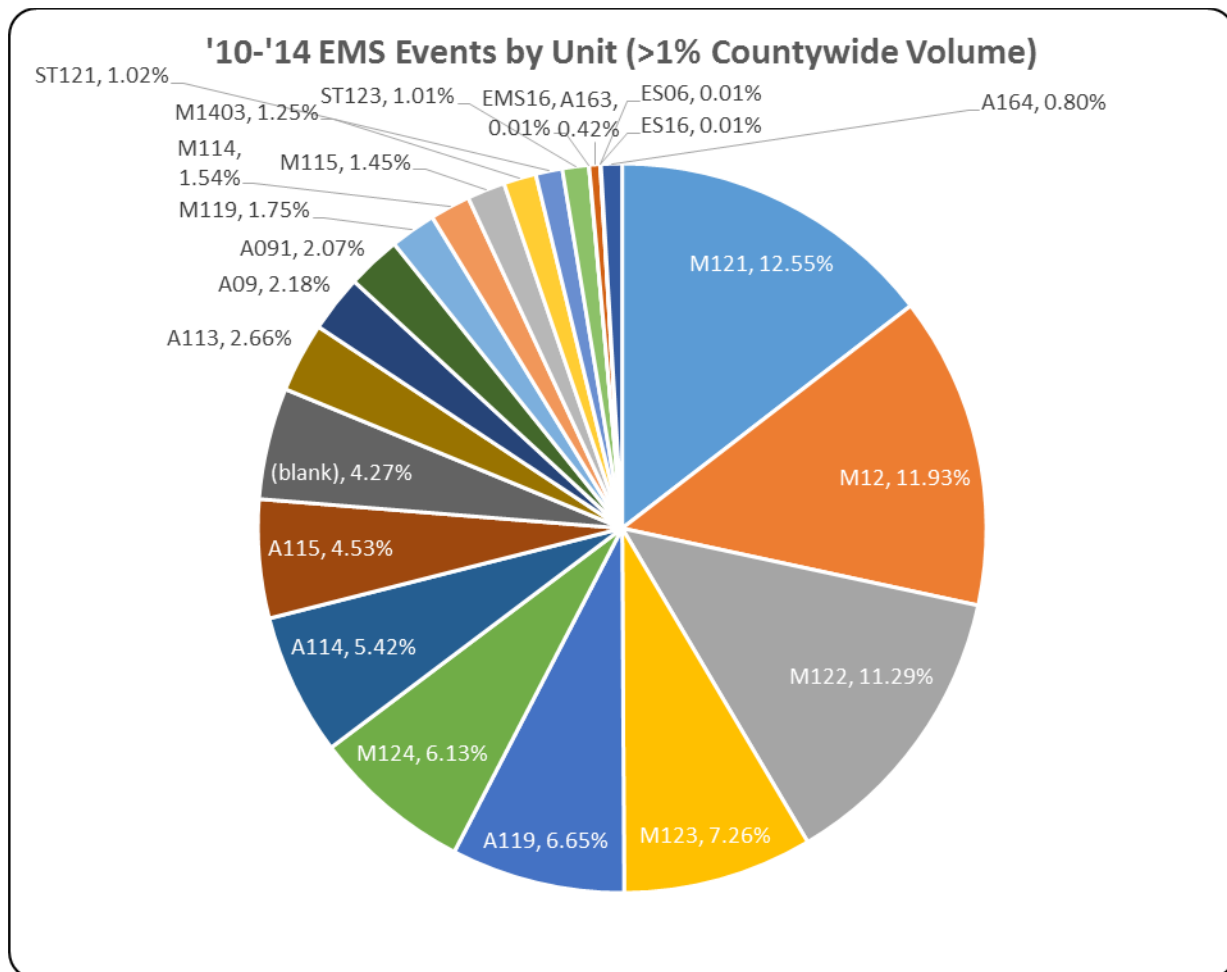
All career EMS staff are certified as Firefighter I and several to the Firefighter II level and Hazardous Materials Operation level.

The Study Team noted that career staff managers reported that they are starting to see turnover in the staff. When asked what the reason may be for the turnover, the Study Team was told that the salary was not competitive with neighboring jurisdictions and northern Virginia jurisdictions. The one main retention factor was the work schedule. The Study Team recommends that the Director of OEMS perform a salary survey to compare Culpeper County salaries with neighboring jurisdictions and northern VA jurisdictions. While it may be difficult financially for the County to make major increases in salaries, a plan should be developed to bring salaries up to a more competitive range. There is value

in maintaining skilled personnel and staff who work well with the volunteer component of the system.

In 2009, Company 12 moved into its own building and current quarters just behind the County dispatch center on Public Safety Court. From this location they respond to the entire County. It should be noted that approximately 70% of their calls are in the Town of Culpeper, so this location provides adequate response times for these incidents. Figure 7-2 illustrates that over 43% of the EMS incidents in Culpeper County get responses from Company 12 units.

Figure 7.2
EMS EVENTS BY UNIT (2010-2014)



COMPARISON OF EMS IN CULPEPER TO THE “IDEAL CHAIN OF SURVIVAL”

Public Education/Prevention Programs

Delivery of EMS in Culpeper County begins with the detection and recognition of the emergency situation by the victim or bystander. Throughout the nation, fire departments have been very effective in reducing the instances of fire through public fire safety education and fire prevention programs. Numerous fire and EMS departments have applied the same concept to health and wellness programs by being involved in injury and illness prevention in their communities. Injury and illness prevention is very important in all communities, but it is vital in areas where extended times exist for EMS response and patient transport. Examples of effective EMS public education/prevention programs include:

- Citizen cardiopulmonary resuscitation (CPR);
- Proper use of the 911 system – Making the Right Call;
- Prudent heart living;
- Child safety;
- Fall prevention
- Child passenger seat checks; and
- Support of public access automatic external defibrillators (AEDs).

The Study Team found no organized approach to EMS-related public education and injury prevention programs in Culpeper County. Several of the department representatives stated that they occasionally attend public events where they may be asked to provide education to a group, provide E-911 instructions to school children and may provide an EMS display at annual open houses. None of the departments stated that they provide CPR training. When queried as to why they do not provide or participate in more public education/prevention programs, the response was that the volunteers did not have time with all of their other responsibilities as volunteer EMS providers. The career staff has such a heavy response volume and no extra personnel assigned so they are not in a position to provide public education.

It is clear that there is no countywide organized effort to promote safe and healthy living by the fire and EMS service due to lack of resources. This does not make the need for prevention and public education any less important. It is a necessary component of providing EMS as part of a system. The long response times associated with covering a rural area increases the importance of residents of the community being able to provide

self-help until EMS can reach them or, even better, being able to have the knowledge of how to prevent injuries and medical emergencies (and prevent 911 calls). The Study Team recommends that the Culpeper County Volunteer Fire & Rescue Association (CCVFRA), EMS Committee, and the supervisors of the OEMS EMS staff seek partners in the community to develop and deliver citizen CPR classes, public education programs focused on injury prevention for all age groups, healthy living related to cardiovascular diseases (stroke, heart attack, etc.), and knowing when to call 911 versus when to see a primary care physician. These programs should be focused on the most rural parts of the county especially where rapid EMS services are unavailable, such as the Rapidan community.

In areas of the country that have embraced the concepts of injury prevention and health awareness, such programs are often included in school curriculums to afford maximum effect in the community. One such program is CPR. It is relatively easy to deliver and is an important program that can be inserted into a number of school curriculums. At present, CPR is not part of the curriculum in Culpeper County schools. Therefore, the Study Team recommends that CPR be a required coursework for all high school students in the Culpeper County school system and that the CCVFRA and County school board work together to implement this recommendation.

Over the last ten years, the EMS community – both public and private – has experienced the tremendous benefits associated with automatic external defibrillators (AEDs) used for the treatment of sudden cardiac death. The use of AEDs allows trained bystanders to administer electrical shock to dying hearts prior to the arrival of EMS providers. Since time is critical in the most severe situations of cardiac arrest, having AEDs available in public buildings can account for the saving of lives prior to the arrival of EMS units. The success of AEDs has been so great that public access to these devices has significantly increased. In fact, there are numerous locations now throughout Virginia where one can easily find public access AEDs – high schools, sports centers, airports, health clubs, shopping malls, and swim centers, to name a few.

In Culpeper County, the Study Team found AEDs are available throughout the County. Most fire apparatus and sheriffs' cars are equipped with AEDs. AEDs are found in schools and many public and private buildings throughout the County. Interviews with the EMS responders revealed limited knowledge of locations with public access to AEDs. In addition, there was limited knowledge of any effort to support a coordinated public-access AED program. Therefore, the Study Team recommends that the OEMS in

coordination with the CCVFRA develop and implement an aggressive, public access AED program that has a countywide focus and works with the local government and business interests to implement public access to AEDs throughout Culpeper County. The program (1) needs to inventory all AED stock and maintain the inventory in the Communication Center, (2) make sure the AEDs are being adequately maintained, (ensure that personnel at the AED sites are trained, and (4) the public is educated to look for AEDs in emergency situations.

In the long term, Culpeper County should look into programs that will alert citizens who are nearby when a serious situation occurs, especially a cardiac arrest. These programs inform the citizens who are enrolled in the program where the emergency is, as well as where the closest AED is located. This would be extremely helpful in the more rural areas of the county where ambulance/medic response times are long. Pulse Point is a very popular program being used in several parts of the country primarily in urban/suburban areas. The Study Teams recommends that the OEMS and the Communications Center research and review programs available since there will be more programs coming to the market and some may be better suited for a rural area. The incorporation of this type of program should be included in long-range planning for service improvement.

Handling the 911 Call

When a person dials 911 in Culpeper County, the call is answered at the Culpeper County Communication Center where it is processed by a trained Emergency Medical Dispatcher (EMD). In 2014, the Communication Center answered and managed 4,587 EMS-related calls.

In relation to EMS delivery, there are three important components to handling the 911 call: (1) process the call quickly, (2) dispatch the appropriate level of care (ALS v. BLS), and (3) provide pre-arrival instructions when life-threatening situations occur. In terms of call processing, the goal is to quickly identify the true life-threatening emergencies and process those calls as fast as possible, which is the purpose of having EMD certified dispatchers.

At the EOC, all 911 calls for EMS service are initially handled by a call taker who answers the 911 call and speaks to the calling party in order to triage the call by obtaining information needed to make the appropriate dispatch. The call taker obtains information and enters it into the computer-aided dispatch (CAD) system in order to further triage the

call by nature and priority. As this process takes place, the system will automatically forward appropriate incident information to a fire/EMS dispatcher if it is determined to be a high priority type call. At that point, while the call taker continues to gather additional information from the calling party, the fire/EMS dispatcher makes the initial dispatch of EMS units. At times these functions are performed by one individual handling both call taker and dispatcher functions.

The CAD system and the APCO Medical Priority Dispatch System (MPDS) protocols integrated in the CAD system provide guidance to the call taker on questions to ask and information to obtain from the calling party. If the type of situation requires medical pre-arrival instructions, the call taker provides that service to the calling party (CPR instructions for example). When all relevant incident information obtained from the calling party is entered into the CAD system, the call record is then forwarded to the fire/EMS dispatcher for handling, including updating responding units with further information as appropriate.

An important part of the 911 call handling and dispatch process is sending the appropriate level of care to the calling party. In Culpeper County, as in most all jurisdictions, there are two options of care level: ALS and BLS. The dispatch of ALS care produces the response of a medic unit, which is staffed by at least one ALS provider and an EMT-B driver. A medic unit is equipped to handle the most serious of medical and trauma-related emergencies in addition to being able to provide basic care if needed (BLS). The Study Team learned that some of the fire and EMS companies allow a medic unit to respond with an ALS provider and a First Responder driver or a driver with only CPR training. The Study Team does not support such staffing because an ALS call indicates the potential for life-threatening medical or trauma emergencies and, therefore, should have at the least an EMT-B serving in the support role to the ALS provider. Therefore, the Study Team recommends that the CCVFRA develop and implement an EMS unit staffing standard that establishes the minimum staffing for a medic unit as one ALS provider and one EMT-B provider (driver). *[Note: A First Responder can participate in the ALS treatment and transport process, but not as the second provider of a two-provider crew.]*

The dispatch of BLS care produces the response of an ambulance, which is staffed by at least one EMT-B and at least a First Responder driver. An ambulance is equipped to handle less serious medical and trauma-related emergencies.

Response Time

With the exception of getting the right level of care to the right patient, perhaps the most important part of any EMS system is response time. Even if the right level of provider with the right equipment responds, if he/she cannot arrive in a timely manner, then the best EMS delivery system will fail. American Heart Association and several standards-making bodies have established the following ALS delivery response time standard: arrival within 480 seconds (90% of the time) if BLS with AED arrives within 240 seconds. This standard addresses the most critical life threatening situations of sudden cardiac arrest.

The current dispatch parameters do not support the timely arrival of EMS on the scene in most situations. After a call is dispatched, the first-due unit, which is generally the closest unit to the incident, has eight minutes to respond before the next-due unit is dispatched. The eight-minute clock starts again. The “life-saving factor” in this situation is that the career unit is dispatched simultaneously with the first-due unit. This is helpful in reducing response times if the first-due unit does not get out, but it must be remembered that outside of their first-due area the travel response times can be lengthy—20 to 25 minutes. The Study Teams recommends that if personnel are not immediate available in the first-due station to respond that the second-due unit be dispatched within three minutes if a crew has not responded from the first-due station. The whole dispatch policy for EMS requires review and study for ways to reduce the times from dispatch until help arrives on the scene. Dispatch and response times should be reviewed semi-annually by the EMS Committee of the CCVFRA to determine if there are additional ways to reduce response times. This may include examining the availability of career staff when there are multiple calls and the future need for additional career staff.

Recently the CCVFRA purchased a web-based system, which saves critical time for fire, rescue and EMS departments when responding to emergencies. The software program provides for responders to simply touch one number on any phone once they have received a dispatch notification through the system. Their station, company chiefs and officers and the dispatch center can see who is responding at a given time. Representatives from the fire and EMS departments all expressed how helpful the system is in letting them know if and who is available to respond to a call. This system is also valuable to the Communication Center, which can send messages to field personnel, should there be a CAD failure. The CCVFRA is commended for securing this system for service improvement.

As noted, there are two fire departments that do not offer EMS response. There may be occasions where they have the closest units to an acute medical emergency, such as a cardiac arrest. This may especially be true in Rapidan where they do not staff an ambulance. There may be occasions in other areas when an ambulance is not available and fire apparatus is the closest unit to the emergency. It is vital in a cardiac arrest situation to get CPR initiated and apply defibrillation to a dying heart. Therefore, the Study Team recommends that all front-line fire apparatus be equipped with an AED and personnel trained to use it. When you consider that this equipment is available in public places and used by citizens and law enforcement, it only seems appropriate that fire emergency personnel have the same lifesaving capabilities. It is also recommended that dispatch protocols be revised to make sure that these units are dispatched when closest to a critical emergency, especially cardiac arrest.

If a fire department or rescue squad unit is the first on the scene, they will assess the patient and if the services of the career unit is not need they will be placed in service. The majority of the time in critical care incidents, they get to the scene and work with the first-due unit. Personnel on the scene will coordinate care and determine who will transport to the hospital.

Once the patient is stabilized, they are loaded into the transport unit to be transported to the closest hospital capable of managing his/her condition. In trauma situations, two medevac helicopter services are available. They are not automatically dispatched on trauma situations, but can be called by a responding unit or unit on the scene. Trauma patients can be flown to University of Virginia (UVA) in Charlottesville, Mary Washington Hospital or Fairfax Hospital. Patients that are transported via ground unit are generally transported to either Fauquier Hospital (primarily from the northern part of the county) or UVA Culpeper Hospital for patients from the southern part of the County. Since the largest number of calls are from the Town of Culpeper and surrounding area, the majority of transports are to UVA Culpeper Hospital.

Patient care is transferred to the emergency room staff and information is provided regarding on the scene and transit assessment and care. The EMS agencies in Culpeper County utilize an electronic reporting program and software called “Imagine Trend.” When the patient report is completed, it is sent to a printer at the emergency room of the hospital receiving the patient. The report gets uploaded through a Wi-Fi connection and

sent to the State office. This system allows the program manager to access data for reports and quality assurance review.

After complex or unusual incidents, the providers will review the call in the station. The career staff will often give feedback to units from other departments they responded with.

Provider Training

Initial, recertification and recurrent training for all EMS providers is an important component in any EMS system. Each individual department is being responsible for their own EMS training for their personnel in working with them to get into training programs, maintain their certification and provide ongoing emergency care training for skills. The CCVFRA has a Training Coordinator, but the Coordinator handles fire training. The County does employ a part-time EMT instructor for volunteer EMT training.

EMS personnel interviewed by the Study Team stated that, while there are sufficient training programs for EMTs, the issue is the failure rates with taking the National Registry Examination required for Virginia certification as EMTs. Individuals stated that candidates were passing the practical skills exam, but there is a high failure with the written exam that is administered electronically. Many of the candidates become hesitant to retake the test for certification. Company 11 has initiated an incentive program to encourage individuals to retake the examination.

Researched statistics show that in Virginia the NR EMT pass rate for the first testing is 65% and up to 75% within three attempts.

Medical Direction

The work of the EMS providers at the emergency scene falls under the auspices of the system's Medical Director, a position required by OEMS and coordinated through the Rappahannock EMS Council Region. The role of Medical Director is an important role in any EMS system. All EMS providers in a jurisdiction basically operate and perform their duties under the license of the Medical Director, thus the Medical Director must be carefully selected to ensure that the person chosen is engaged at all levels of EMS in the jurisdiction. Some jurisdictions have assistant or deputy medical directors to help provide oversight and direction to the EMS system.

Each department offering EMS response in Culpeper County has signed an “Operational Medical Director Agreement.” All of the departments, including the career department, with the exception of Little Fork VFRC, have Dr. Jordon Crovatin, who is associated with UVA Culpeper Hospital as its Medical Director. Dr. Jinks, Fauquier Hospital, Warrenton, serves as Medical Director for Little Fork VFRC. There was concern expressed by members of the CCFVRA regarding Little Fork VFRC having a Medical Director different from the rest of the departments. Since Little Fork VFRC ambulance transports primarily to Fauquier Hospital the Study Team recommends that the Little Fork Volunteer Fire & Rescue Company continue with this relationship.

EMS Billing

The OEMS career EMS program charges a fee for ambulance transportation. Information is gathered at the time of transport and passed onto the billing company. The contracted billing company seeks the reimbursements on behalf of the County. There is an approximate 65% recovery rate of the fees since their approach “soft” recovery; meaning that they do not pursue payment from uninsured or payment not fully covered by insurance. No one is ever denied service because of lack of insurance or inability to pay. No incidents have been reported where citizens failed to call for an ambulance because of their inability to pay.

Recently the Culpeper County Board of Supervisors passed a resolution to charge a fee for ambulance service provided by the volunteer departments. The volunteer departments reluctantly agreed to this process in order to obtain additional funding from the County. The leadership and members of the volunteer departments have not fully accepted the concept of charging for their services. This is not unusual in volunteer systems. The volunteers’ view is that they are providing their services for free, therefore, there should not be a charge for service being given to the citizens.

There is also an often unspoken fear that citizens will not donate to the volunteer agency, if there is a fee for their services. A more prevalent belief by County officials is that the only ones who benefit from no fees are the insurance companies, since most insurance includes premiums for ambulance and emergency care reimbursement. Medicare and Medicaid also have provisions for reimbursement of emergency services that jurisdiction throughout the country access.

In jurisdictions that have instituted a fee for ambulance, they have witnessed how a billing program can actually improve the level of emergency services by providing an additional revenue stream. In Culpeper County, the additional revenue is not being directly returned to the volunteer departments, but will enable the County to provide additional funding for the service.

There can be some concerns from the public with patient transport billing. While there has been a system of billing for the career EMS service, it has been mentioned that there may be some citizen concern or questions regarding the County billing for services provided by volunteers. Fortunately, most of those concerns can be resolved with good program oversight and education. The Study Team recommends that the County support the CCVFRA in providing education to the community regarding the expansion of the ambulance billing program. With the proper education, most citizens support the recovery of services they are paying their insurance companies to provide.

Quality Assurance

Another important part of an EMS system is the presence of a quality assurance program. A quality assurance (QA) program helps ensure that proper documentation has been completed, but even more important, that patient care was provided in accordance with medical protocols and procedures.

In Culpeper County each of the departments that provide ambulance service has assigned an individual to review the run reports to ensure compliance with the protocols. This individual also completes a quarterly report to the REMSC with the quality indicators that have been requested for the quarter. The Career Captain from OEMS also reviews all incident reports and meets monthly with the Medical Director prior to the monthly Medical Director Advisory Committee meeting.

Much of the quality assurance and improvement is done at the regional level. In response to the Virginia EMS Rules and Regulations, the Rappahannock EMS Council has developed and adopted a quality improvement system for all providers in its region. The system is composed of a Regional Performance Improvement Committee made up of provider representatives and the regional Medical Direction Committee. This process provides for collecting and monitoring regional reporting data from all EMS agencies on a quarterly basis.

Virginia does agency inspections in order for EMS vehicles to be certified. All EMS units in Culpeper County are inspected by the OEMS. During this inspection, compliance with EMS regulations, which requires quality management program and adherence, is reviewed. The Regional Council supports the individual departments if needed in meeting this requirement.

SUMMARY

The majority of pre-hospital emergency care in the United States is provided by the fire service. In Culpeper County, EMS is provided by volunteer fire-rescue departments, volunteer rescue agencies, and career EMS personnel employed by the County working together in an integrated system. There are two fire departments in Culpeper County that do not provide direct EMS services but do respond on vehicular incidents and may be called upon to assist on medical calls.

Culpeper Volunteer Rescue Squad is the only all-volunteer EMS agency in the county and handles the largest call volume of all the volunteer companies. Five of the volunteer fire departments also provide various levels of EMS. Since the early 1990s, a career staff supplements the services provided by the volunteers. Over the past few years, their call volume has increased, necessitating an increase in the career staffing. They currently maintain two ambulance/medic units in service 24/7. When staffing allows and the need arises they can also staff a quick response vehicle.

Because of the rural nature of the County and the long travel times associated with many of the EMS calls, public education, prevention and self-help programs are important to patient outcomes especially in critical situations. The County is in need of a planned collaborative effort to make these types of programs available to the citizens.

EMS training for certifications is much more intense, regulated and time consuming than fire training. This places a greater demand on volunteers desiring to serve their community by providing emergency care. The number of volunteers capable of devoting the amount of time needed for the training, certifications and retention of skills is slowly dwindling. The CCVFRA needs to work with the EMS component of the system to support EMTs and Paramedics, especially in the volunteer ranks, if the system is to continue meeting the needs of the County.

It was obvious when interviewing members of the EMS agencies in Culpeper County that they are very dedicated to providing the best emergency care possible with the resources they have. They are cognizant of EMS standards and various rules and regulations and strive to comply and adapt for their conditions in a rural community. While the volunteer providers work hard to meet the training requirements and provide the service, they are realistic and are open to help from the career service and regional programs in order to continue to serve the community. The Study Team was impressed by measures they developed to ensure they are able to provide care on a timely basis and that it is of the quality needed to support the patient's condition.

OPTIONS AND RECOMMENDATIONS

- 7-1 The Study Team recommends that the Director of OEMS perform a salary survey to compare Culpeper County salaries with neighboring jurisdictions and northern Virginia jurisdictions.
- 7-2 The Study Team recommends that the CCVFRA, EMS Committee and the supervisors of the OEMS EMS staff seek partners in the community to develop and deliver citizen CPR classes and public education programs focused on injury prevention for all age groups, healthy living related to cardiovascular diseases (stroke, heart attack, etc.), and knowing when to call 911 versus when to see a primary care physician.
- 7-3 The Study Team recommends that CPR training be required coursework for all high school students in the Culpeper County school system and that the CCVFRA and County school board work together to implement this recommendation.
- 7-4 The Study Team recommends that the OEMS in coordination with the CCVFRA develop and implement an aggressive public-access AED program that has a countywide focus and works with the local government and business interests to implement public access to AEDs throughout Culpeper County.
- 7-5 The Study Team recommends that all front-line fire apparatus be equipped with an AED and personnel be trained to use it. Considering that this equipment is available in public places and used by citizens and law enforcement, it only seems appropriate that fire emergency personnel have the same lifesaving capabilities.

- 7-6 The Study Team recommends that dispatch protocols be revised to make sure that AED-equipped fire units are dispatched when closest to a critical emergency, especially cardiac arrests along with the appropriate ambulance/medic unit when the fire unit is closest to the incident.
- 7-7 The Study Teams recommends that the OEMS and the Communications Center research and review programs available for notification of citizens of cardiac arrest situations since there will be more programs coming to the market and some may be better suited for a rural area than currently available systems. The incorporation of this type of program should be included in long-range planning for service improvement.
- 7-8 The CCVFRA must develop and implement an EMS unit staffing standard that establishes the minimum staffing for a medic unit as one ALS provider and one EMT-B provider (driver) with the role of a First Responder limited to a third or fourth care provider on the unit.
- 7-9 The Study Team recommends that if personnel are not immediately available in the first-due station to respond that the second due unit be dispatched within three minutes, if the first-due unit does not respond within that timeframe.
- 7-10 The Study Team recommends that dispatch and response times should be reviewed semi-annually by the EMS Committee of the CCVFRA to determine if there are additional ways to reduce response times. This may include examining the availability of career staff when there are multiple calls and recommending additional EMS career staff.
- 7-11 The Study Team recommends that the Little Fork Volunteer Fire & Rescue Company continue with its relationship with the Medical Director from Fauquier Hospital where they perform the majority of their transports.
- 7-12 The Study Team recommends that the County support the CCVFRA in providing education to the community regarding the expansion of the ambulance billing program.

CHAPTER EIGHT OPERATIONS AND STAFFING

This chapter includes a review of fire protection related water supply, pre-fire planning, the incident command system, and specialty operations services provided in Culpeper County by the fire and EMS companies, as well as staffing considerations. Information regarding the determination of fire apparatus, firefighter utilization on apparatus, and three primary staffing options is presented, along with potential determination of future career staffing needs and appropriate findings and recommendations

INTRODUCTION

Rapid decision making on the scene of a fire or rescue emergency is mission critical. Often, there is no time for deliberation or research. Decisions made at the emergency scene may be irreversible, and the consequences of error can be disastrous. Such errors can lead to further property loss, as well as injury or death to civilians and firefighters. As such, command and control, pre-incident planning, solid training and operating doctrines and progressive building and fire codes are essential in eliminating failure points. The combination of all of these elements is essential to fire officers who must make decisions based on limited and rapidly changing information.

The fact is all emergency situations are different. In fires involving structures, these differences include:

- The type of fire and its location in the building;
- The building type, its construction and the building code used;
- The interior contents and furnishings of the building;
- The presence of hazardous materials;
- The presence of built-in fire protection and life safety systems; and
- The time of day and weather conditions.

All fire officers and firefighters must be well trained and prepared in order to be successful in handling emergency incidents. If training and preparation is left up to “on-the-job experience,” the cost in property and life loss has the potential to be significant.

There are several key factors needed to ensure that emergency scene operations occur as efficiently, effectively and safely as possible. First, fire and rescue stations must be

sufficient in number and geographic distribution in order to allow for the timely arrival of emergency equipment. Second, emergency response apparatus must be adequately staffed to allow basic tasks to be completed in a timely and effective manner. Third, emergency responders must be properly trained and equipped to handle a wide variety of emergency incident scenarios. Finally, standardized operating procedures are needed to help guide emergency scene decision making in the deployment of basic levels of service.

THE FIRE PROBLEM

The term “working fire” is a common term used throughout the United States by fire service personnel to describe a structure fire where fire department resources are expected to engage in some type of fire attack operation in order to mitigate the incident. Unfortunately, there is no agreed upon standard definition of a “working fire;” the term varies from region to region and, therefore, fire incident data vary as well.

For the purpose of this report, the Study Team defines a “working fire” as any fire incident where fire department personnel must don their personal protective equipment (PPE) and deploy at least one hose line to control and extinguish a structure fire.

In the late 1960s, the fire department’s incident response mission began to change. Physicians recognized that the same positive results regarding trauma care on the battle field in Korea and Vietnam could be possible on the streets of the United States, but “forward” aid stations and rapidly deploying “medics” would be needed. Enter the fire service. Fire stations are routinely located throughout the community to ensure arrival at the scene of a fire during the incipient stages of a structure fire—before flashover occurs. Flashover, the near-simultaneous ignition of all of the directly exposed combustible material in an enclosed area, propels the fire beyond the resources of a single fire company.

Today, fire departments are “all-hazards” response agencies. This country’s domestic first responders are called upon to handle a wide variety of incidents ranging from all types of fires, public assists, heart attacks and car accidents to hazardous material incidents, highly technical rescues, natural disasters and terrorism. In fact, just as the case is in the Culpeper County, the fire and EMS organization has become the lead emergency management agency in most local communities. However, of all the incidents that fire

departments respond to, while less frequent, the working structure fire carries with it perhaps the greatest immediate threat to life and property.

The majority of incidents handled by today's fire departments are handled with one or two pieces of apparatus, and, with the exception of an emergency medical incident, these incidents are handled with a decreased level of urgency. A working structure fire on the other hand presents a series of urgent matters that must be quickly addressed by responding forces if lives and property are to be saved.

A structure fire requires the response of an adequate number of personnel and equipment; it requires quick and accurate decision making, and it requires discipline. Without any of those three key elements, the structure fire may very well be extinguished, but not without significant property loss and risk to the lives of emergency responders and civilians.

Therefore, the Study Team believes that a fire department, whether volunteer or career, must be sufficiently staffed, equipped, and prepared for the response to structure fires. Being ready for the structure fire response also ensures that the fire department's response readiness for all other call types is maintained in a high state of operational readiness.

NATIONAL FIRE PROBLEM

Fire continues to be a serious problem throughout the United States and has been for many years. In general, persons and communities of lower socioeconomic status generally tend to suffer greater occurrences of fire and its related losses. Thus, the workloads of fire departments are generally greater in the lower economic neighborhoods of the United States.

In 2013, the National Fire Protection Association reported:

- An estimated 1,240,000 fires resulted in 3,240 civilian fire fatalities, 15,925 civilian fire injuries and an estimated \$11.5 billion in direct property loss.
- One civilian fire death every 2 hours and 42 minutes and one civilian fire injury every 33 minutes.
- Ninety-seven firefighters died while on duty or of injuries incurred while on duty.
- Home fires caused 2,755, or 85%, of the civilian fire deaths.

- Fires accounted for 4% of the 31,644,500 total calls handled by municipal fire departments. Seven percent of the calls were false alarms; 68% of the calls were for aid, such as EMS.
- 487,500 structure fires accounted for only 4% of all calls; however, that 4% accounted for 39% of all reported fires AND the majority of losses.
- 487,500 reported structure fires caused 2,855 civilian fire deaths, 14,075 civilian fire injuries, and \$11.5 billion in direct property damage involving 86% of the civilian fire deaths, 88% of the civilian fire injuries, and 83% of the direct property loss.
- 13,000 structure fires occurred in high-rise buildings.

VIRGINIA FIRE PROBLEM

In 2014, the Virginia Department of Fire Programs reported:

- The total fire dollar loss associated with fires in Virginia in 2014 was **\$243 million**.
- One civilian was killed or injured by fire in Virginia every **17 hours** in 2014.
- **January** was the month with the most incidents, while **April** was the month with the largest number of fires.
- Fire departments in Virginia responded to an average of **2,287** incidents per day in 2014; one incident occurred every **38 seconds**.
- Rescue and EMS calls accounted for **71%** of the total incidents in Virginia in 2014; fires only made up **3%** of the calls.

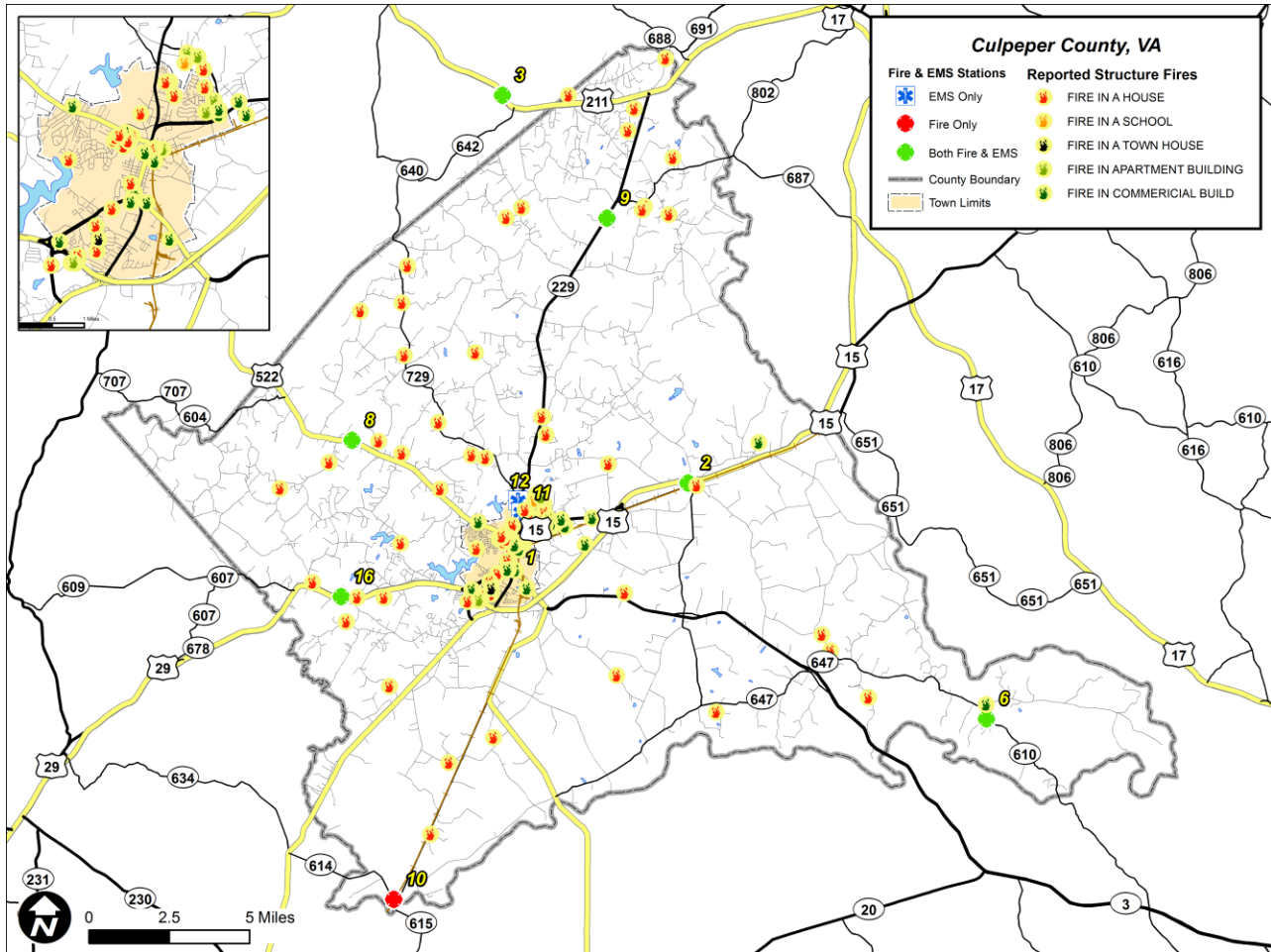
**Figure 8.1
VIRGINIA FIRE DATA & STATISTICS**

Incident Summary, Virginia, 2009-2014						
	2010	2011	2012	2013	2014*	2015**
Fires	28,235	25,929	25,169	22,589	23,235	9,294
Rescue and EMS	430,695	452,000	512,162	530,495	558,278	205,752
Other Calls	197,186	206,338	210,410	204,666	208,359	78,149
Total Incidents	656,116	684,267	747,741	757,750	789,872	293,195
Aid Given	38,244	42,167	44,033	43,041	44,348	17,564
Fire Exposures	447	370	360	349	362	141
Grand Total	694,807	726,804	792,134	801,140	834,582	310,900
Total Fire Dollar Loss	\$245,074,521	\$239,903,587	\$273,735,147	\$234,577,638	\$242,555,184	\$104,527,462
Civilian Fire Injuries	471	479	419	408	432	165
Civilian Fire Deaths	68	56	55	70	77	26
Fire Service Injuries	423	592	671	522	607	195
Fire Service Deaths	3	1	4	1	0	0

CULPEPER FIRE PROBLEM

Figure 8.2 pinpoints locations of structural fires over the last data year in the Culpeper County. As may be seen, the majority of building fires occurred within the Town of Culpeper and sporadically throughout the rest of the County.

**Figure 8.2
STRUCTURE FIRE INCIDENTS**



CULPEPER COUNTY INCIDENT WORKLOAD

Fire and rescue services are provided to the residents of Culpeper County through a system comprised of both volunteer and career personnel. There are ten volunteer organizations providing services to the County: the Culpeper County Volunteer Fire Department, the Brandy Station Volunteer Fire Department, the Richardsville Volunteer

Fire and Rescue Company, the Salem Volunteer Fire and Rescue Company, the Little Fork Volunteer Fire and Rescue Company, the Rapidan Volunteer Fire and Rescue Company, the Culpeper Volunteer Rescue Squad and the Reva Volunteer Fire and Rescue Company. The Amissville Company in Rappahannock County and the Remington Company in Fauquier County also provide coverage in Culpeper County.

There are approximately 594 volunteer members spread among these agencies, of which approximately 361 are active operational volunteers. The volunteer companies have their own officers to oversee the operations of their respective organizations. The volunteers are the primary providers of fire and rescue coverage. The majority of the members work full-time jobs resulting in limited availability of volunteers for weekday coverage.

The total number of emergency response calls is expected to continue to increase. This is based primarily on population growth. This growth increase may require additional stations and manpower to maintain or improve the current level of service. Twenty career personnel staff the Culpeper Emergency Services transport unit 24 hours a day, seven days a week, every day of the year to supplement the volunteer EMS response.

The County Comprehensive Plan projects that by 2020 a total of up to 40 career providers may be needed for full coverage. The Comprehensive Plan anticipates that an increase in senior population will place a greater demand on public safety providers. Any development proposals focused on senior housing should be expected to mitigate these impacts.

The primary indicator of level of service in regard to fire protection is response time. Currently, no empirical data is available for Culpeper County in terms of average response time. The current level of service is measured by distance from the various stations whether the station is fire or rescue only or a joint use location through 2020.

In a growing county, it is not realistic to project workload based on one growth period with other periods that are projected to have a higher or slower growth rate. The Study Team considered the limited workload data available. Consistent comprehensive fire and EMS workload data were not available for consideration.

As shown in Figure 8.3, the total number of emergency response calls in 2013 was 6,733. Over the past six years, the number of calls has averaged 6,403 per year countywide.

Figure 8.3
CULPEPER COUNTY CALL VOLUME

Facility	NUMBER OF DISPATCHED CALLS BY COMPANY 2008-2013					
	2008	2009	2010	2011	2012	2013
Culpeper	3,299	3,907	3,793	4,071	4,058	4,058
Brandy Station	435	607	497	629	531	545
Amissville	120	188	171	183	165	166
Richardsville	161	265	263	248	287	239
Salem	480	663	604	566	527	643
Little Fork	324	418	415	485	492	463
Rapidan	224	98	88	79	76	82
Reva	266	459	490	524	528	537
Total	5,309	6,605	6,321	6,785	6,664	6,733

Source: Culpeper County Comprehensive Plan.

With the growth expected in the County, the call volume is expected to rise approximately 14.9% by 2020 and over 32% by 2030

Figure 8.4
CULPEPER COUNTY CALL VOLUME PROJECTIONS

FIRE AND RESCUE CALL PROJECTIONS		2020-2040		
Year	2020	2030	2040	
Total Calls	7,714	8,906	10,197	
Population	55,102	63,614	72,835	

Source: Culpeper County Comprehensive Plan.

Caution is required in the interpretation of the data presented. The Study Team found that a central database for pulling countywide data, to include system performance, fire loss, and other statistics, do not exist. The Study Team recommends that developing and implementing such a database should be a priority. Additionally, the Study Team recommends that centralized reporting, data collection and performance management statistics should be required of all fire and rescue providers in the County and should be codified by County Ordinance. Furthermore, the Study Team believes that the workload should be monitored and reported monthly and this data should be used in the determination of future needs of the service providers.

SPECIAL OPERATIONS SERVICES

The following sections relate to special operations services provided by various components of the Culpeper County fire and EMS services.

Overview of Special Operations

In fire service terms, “special operations” generally refers to those services that a fire department provides other than fire and emergency medical response (EMS). The traditional special operations services include:

- Hazardous materials (HAZMAT) response,
- Water rescue;
- Vehicle extrication;
- Aircraft and Marine firefighting; and
- Technical rescue service.

The delivery models for these special operations services can vary greatly from community to community across the United States. With the exception of vehicle extrication service, special operations services are commonly not needed in most communities; however, their mere availability is very important.

Because special operations services are highly technical in nature and require specialized training and equipment, many communities opt not to deliver such services. Other communities may elect to form a partnership with neighboring jurisdictions and share resources through either a mutual aid agreement or a regional response team approach.

When a community evaluates the need for special operations services, it is important to remember when these specialized services are needed, there cannot be significant delay in response. The common dilemma today is “at what cost” does the community wish to support the delivery of fire department based special operations services, because the delivery of said services is generally expensive both in terms of the training commitment and equipment.

As a general rule, the decision by a fire department or community to initiate the delivery of any new service must be examined closely both in terms of the expected demand for service and the costs of delivering that service. The demand and costs must always be

compared to the existing available resources in the department's response area. This comparison is important in order to gather adequate information so that an informed decision on special operations services can be made.

For example, it might be more practical for a fire department to train all of its responders to the "awareness" level of trench collapse emergencies and use a neighboring community's trench rescue team as the primary response agency rather than fund the purchase of expensive trench rescue equipment and train its own trench rescue team.

The regional team approach to the delivery of special operations services continues to be a common approach in suburban communities across the nation. In Northern Virginia, many of the special operations response teams are organized at the county level and operated as regional responses assets.

Hazardous Materials Response

Over the last quarter century, international disasters in India, USSR, and the United States have all focused attention on the potential for catastrophic hazardous materials incidents. In the United States, the concern for the prevention of hazardous materials disasters served as the impetus for federal legislation to prevent and control the releases of hazardous materials and to protect workers involved in hazardous waste site cleanup and emergency response.

On October 17, 1986, President Ronald Reagan signed into law the Superfund Amendment and Reauthorization Act of 1986 (SARA). This legislation truly transformed the delivery of emergency response services and affected almost every jurisdiction throughout the nation. Although SARA is now more than 20 years old, its impact still affects how emergency responders handle present-day hazardous materials incidents, both in terms of response operations and personnel training.

SARA provides for protection of the community under Title III and the protection of the worker under Title I. As a result of the legislation, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Labor, through the Occupational Safety and Health Administration (OSHA), both adopted regulations, which had a major impact on a community's planning and response to hazardous materials incidents. These regulations

impacted communities in a number of ways, but most significantly in the areas of planning, information gathering and retrieval, and emergency response capabilities.

In 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response, OSHA provides the following definitions for the various levels of emergency response capabilities:

- First Responder - Awareness (FRA) — Individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. Persons trained to the FRA level simply recognize the presence of an emergency involving hazardous material and take action to notify emergency responders.
- First Responder - Operations (FRO) — Individuals who respond to releases or potential releases of hazardous substances as part of the initial response for the purpose of protecting nearby persons, property or the environment from the effects of the release. Persons trained to the FRO level meet the FRA requirements and are trained to take defensive actions to control, or minimize the effects of a hazardous materials release. FROs generally do not take any action that involves touching the hazardous material or its container and they are commonly trained in decontamination operations. The FRO is the “workhorse” of most every fire department in terms of basic response to hazardous materials incidents. More fire department personnel are trained to the FRO level than to any other hazardous materials training level.
- Hazardous Materials - Technician (HMT) — Individuals who respond to releases or potential releases of hazardous substances for the purpose of stopping the release and mitigating the incident. Persons trained to the HMT level meet the FRO requirements and are trained to take offensive actions to control the release of a hazardous material from its container. HMTs are basically trained to manage leaks involving a wide variety of hazardous materials containers. The HMT is the workhorse of most every hazmat response team. More HAZMAT team personnel are trained to the HMT level than to any other hazardous materials training level.
- Hazardous Materials Specialist (HMS) — Individuals who respond with, and provide support to hazardous materials technicians at hazardous materials incidents. Typically, persons trained to the HMS level specialize in certain topic areas either through specialized knowledge or specialized skill. A local or regional HAZMAT

response team may have several “specialists” available to them through a callout or contact roster. For example, a local agricultural chemist might serve as a HAZMAT team’s pesticide specialist, but he would not respond to an acid tanker incident.

In the post 9-11 era, most HAZMAT response teams have been tasked with accepting the new role of weapons of mass destruction (WMD) response in addition to their regular HAZMAT response duties. When looking to identify who would best fill the need for WMD response, the local HAZMAT team was the natural choice given their training in chemical protective clothing and decontamination operations and their experience in the management of chemical releases. These additional WMD responsibilities were further reinforced by the anthrax events that followed September 11th when HAZMAT teams all across the nation found themselves responding to potential biological agent emergencies.

Today, a local HAZMAT team must be able to deal with a myriad of complex issues. The HAZMAT response field has grown tremendously over the last two decades from just responding to oil spills along the highways in the 1980s to being prepared for chemical, biological, and nuclear terrorist events.

Hazardous Materials Response in Virginia

In the Commonwealth of Virginia, HAZMAT teams are organized by region by the Virginia Department of Emergency Management (VDEM), Technological Hazards Division (THD) and are supported by regional Hazardous Materials Officers (HMO), which can provide assistance to local jurisdictions in emergency situations involving hazardous materials and weapons of mass destruction. This assistance can take several forms depending on the incident severity and the capability of local responders.

Assistance can include an on-scene response by an HMO and a state-contracted regional HAZMAT response team, if needed. Once on scene, these officers can provide technical assistance and response advice and serve as liaison to other agencies or groups. These officers are prepared to conduct offensive-control actions to include hot-zone entry for reconnaissance, stabilization, and product confinement.

Each hazardous materials officer is trained and equipped to assist with the identification of chemical, biological, radiological, and nuclear materials. Technical assistance or on-

scene response is available on a 24/7 basis from one or more of the HMOs. These officers will work with other state resources, industry representatives, and technical consultants to provide vital information to emergency responders on scene.

THD maintains specialized detection and monitoring equipment, specialized protective clothing, and product-control devices. On-scene responses can be made by ground or air transportation and are available on a 24-hour basis throughout the Commonwealth.

Figure 8.5
VIRGINIA REGIONAL HAZMAT TEAMS

REGIONAL HAZARDOUS MATERIALS RESPONSE TEAMS



Source: VDEM

Throughout the Commonwealth, there are also a number of federal government installations and agencies that provide HAZMAT response services on a mutual aid basis to surrounding communities.

Hazardous Materials Response in Culpeper County

The response to hazardous materials incidents in Culpeper County is handled by the local volunteer fire and ambulance companies at the FRA and FRO level. Full hazmat response is provided by the VDEM Regional J Team operated by the Fredericksburg, VA, fire department. The VDEM J Team also provides service to Caroline County, Fauquier County (South of I-66; East of Rt. 17; South of Rt. 11), City of Fredericksburg, King George County, Madison County (East of Route 29), Orange County, Prince William County (South of Route 234), Spotsylvania County and Stafford County.

The Fredericksburg Fire Department Regional Hazardous Materials Response Team (FRDRHMRT) is a Level III team consisting of 21 contract members; fourteen are certified at the Technician level and seven are certified at the Specialist level.

The FRDRHMRT responds to a variety of chemical related incidents including those occurring at water/wastewater treatment facilities, incidents involving the transportation industry, and incidents at industrial and fixed-facility locations. In addition, FRDRHMRT also maintains the capability to respond to and mitigate incidents involving terrorism and chemical, biological and radiological threats.

In terms of response, the FRDRHMRT has its own Standard Operating Guidelines (SOGs) covering alerting procedures and response procedures. Basically, the team uses a tiered alerting and response system format whereby the level of response (equipment and people) is selected based upon the nature of the incident. Such a tiered response system is common in the field of HAZMAT response. The Study Team learned of no issues concerning the alerting or response of HAZMAT resources for Culpeper County.

In summary, the Study Team finds the level of hazardous materials emergency response appropriate and adequate for the hazards presented in Culpeper County.

Vehicle Extrication Service

Vehicle extrication service is the most common type of rescue service provided by fire departments today. While the advancement in passenger vehicle safety features has certainly helped reduce civilian injury and death rates in motor vehicle collisions, there still remains the need for specialized emergency response equipment and specially

trained response personnel capable of “cutting” patients out of mangled cars after a violent collision.

The manner in which vehicle extrication service is delivered generally varies by locale and the demand for services. Three common service delivery models are (1) the use of a heavy rescue squad platform (a specialized vehicle that carries large quantities of various rescue equipment), (2) the use of a rescue engine platform (an engine company equipped with some rescue equipment in addition to firefighting equipment), and (3) the use of a ladder truck platform (aerial device that carries extrication equipment). Each model has its own strengths and weaknesses. The most important component is that trained rescue personnel (technicians) arrive with the tools needed to complete the extrication so that the traumatically injured patient can be taken to an appropriate medical care facility for treatment in a timely manner.

Extrication services in Culpeper County are provided by all eight fire and rescue companies to some extent. Heavy rescue vehicle extrication is provided by the Culpeper County Volunteer Fire Company, Little Fork Fire and Rescue Company, Reva Volunteer Fire and Rescue Company, and the Brandy Station Volunteer Fire Department.

One of the special operations issues reviewed by the Study Team was the possibility of duplication of resources. For a community the size of Culpeper County, both in geographical area and population, the Study Team recommends no change in the present level of heavy-duty extrication services. The Study Team is of the opinion that until such time that additional fire or rescue stations are constructed, the delivery of extrication services should remain unchanged in terms of the vehicle platform and vehicle location. Once additional stations are built the County should conduct a complete review of how extrication services are distributed using the rescue squad and rescue engine concepts with a focus on minimizing response time and avoiding duplication of services.

Technical Rescue Services

Technical rescue services normally include confined space rescue, trench collapse rescue, structural collapse rescue, high-angle rescue, and water rescue.

In Culpeper County, other than water rescue, technical rescue services are provided through mutual aid with adjoining jurisdictions and through the Virginia Department of

Fire Programs (VDFFP) Technical Rescue Team (TRT) program, which operates a regional TRT in seven divisions throughout the Commonwealth. These teams provide specialized emergency response services such as: Trench Rescue, Confined Space Rescue, Vehicle Rescue, Water Rescue, Rope Rescue, Farm Machinery Rescue, Structural Collapse Rescue, and Wilderness Search Rescue. While Culpeper County is part of VDFFP Division 2, the VDFFP TRT serving Culpeper County is Fairfax County Fire and Rescue Department out of VDFFP Division 7.

In terms of water rescue, the Richardsville Volunteer Fire Department operates a water rescue team. However, the Study Team was unable to obtain policies, procedures, training requirements, and equipment lists for this team.

A unique technical rescue asset to Culpeper County is Little Fork Volunteer Fire and Rescue Company's Technical Large Animal Rescue Team (TLAER), which is the only volunteer unit in the Commonwealth of Virginia that specializes in technical rescues of horses and cows. TLAER members are required to be:

1. EMT or Firefighter certified
2. Trained as TLAER Technicians at the Virginia Tech MARE Center in Middleburg, Virginia.
3. Certified in ICS (Incident Command System)
4. Available to assist with calls in any jurisdiction in the Commonwealth of Virginia
5. Command Officers require a minimum certification of Fire Officer I

Figure 8.6
LITTLE FORK VOLUNTEER FIRE AND RESCUE COMPANY'S
TECHNICAL LARGE ANIMAL RESCUE TEAM



Mass Casualty Incident Response

A mass casualty incident (MCI) is any incident in which emergency medical services resources, such as personnel and equipment, are overwhelmed by the number and severity of casualties. For example, an incident where a two-person crew is responding to a motor vehicle collision with five severely injured people could be considered an MCI. However, more commonly MCI events include incidents such as building collapses, train and bus collisions, tornadoes and other large-scale emergencies.

The Culpeper Volunteer Rescue Squad operates a MCI response trailer that is equipped to treat 50 patients.

RESIDENTIAL SPRINKLERS

Presently, there is no residential sprinkler requirement for single-family dwellings in Culpeper County. Because the majority of structure fires in the United States involve residential occupancies, when more residential occupancies are built, then one can reasonably expect more opportunities for structure fires to occur.

It is also a well-accepted fact in the fire service that today's lightweight building construction systems do not endure fire conditions as well as their pre-1970s counterparts. This generally means more rapidly developing fire conditions with quicker destruction of the structural components.

For firefighting crews to be successful, they must arrive on scene before those severe conditions develop. The installation of residential sprinklers significantly reduces the development of severe fire conditions and in fact, generally extinguishes most of the fires if sprinkler activation occurs. More importantly, residential sprinklers are designed to save lives by being "fast-acting" and allowing the safe evacuation of the structure during the early stages of the fire.

A good example of the use of residential sprinklers in a "bedroom" type community is Carroll County, Maryland, where residential sprinkler ordinance has been adopted. Because of Carroll County's limited development of public water systems and the vast majority of the fire protection service is provided by volunteer fire and EMS companies, the residential sprinkler requirement has alleviated some of the concerns over providing

water supplies in areas previously undeveloped. Before the sprinkler ordinance was enacted, developers had the choice of installing underground fire protection water storage tanks or installing residential sprinklers. Many choose the sprinklers over tanks because of the cost difference when compared to the tanks.

However, unlike in Maryland, Virginia localities cannot make changes to the building code and codes in the Commonwealth do not require sprinklers. In Virginia, sprinklers and other fire detection and fire suppression features are governed in the building code. The building code in Virginia is pursuant to State law and State law doesn't give localities the authority to change the building code.

The Study Team encourages the County to aggressively promote the installation of automatic sprinklers in all new, residential structures regardless of structure size and non-residential structures that have over 1,500 square feet of enclosed space.

WATER SUPPLY

Assessment and Training

While Culpeper County does encourage dry-hydrant installation, maps the pre-defined "fill" points and does make use of Commonwealth grant funding to continue to install more dry hydrants, there does not appear to be a countywide effort to determine the water supply capabilities of the local fire and EMS companies, e.g., tanker shuttle drills, water supply drills, large diameter hose relay drills, etc. Operational readiness is very important in the delivery of fire protection services. In terms of water supply, operational readiness means that all supply sites have been identified; equipment used in the delivery process is adequate and functional; and the people expected to execute the delivery process are trained and ready to respond.

Alternative Water Supply Program (AWS)

The Insurance Services Office (ISO) offers the ability for fire departments that serve large nonhydranted areas are to develop an Alternative Water Supply Program (AWS), to help fire departments improve their ISO Public Protection Classification (PPC) rating. The AWS is a systematic means for using mobile water tankers to meet the fire flow

needed. To support the AWS, the hydrant system is not used to support the mobile water tanker shuttle process. An independent water source must be identified and used.

It is necessary to test a system to realize its effectiveness and make adjustments. The fire service has not concentrated on determining needed fire flow. Like any other aspect of the fire service, training and drills are needed to reinforce these skills and determine areas for improvement. Most fire departments conduct weekly training sessions to reinforce techniques needed for search and rescue, hose line management, vehicle extrication, and other functions. Sometimes water supply is addressed, but in many cases the goal is to ensure that the pump operator can get water to the hose. Rarely do they test the ability to sustain a set water flow for a length of time. This is a basic and critical element in successfully bringing a fire under control.

As such, the Study Team recommends that there be more water supply interoperability training between the departments. This training should at least take the form of semi-annual water supply drills that simulate the two-hour ISO water supply test in the County's nonhydranted and/or inadequate public water system areas. These drills should be held at various locations throughout the County and should include all of the local fire and rescue companies.

Additionally, a successful AWS depends on the performance measure of the apparatus used to shuttle, or move, the water from the source to the fire. The size of a tanker's water tank is important. However, other parameters affect how effectively the water will be delivered. Off-load mechanisms, piping, and operator proficiency influence how effective a tanker is at "dropping" its load for use at a fire. As such, the Study Team recommends that standard tanker apparatus specifications be developed to assure maximum effectiveness.

Water Supply Coordinator

When attempting to improve a community's fire protection water supply delivery process, some emergency services organizations appoint a person to serve as the jurisdiction's water supply coordinator (WSC). A WSC is probably most useful in the suburban/rural areas forced to use a variety of means to provide water supplies for fire protection.

The WSC is often responsible for assembling data and information on all of the community's water supply sources, for collecting information on the fire department water supply delivery resources, and for approving the design and installation of new water supply sources.

Given the size and nature of Culpeper County's local fire response areas and its water supply sites, the Study Team believes that a countywide WSC is needed. As such, the Team recommends that Culpeper County appoint a WSC with the following responsibilities:

1. Maintain the countywide water supply map book/resource guide that identifies the location and capability of all water supply sites within the County;
2. Recommend additional water supply sites for underground storage tanks and/or dry fire hydrants and manage state grants for such;
3. Possess review sign-off authority on new fire protection water supply development; and,
4. Coordinate the implementation of interoperability water supply training with the County training for the local fire and rescue companies.

Ideally, with the creation of a county fire marshal, the WSC would be a duty of the county fire marshal.

PRE-FIRE PLANNING

Pre-fire planning serves an important component of the success of firefighting agencies in dealing with fire incidents. For that reason, this section outlines an approach to and the need for initiating a comprehensive and consistent pre-fire planning effort by the Culpeper County fire companies.

Pre-Fire Planning — The Concept

One of the major job responsibilities of firefighting personnel is to conduct pre-fire planning programs to target hazards within their first due response area. Chief William Clark in his textbook *Firefighting Principles and Practices* also discusses pre-fire planning in the following manner:

“When a fire department is acquainted with the potential of a fire before it occurs, that department has an advantage over the fire, provided that it makes preparation in keeping with the need shown by the advanced study. It is of little use to identify and isolate firefighting problems if nothing is done to offset them. The elements of a pre-fire plan should not only pinpoint needs but provide for meeting them. Target hazards and their peculiar features should be identified. The requirements for combating a fire should be studied and plans should be prepared.”

To ensure preparedness for emergency situations, firefighters should visit the target hazards in their area, tour each facility, prepare drawings and lists of hazards, and develop the tactics and strategy for handling incidents at each particular facility. All stations that may respond to an incident should have access to the drawings and information. The officer should have information readily available to refer to while en-route to the incident. In addition, the officers should conduct regular station refresher drills utilizing this material. In summary, pre-planning is knowing in advance what you are up against.

The essential features of a pre-fire plan suggested for use in Culpeper County should include the following:

1. Special Hazards: Structural faults, cracked walls, overloading, hazardous materials, and man-traps (locations, amounts, 704M class, etc.).
2. Entry and Access: Types of doors and windows, recommended entry, how to force entry if necessary, stair location, access to roof, basement, storage, and utilities.
3. Special Apparatus Assignment: Recommended revisions to the standard apparatus assignment based on one or more unique aspects of the structure and/or contents.
4. Life Safety: Need for evacuation, number of people, how to evacuate, special evacuation needs for the disabled, where people are concentrated or potentially trapped, exit travel, and operational restrictions.
5. Exposure: Buildings and/or material in vicinity of, distance from, type of occupancy, type of construction, means of fire spread, and combustibility.
6. Confinement: Possible fire and smoke travel (within or without), firefighting openings, fire walls, compartmentalization, automatic dampers, and fire doors.

7. Protection Systems: Sprinklers, automatic extinguishing systems, standpipe, internal alarm, emergency lighting, and location of valves, controls, etc.
8. Ventilation: Building features, building equipment, location of controls, roof, wall, and basement openings. Occupancy and Fuel Load: Location, type or class, amount, and concentration of combustibles.
9. Water Supply: Location of fire company connections, valves, hydrant locations, main sizes, location and quantity of auxiliary sources.
10. Salvage: High value areas, stock susceptible to sprinkler/water damage, water removal methods, location of drains and sumps.
11. Utilities: Location of HVAC controls and switches, location of Knox box, location of elevator keys, location of trash room/s. Location of controls and valves for electricity, gas (inside and outside), and water (inside and outside).
12. Construction: Building specifications, type of construction, class type, construction of roof, interior walls and floors, false ceilings, and shafts.
13. Personnel Needs: Personnel needs required delivering the estimated fire flow, and their recommended locations around the facility.
14. Additional Agencies: Any additional agencies in the County or the state equipped in handling an incident at a given facility.

Finally, a complete pre-fire plan also addresses the placement of apparatus and of the operational priorities.

Pre-Fire Planning in Culpeper County

Fire and rescue company officials advised the Study Team that fire units might be involved in building familiarization, as part of company training and/or fire prevention activities. Although there is a formalized pre-fire planning program utilized by the fire companies; CCVFRA SOG 0-14-01, Target Hazard Pre-Incident Plans. The Study Team was provided with limited documentation relating to pre-fire planning accomplished by the fire and EMS companies.

The Study Team recommends that the County initiate use a consistent and comprehensive pre-fire planning program to strengthen their ability. Ideally, with the creation of a County fire marshal, the WSC would be a duty of the County fire marshal.

POST-INCIDENT ANALYSIS

Post-incident analysis is a tool used by many fire/rescue departments and companies interested in continuously learning and improving their ability to handle emergency situations. The Study Team noted that “hot wash” sessions, brief on-scene, post-incident evaluations of how things went, are routinely conducted by some of the Culpeper County fire and rescue companies.

Due to the opportunity for service providers to benefit and learn from post-incident analysis, the Study Team recommends that a Standard Operating Procedure (SOP) relating to post-incident analysis on defined fire, rescue, EMS, HAZMAT incidents and other special issue incidents be developed and implemented.

Ideally, this should be the responsibility of the County Training Officer.

National Incident Management System (NIMS)

Federal departments and agencies are required to make local, state, territorial, and tribal nation jurisdictions adopt the National Incident Management System (NIMS) as a condition to receive federal preparedness grants and awards. The *National Incident Management System (NIMS) Implementation Objectives* were developed to guide jurisdictions in their implementation of NIMS. NIMS implementation is assessed through the direct reporting of data to FEMA utilizing the *Unified Reporting Tool*.

The NIMS Training Program defines the national NIMS training program. It specifies National Integration Center and stakeholder responsibilities and activities for developing, maintaining and sustaining NIMS training. The NIMS Training Program outlines responsibilities and activities that are consistent with the National Training Program, as mandated by the Post-Katrina Emergency Management Reform Act of 2006. This program integrates with FEMA training offered through the Emergency Management Institute (EMI) and United States Fire Administration (USFA).

The NIMS is intended to be used by the whole community. The intended audience for this section is individuals, families, communities, the private and nonprofit sectors, faith-based organizations, and local, state, tribal, territorial, insular area, and Federal governments. NIMS is a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private

sector to work together seamlessly and manage incidents involving all threats and hazards—regardless of cause, size, location, or complexity—in order to reduce loss of life, property and harm to the environment.

The NIMS is the essential foundation to the National Preparedness System (NPS) and provides the template for the management of incidents and operations in support of all five National Planning Frameworks. The Incident Command System (ICS), used daily by the fire and EMS service, is a fundamental element of the NPS. The use of ICS provides standardization through consistent terminology and established organizational structures.

INCIDENT COMMAND SYSTEM (ICS)

This section reviews the Incident Command System (ICS) and its relevance in Culpeper County.

National ICS Experience

The ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. The ICS is normally structured to facilitate activities in five major functional areas: command, operations, planning, logistics, intelligence & investigations, finance and administration. It is a fundamental form of management, with the purpose of enabling incident managers to identify the key concerns associated with the incident—often under urgent conditions—without sacrificing attention to any component of the command system.

The ICS provides an organized technique for handling various emergencies, including hazardous material incidents, and ensures that the incident commander's decision-making process can be initiated quickly and efficiently. The establishment of this system is required under the OSHA regulations of the Superfund Authorization and Re-authorization Act (SARA) of 1986 and the National Fire Protection Association Standard 1500, paragraph 6-1.2.

The ICS was developed in the United States as a consequence of several large fires that consumed portions of southern California in 1970. As a result of those fires, a need was identified to develop a system whereby many different agencies could work together toward a common goal in an effective and efficient manner. The system consists of procedures for controlling personnel, facilities, equipment, and communications.

The ICS is designed to be in effect from the time an incident occurs until the requirement for management of operations no longer exists. The Incident Commander (IC) serves as a title, which can apply equally to the first arriving officer of a single fire truck up to the Chief who may assume overall IC.

The incident command system has a number of components. These components, working together interactively, provide the basis for an effective ICS concept of operations:

1. Common terminology;
2. Modular organization;
3. Integrated communications;
4. Unified command structure;
5. Consolidated action plans;
6. Manageable span of control;
7. Pre-designated incident facilities; and
8. Comprehensive resource management.

The ICS organizational structure develops in a modular fashion based upon the nature of an incident. The staff builds from the bottom up with responsibility and performance placed with the Incident Commander. Four separate branches can be developed, each with several units. The specific organizational structure established for any given incident will depend upon the management needs of that incident.

If one individual can simultaneously manage all the major functional areas within his/her scope, no further organization is required. If one or more of the areas require independent management, an individual is assigned to assume responsibility for that area. This plan requires advance designation of the individuals qualified for specific areas of supervision. As the plan escalates, announcements can be made as to the level of response the situation has attained, and those individuals can automatically assume the responsibilities for that particular area.

Obviously, there exists a need for this type of control function. When no command exists, a system of freelancing evolves. With the freelancing approach, officers respond and work independently of any other supervision. As a result, the common goals and objectives cannot be achieved. Individuals may become injured, and the incident cannot be handled in a controlled manner. Other problems with the lack of establishment of a command system involve multiple competitive commands where competing officers establish conflicting orders and different attack plans.

ICS in Culpeper County

The Study Team noted during interviews that all persons interviewed felt that ICS is used on fires and major incidents. However, the Study Team also noted that three areas identified for improvement in the Old Keller Manufacturing Building Fire after-action report were ICS-related, as outline in Figure 8.7 and that no countywide ICS SOP was in place.

**Figure 8.7
OLD KELLER MANUFACTURING BUILDING FIRE —
POST-INCIDENT ANALYSIS**

Action No.	Issues/Observation
1	Unless sufficient staffing dictates otherwise, the county should consider SOP’s for transferring command to any unit other than an Engine as a last resort.
2	A strong command presence needs to be defined and identified from the initial arriving unit until it is terminated. ICS will enhance accountability and bring order to an otherwise chaotic event (if used properly). Studies across the fire service have discovered that response problems were far more likely to result from inadequate management than from any other single reason. All county fire and rescue personnel should be trained and aware of the significance of this SOP.
3	If ICS is used on a daily or regular basis, the expanding of the system should go very smoothly during disasters or large-scale incidents. Delegating responsibility for geographic areas (Divisions) or specific functions (Groups) was absent and again needs to be employed on a regular basis to increase the comfort level with this practice under deteriorating conditions.

Source: CCVFRA

For purposes of safety as well as successful incident operations, it is essential that there be consistency in the ICS utilized by the Culpeper County fire and EMS companies and other County officials and staff. As such, the Study Team recommends that one ICS be adopted, implemented and utilized countywide. It is essential to operational safety and

effectiveness that there not be duplicating ICS policies and procedures implemented by any of the fire and EMS companies.

Further, the Study Team recommends that there be regular and comprehensive training in the ICS, and that the ICS must be utilized to the appropriate level on *every* emergency incident. Finally, the Study Team recommends that all organizations be mandated to participate in joint training exercises involving the use of the ICS.

INTEGRATED EMERGENCY COMMAND STRUCTURE

At the present time, each volunteer fire and EMS company has an operational chain of command established in its bylaws or as determined by the fire chief by operational guideline. Potentially each fire and EMS company has a different rank structure that may or may not include the following:

- Fire chief
- Assistant chief
- Deputy chief
- Captain
- Lieutenant

There is no countywide policy giving operational authority to officers leaving their station's first-due area. In theory, an officer leaving the first-due area would only have operational authority over the crews and units responding from the home station. However, the volunteer officers in the Culpeper County system are commended for their commitment to a "no-ego" command structure, which currently allows any qualified command officer to take charge at an incident, irrespective of whose volunteer company jurisdiction the incident may be in, to ensure the overall safety and effectiveness of the operation. The Study Team recommends that an SOP codifying this practice be developed and adopted.

This lack of an integrated chain of command policy and procedure within Culpeper County potentially results in less qualified personnel commanding incidents while more qualified personnel are on the scene. This is a practice that, if changed, would ensure the continued current practice of management and command of incidents in Culpeper County. The Study Team recommends that a standard that establishes an integrated chain of command within Culpeper County be developed and adopted.

COMMAND OFFICER COVERAGE

The Study Team noted that the dispatch and response of an appropriate number of command (chief) officers on emergency fire and EMS incidents is not a mandated part of the unit responses. It is an accepted fact that it is essential to have appropriate command officers on emergency incidents to assure proper direction and coordination of incident mitigation efforts.

Typically, there should be at least one command officer dispatched on house fire assignments and two command officers dispatched on commercial/industrial box assignments and every alarm (second and third, etc.) subsequently dispatched on incidents. Command officers should be dispatched initially from the first-due station/company and then from other next due companies on the box assignment in sequential order.

As with other fire and EMS units dispatched on an incident, command officers should be dispatched and replaced as needed when there is failure to respond.

The establishment of command officer duty schedules by company and countywide is used in many regions in county fire and EMS systems to assure command officer coverage of emergency incidents. The Study Team recommends establishing a standard requiring the establishment of company and countywide duty schedules for command officers.

It should be noted that adopting a command officer schedule will insure that well-qualified command officers are available, which is an essential component to the delivery of effective incident command and, ultimately the safety of volunteer personnel.

POLICIES AND STANDARD OPERATING PROCEDURES

The following sections address Culpeper County, CCVFRA and fire and EMS company policies and Standard Operating Procedures (SOPs).

Input from Culpeper County Fire and EMS Providers

The Study Team was provided with a substantial amount of input from Culpeper County fire and EMS providers, which has been considered a part of this chapter. The points made relating to written policies, standards and standard operating procedures include:

- The need for unified policies;
- One standard set of SOPs and SOGs is needed;
- There is no control over fire/EMS operations;
- There are eight different operational policies;
- The Association SOPs are lacking and incomplete;
- Countywide policies are needed;
- We need an effective process and enforcement of standards, with an efficient process – change takes too long;
- There is too much left to “interpretation” in rules and regulations;
- Power struggles and distrust in the Association have left most of us to do our own thing;
- Fire companies need to be held to the same countywide standards;
- There needs to be standard running assignments and SOGs for all fire companies;
- There need to be common engine assignments countywide—first-, second-, and third-due engines;
- Many standards are not met throughout the County;
- Incident command on many calls is a joke and do not follow ICS;
- There should be standards for staffing fire apparatus;
- There needs to be one set of operations standards that all companies follow;
- Standards should be enforced; and
- Standards should be based on what is best for service to the citizens and our safety.

The reader will note duplication in subjects covered in this list of input points. The Study Team included the duplicative points due to the fact that a large number of current service providers indicated a concern over the same issue—the need for countywide policies, standards and SOPs that are followed by all with compliance enforced, as needed.

CCVFRA SOPs

The Study Team reviewed established countywide standards established through the years by CCVFRA for subject coverage, consistency and comprehensiveness. Further, CCVFRA standards were discussed generally with officers, firefighters and EMS personnel.

In a volunteer fire and EMS system, such as has been operational in Culpeper County, providing clear and consistent policy direction to all members of the organizations is critical to the safe and efficient functioning of the personnel and apparatus on incidents. There should be no duplication, inconsistency and/or lack of direction to the volunteer members.

In the experience of the Study Team, all operational policy and procedural direction should come from one source and should be countywide. Currently, the CCVFRA should assure the establishment of comprehensive countywide policies and SOPs with comprehensive input and review by the volunteer officers and members. However, the Study Team noted much distrust among several leaders in the volunteer companies and the leadership of CCVFRA. This issue must be resolved. This report recommends several approaches to do so.

The Study Team found that the current CCVFRA SOPs to be less than comprehensive and lacking basic operational subjects. Furthermore, the Study Team noted that the time required to adopt or change a policy is too long, which results in operational inefficiency and potential safety issues.

The United States Fire Administration (USFA) suggests the following areas, at a minimum, be addressed when developing a comprehensive set of SOPs:

MANAGEMENT AND ADMINISTRATION

GENERAL ADMINISTRATION — Procedures related to activities that maintain and support the organization, including financial management, resource management, information processing, and maintenance and development of the organizational infrastructure.

- Organization—Establishment of the organization, mission statement, policy on SOPs, chain of command, code of ethics, drug-free workplace and inter-department communications.
- Facilities—Non-smoking areas, telephones and usage, sleeping facilities, apparatus bay doors, portable fire extinguishers, smoke and carbon monoxide detectors, storage and use of fuels, facility maintenance and repairs, facility security, public access policy and workplace violence.
- Emergency Vehicles and Special Apparatus—Fueling of vehicles, inspections of vehicles, out-of-service vehicles, non-departmental riders, care and maintenance of vehicles and special apparatus, repair of vehicles and special apparatus.
- Equipment and Supplies—Personal protective equipment, small tools and equipment, power tools and equipment, SCBA maintenance, hose testing and maintenance, inventory control procedures, ropes and harnesses, communications equipment, public use requests.
- Finance—Budgeting, procurement and purchasing, out-of-town travel, expense reimbursement.
- Fundraising—Income-producing activities, public solicitations, grant applications, special requirements and activities, managing donations.
- Training, Education, and Exercises—In-service training (initial and refresher), live fire training exercises, training evaluation, certification, requests for training, training records, inter-organizational/community exercises.
- Information Management—Incident reporting system, record-keeping systems, confidentiality and access to information, use of computer equipment, archiving information.

MEMBER HEALTH AND ASSISTANCE PROGRAMS — Procedures affecting member health, fitness, and performance, to include assessment, enhancement, and enforcement activities.

- Medical Screening/Health Assessment—Fire department physician, baseline/entry and annual examinations, post-injury/exposure examinations, exercise screening/stress tests, vaccinations, medical/exposure records.
- Health and Wellness Promotion—Fitness assessment, fitness conditioning programs, healthy lifestyles.
- Performance Evaluation Process—Work performance assessment, appeal process.

- Post-Injury Rehabilitation—Post-traumatic incident debriefing, occupational therapy, work hardening programs, disability/job assessment, ergonomics/job engineering, reassignment options.
- Employee/Member Assistance—Substance abuse cessation, critical incident stress management, professional development, family relations, legal and financial services, mental health services.
- Facility Safety—Code requirements, basic safety standards, personal behavior and hygiene, food preparation safety, infection control in stations (cleaning, disinfecting, storage, etc.), facility maintenance and repairs, station safety and health inspections and enforcement.
- Hazard Communication—Employee right-to-know requirements, employee participation, maintenance and access to safety information, employee notification and training.

ORGANIZATIONAL PLANNING AND PREPAREDNESS — Procedures affecting organizational analysis and planning systems for management, administration, and emergency operations.

- Strategic/Master Planning—Inter-organizational coordination and planning, organizational planning (long-term and short-term), administrative systems, organizational evaluation.
- SOP Development—Committee organization, schedule, needs assessment process, development process, approval, distribution, implementation, evaluation.
- Risk Management—Identification of workplace hazards, vulnerability and risk assessment, risk control techniques, safety systems, risk management monitoring.
- Emergency Operations Planning—Community right to know, general operations planning, facility and operational preplanning (fire suppression, emergency medical response, hazardous materials response, technical rescue, disaster operations), resource classification.
- Mutual/Automatic Aid—Requirements for outside aid, resource lists, inter-jurisdictional unified command, evaluating aid agreements.

PREVENTION AND SPECIAL PROGRAMS

PUBLIC INFORMATION AND EDUCATION — Procedures to promote awareness of hazards, provide emergency information, encourage prevention, and foster good will and support in the community.

- Working with the Public—Special populations, use of information technology, distribution and dissemination channels, personal and professional behavior.
- Working with the Media—Media rights and responsibilities, personal and professional behavior, using print and broadcast media (interviews, briefings, news releases, media events, advertising, etc.).
- Emergency Public Information—Rights of privacy and public safety, media access to incident scenes/entry zones, media staging or information center, incident information flow, legal issues.
- Public Education—Program goals and objectives, use of department and community resources, conducting programs and activities, evaluating program accomplishments.
- Public Relations—Customer service strategies, building/maintaining departmental image, dealing with citizen complaints, member contacts with municipal/elected officials and media representatives.

Building Inspections and Code Enforcement — Procedures for evaluating and enforcing safety in buildings and commercial operations.

- Authorities and Codes—References to applicable government regulations and policies, community plans and zoning ordinances, codes and standards in force locally (buildings, construction, fire prevention, employee safety and accident prevention, hazardous materials, health, etc.).
- Design and Plans Review—Working with business/facility owners and managers, review teams, review processes, approval processes, notification procedures, documentation and reporting.
- Residential Inspections—Working with homeowners, scheduling inspections, conducting inspections, documentation and reporting.
- Commercial Inspections—Working with business owners, scheduling inspections, conducting inspections, documentation and reporting, coordinating company and prevention division inspections.

- Industrial Inspections—Working with industry, scheduling inspections, conducting inspections, documentation and reporting, coordinating company/hazmat and prevention division inspections.
- Code Enforcement—Project monitoring, inspection follow up, negotiations, sanctions.
- Record Keeping—Documentation and reporting systems, information dissemination, archiving.

Special Programs

- Fire Cause and Arson Investigation—Procedures for investigating fires, which may include arson detection, cause and origin detection, and evidence collection and preservation.
- Hydrant Maintenance—Programs and procedures for inspecting and maintaining hydrants.
- Other Special Programs—Guidelines for other special programs conducted by the department to support management, administration, or emergency operations.

EMERGENCY OPERATIONS

OPERATING EMERGENCY VEHICLES — Procedures for the safe and effective operation of emergency vehicles and special apparatus, including fire engines, ambulances, trucks, tankers and other fleet vehicles.

- Driving Emergency Vehicles—Driver qualifications, skills maintenance, driver behavior, use of warning devices, roadway operations (traffic laws, intersections, speed, passing, following other vehicles), backing up, parking, operation in high-risk areas.
- Riding Emergency Vehicles—Permitted vehicle occupants, passenger behavior, safety in emergency vehicles, reporting safety problems and violations.
- Operating Special Apparatus—Operator qualifications, operator behavior, placement and operation of special apparatus, safety in special apparatus operations, operation in high-risk areas.
- Vehicle Accident Reporting and Investigation—Accident scene procedures (information gathering, injury assessment, notification, etc.), reporting forms and documentation requirements, post-accident investigation (examination of scene, interviews with participants and witnesses, etc.), report preparation and dissemination.

- Use of Personal Vehicles—Driver behavior, roadway operations, permitted vehicle occupants, reporting safety problems and violations.

SAFETY AT EMERGENCY INCIDENTS — General procedures outlining safety considerations for agency personnel at various types of emergency incidents.

- **Applicable Standards**—Authorities recognized by the department as defining safe work practices in emergency response (e.g., OSHA/EPA regulations, state and local regulations, NFPA 1500, and other professional association or consensus safety standards).
- **Risk Management Guidelines**—General guidelines for identifying hazards and minimizing risk in emergency response, including, for example, emergency responder qualifications, standard safety guidelines, use of pre-plans, initial evaluation of risk, development of site safety plans, assignment of safety personnel, control of scene access, regular reevaluation of conditions, etc.
- **Safety Officer**—Authority and responsibilities of the Incident Safety Officer and the Health and Safety Officer, incident scene safety management procedures, post-incident follow up, reporting and documentation.
- **Protective Clothing and Equipment**—General procedures for selecting, using, maintaining, inspecting, fit testing, decontaminating, and disposing of personal protective clothing and equipment, such as PASS Devices, SCBA, HEPA Mask Respiratory Protection, etc.
- **Personnel Accountability System**—Supervisor responsibilities, member responsibilities, incident arrival procedures, personnel tracking and inventory procedures, maintenance of supplies.
- **Responder Exposure Control**—Personal hygiene, use of PPE/barrier protection, incident operations, incident recovery (disposal, cleaning, decontamination, storage, etc.), post-exposure procedures.
- **Hearing Conservation**—Standards for noise exposure, hearing protection, noise reduction, monitoring incident noise, assessment of hearing problems, documentation and reporting.
- **Operating in a Hostile Environment**—Assessing hostile environments, dealing with potentially violent persons, identifying civil disturbance situations and terrorism incidents, interaction with law enforcement, delaying or suspending operations, modifying operations, resuming normal operations.

- Operating on Roadways—Operations near moving traffic, traffic control, use of warning devices, vehicle/ scene stabilization, coordination with law enforcement personnel, standard procedures and precautions, special situations (e.g., downed power lines).
- Incident Scene Rehabilitation—Rehab officer functions, monitoring responders' emotional and physical condition, rotation of personnel, requesting relief, rehabilitation area and supplies, food and fluid replenishment.
- Medical Support—Systems to provide medical care for injured responders: supplies, treatment area, medical evaluation and treatment, post-incident follow up.
- Incident Termination—Operational debriefing/defusing, release of information, releasing the scene to another party (owner, police, hazmat cleanup crew, etc.).

COMMUNICATIONS — General procedures governing communications during emergency incidents.

- System Access—Activities that provide the community access to the emergency response system, including call receipt, call routing, call processing, and instructions given over the telephone to callers.
- Definition of Alarms/Dispatch Protocols—Procedures and protocols for assigning and dispatching units to specific types of emergencies or to escalating emergencies.
- General Procedures—General procedures and protocols for communications among dispatch and field personnel in emergency and non-emergency incidents.
- Emergency Signals—Initiation of emergency signals, radio signals, other warning signals, personnel actions.
- Alternate Radio Frequencies—The use of alternate radio frequencies on major incidents or incidents where the Incident Command/Incident Management System has been activated.
- Mobile Computer Terminals (MCTs)—Procedures outlining the use of Mobile Computer Terminals (MCTs) on fire and emergency apparatus, as well as in-station dispatch terminals.
- Mutual Aid Communication—Procedures for communicating with units and personnel from other jurisdictions on mutual aid responses.
- Situation/Status Reports—Procedures describing when and how to complete situation/status reports for major emergency and non-emergency incidents.

COMMAND AND CONTROL — General procedures directing use of the Incident Command/Incident Management System and controlling inter-agency coordination.

- Incident Command/Incident Management System—General description of the Incident Command/ Incident Management System, including organizational structure, assignments, activation, general procedures, etc.
- Mutual/Automatic Aid—Resources available for different types of emergencies, requesting or responding to requests for aid, interacting with mutual/automatic aid agencies, documentation and reporting, cost/ resource recovery.
- Incident Scene Management—General procedures for activating the Incident Command/Incident Management System, ICS/EOC interface, designating an Incident Safety Officer, organizing the scene, use of control zones, placing resources, supervising personnel, controlling access, controlling bystanders and crowds, coordinating with other agencies, etc.
- Staging—Procedures for staging units and apparatus at emergency scenes, which may include specific procedures for staging and the designation and use of staging officers.
- Transferring Command—Process for transferring command once established on an emergency scene.
- Public Information—Duties and procedures of the Public Information Officer and other personnel at emergency incidents, dealing with relatives/family liaison.
- Record Keeping—Records and information that must be maintained when activating or terminating the Incident Command/Incident Management System.

SPECIAL OPERATIONS — Procedures for special emergency response operations and situations.

- Aircraft Operations—Procedures for using department-owned aircraft in emergency operations: qualifications of personnel, care and maintenance of aircraft, requests for air support, operating aircraft, use of special equipment.
- Boat and Watercraft Operations—Procedures detailing operation of agency boats and watercraft: qualifications of personnel, care and maintenance of watercraft, requests for watercraft support, operating watercraft, use of special equipment.
- Special Unit Operations—Procedures explaining operation of any specialty unit within an agency, such as bicycle teams, all-terrain vehicles, snowmobiles, etc.
- Bomb/Hazardous Device Threats or Confirmed Incidents—Procedures for bomb threat incidents: agency responsibilities, mutual aid assistance, points of contact,

bomb squad response protocols, evacuation of civilians, hoax procedures (phone threats), communication policy, preservation of evidence.

- Terrorism Incidents—Procedures for terrorism incidents: agency responsibilities, mutual aid assistance, points of contact, general response protocols, task force operations, secondary devices, mass decontamination of casualties and emergency responders, mass evacuations, preservation of evidence.
- Civil Disturbances—Procedures for operations during civil disturbances: protection of responders, initiating and suspending operations, use of staging areas, task force operations, police escort procedures, interaction with law enforcement and emergency management agencies.

POST-INCIDENT OPERATIONS — Procedures for activities after incidents designed to assess and document actions, restore capabilities, address problems, and improve future results.

- Post-Incident Analysis—Methods for identifying lessons learned and potential corrective actions following response to an emergency incident: incidents to be reviewed/analyzed, participants and roles, format for gathering information, format for conducting analyses, standardized action plan, mechanism for reporting results.
- Post-Incident Recovery—Activities designed to restore the department’s response capability after an incident, including consideration of staffing assignments, equipment replacement, and cost recovery.
- Incident Record Keeping and Reporting—Completion of standard incident documentation, preparation and submission of special incident reports, incident review process, incident follow-up procedures.
- Injury/Exposure Reporting and Investigation—Accident and injury reports, exposure reports, death reports, maintenance of the health data base system, identification of injury/exposure trends and problems, liaison with the community’s health care system, member notification and testing, confidentiality of personal health records, exposure/injury follow up.
- Critical Incident Stress Debriefing/Defusing—Situations that indicate a need for CISM, identifying individuals needing CISM, procedures for notifying a qualified debriefing team, conducting a defusing, post-incident follow up.

FIRE SUPPRESSION RISK MANAGEMENT — Procedures designed to minimize risk to responders and implement aspects of the department's health and safety program at fire suppression incidents.

- **Required Use of Personal Protective Equipment (PPE)**—Use of turnout gear, SCBA, PASS devices/alarms, and other equipment at fire suppression incidents.
- **Rapid Intervention Teams**—Procedures for deploying intervention teams during incidents: availability, proper uses, activation, proper uses, standard practices, special situations.
- **Evacuation (Firefighters)**—Evacuating responders from dangerous structures or areas: determining dangerous conditions, activation signal, procedures for evacuation, accounting for personnel, return to normal operations.
- **Air Monitoring**—Monitoring carbon monoxide (CO) levels during overhaul, equipment and uses, removal of SCBA.

COMPANY OPERATIONS—Procedures covering activities related to specific company operations.

- **Incident Staffing**—Number and types of personnel, capability, personal protective equipment, etc. for different types of fire suppression incidents.
- **Water Supply**—Acquiring and maintaining water supply at fire operations.
- **Tanker/Tender Operations**—Use of tankers/tenders at fire scenes.
- **First-In Engine Operations**—Duties and functions of the first-in engine company at a fire scene.
- **Second-In Engine Operations**—Duties and functions of the second-in engine company at a fire scene.
- **Truck Company Operations**—Duties and responsibilities of the truck company at a fire or other emergency scene.
- **Special Units**—Duties and responsibilities of units needed to perform special functions, such as rescue units, cascade systems, lighting units and grass-fire units.

TACTICAL/STRATEGIC GUIDELINES — Procedures that guide fire and emergency personnel in remediation of fire suppression incidents.

- **Incident Size-Up**—Conducting incident size-up upon arrival on the emergency scene.
- **Automatic Alarms**—Responding to and dealing with automatic alarms.

- Offensive and Defensive Operations—Agency operations at emergency scenes, including offensive fire attacks, defensive operations, and how to determine which approach will be taken.
- Apparatus Placement—Placement of apparatus on an emergency scene to ensure safety and effective emergency operations.
- Forcible Entry/Gaining Access—Forcible entry activities, to include lockouts of residences and automobiles and use of lock and/or Knox boxes in emergency and non-emergency situations.
- Foam Operations—Use of foam on emergency incidents, including when and how to apply foam.
- Ventilation—Conducting safe and effective ventilation operations.
- Hot/Cold Weather Operations—Operating in hot and cold weather or winter environments.
- Sprinkler/Standpipe Operations—Using standpipes and operating in buildings and residences with sprinkler systems.
- Apartment/Condominium Operations—Operations in apartment buildings or condominiums.
- Commercial Building Operations—Operations in commercial buildings.
- Salvage—Conducting salvage operations at a fire scene.
- Overhaul—Conducting overhaul operations at a fire scene, which may include procedures for evidence and crime scene protection.
- Exposures—Checking and protecting exposures and minimizing exposure risk.

SPECIAL FACILITIES/TARGET HAZARDS — Procedures for response to and operations at special structures or hazards.

- High Rise Operations—Responding to and operating at emergency incidents in high rise buildings.
- Clandestine Drug Labs—Responding to an emergency involving a known or suspected clandestine drug lab, which may include safety factors, law enforcement coordination and evidence preservation.
- Correction Facility Operations—Operating at emergency incidents in correctional facilities which may involve safety for personnel, law enforcement coordination and escorts for personnel.

- **Industrial Facilities**—Operations at industrial facilities that may involve hazardous materials, large buildings, warehouses, and dangerous machines; includes interfacing with industrial fire brigades or fire departments.
- **Other Special Structures**—Fire suppression operations at any other special structures (arenas, stadiums, historically relevant structures, airports, schools, market places, etc.).

SPECIAL FIRE SUPPRESSION OPERATIONS — Procedures covering special fire suppression response situations and operations.

- **Aircraft Firefighting Operations**—Responding to and operating at fire suppression incidents involving aircraft.
- **Special Unit Operations**—Deployment of special units in fire suppression operations.
- **Wildfire Operations**—Response to wildfire emergencies.

EMERGENCY MEDICAL RESPONSE RISK MANAGEMENT — Procedures designed to minimize risk to responders and implement aspects of the department's health and safety program at emergency medical incidents.

- **Incident Infection Control**—Applicable regulations and standards, rights of patients and responders, personal hygiene and behavior, responder health issues, preparation for response, standard protective measures, special situations, compliance monitoring.
- **Protective Clothing and Equipment**—Selection, use, and disposal of specialized emergency medical protective clothing and equipment (gloves, masks, protective eyewear, gowns, resuscitation equipment, etc.) based upon specific situations.
- **Lifting/Moving Patients**—Proper lifting dynamics, proper use of stretchers, special situations (stairways, elevators, etc.).
- **Hostile Situations**—Approaching emergency incidents, use of body armor, cover and concealment, response to crime scenes, suicidal persons, people with weapons, patient restraints, special situations (snipers, hostages, extremist groups, bombing incidents, etc.).

PRE-HOSPITAL EMS FIRST RESPONSE — Procedures directed at the personnel delivering the first pre-hospital EMS resources to the incident scene.

- Delivery Model—The specific configuration of the first response component: type of vehicle, number of vehicles, staffing of the unit (number and care capability).
- Patient care—General procedures addressing patient care delivered in the pre-hospital setting.
- Treatment Protocols—Medically approved protocols for pre-hospital EMS personnel that ensure consistent and appropriate treatment of patients (includes interaction with Medical Director).
- Medical Devices and Equipment—Selection of types of medical devices and equipment appropriate for field use in the defined scope of practice and treatment protocols.
- Biohazard and General Waste Disposal—Types of hazards and disposal methods, disposal area/facility, segregation of waste products, packaging, labeling, storage, treatment, disposal.
- Clothing/Equipment Decontamination—Methods and appropriate applications, decontamination area/ facility, use of chemical agents, cleaning clothes, disinfecting.

PATIENT DISPOSITION AND TRANSPORTATION — Procedures directed at how the Fire/EMS Organization assures the safe and effective delivery of the patient to the appropriate facility.

- Destination Guidelines—Criteria for triage of pre-hospital EMS patients to specific destinations.
- Method/Mode of Transportation—Methods to determine how pre-hospital EMS patients are transported (i.e., ambulance vs. helicopter).
- Ambulance Operations—Behavior in the patient compartment, securing the patient, situating and securing equipment, standard safety devices and techniques, use of hazardous equipment during transport (starting an IV, defibrillation, etc.)
- Helicopter Operations—Choosing and marking a landing zone, arm signals, crowd control, protective gear, approaching a helicopter, behavior and etiquette during transport, standard safety devices and techniques, use of hazardous equipment during transport.

MANAGEMENT OF EMS OPERATIONS — Procedures directed towards maintaining organizational readiness to provide emergency medical services in compliance with applicable laws, regulations, and standards.

- Re-supply/Procurement of Supplies—Pre-hospital EMS provider supply and re-supply of expendable medical supplies and medications.
- System Inventory—Determining and accounting for appropriate amounts of medical supplies and medications carried/stored by pre-hospital EMS providers.
- Designation of Treatment Facilities—Coordination with facilities to receive patients.
- Data Collecting and Reporting—Collecting and analyzing pre-hospital EMS system data.
- Quality Improvement System—Using pre-hospital EMS data to evaluate the system and provider performance, to include customer satisfaction and patient care.
- Research and Reporting—Research conducted and reported as the result of a collaborative involvement of the EMS community.
- Standard of Care—Methods to define the minimum level of care based on available resources, accepted performance standards, and local community needs.
- Patient Care Reporting—Minimum data sets for patient care reporting and times, when reporting is necessary.
- Patient Documentation and Billing—Minimum data required for patient billing activities, procedures for billing activities and identifying times when data collection is necessary.

SPECIAL EMS OPERATIONS—Procedures covering special emergency medical response situations and operations.

- Mass Gatherings—Event types, planning practices, first aid/EMS services, alternate patient access methods, pre-positioning/staging emergency apparatus and resources, expanding response in an emergency.
- Hazardous Materials Team Medical Monitoring—Use of medical monitoring equipment, pre-and post-entry monitoring, criteria for excluding personnel from operations.
- EMS Operations at Hazmat Incidents—Emergency decontamination of victims and team members, patient care and treatment, transport considerations, personal protective equipment.
- EMS Operations at Technical Rescue Incidents—Pre- and post-entry monitoring for team members, patient care and treatment, transport considerations, personal protective equipment.

- EMS Operations During Disasters—Triage methods, alternate treatment procedures, alternate transport procedures, evacuation of hospitals and medical facilities, mass casualty procedures, interfacing outside medical response teams (Disaster Medical Assistance Teams, medical strike teams, community emergency response teams, etc.), shelter medical procedures, “special needs patient” care, patient decontamination.
- EMS Operations in the Rehabilitation Area/Sector—Criteria for excluding personnel from operations, treatment for emergency service personnel, rehabilitation for emergency service personnel.

HAZARDOUS MATERIALS RESPONSE RISK MANAGEMENT — Procedures designed to minimize risk to responders and implement aspects of the department’s health and safety program at hazardous materials incidents.

- Personal Protective Equipment—Use of turnout gear, SCBA, PASS devices/alarms, and other equipment at hazardous materials incidents.
- Hazardous Materials Personal Safety—Identifying chemical emergencies, incident levels, chemical safety, general precautions for hazardous materials incidents, roadway operations.
- Air Monitoring—Procedures for conducting air monitoring at incidents, addressing such factors as methods and action levels for air monitoring.

HAZ-MAT FIRST RESPONDER OPERATIONS — Procedures defining recommended work practices and response techniques for First Responder Operations personnel.

- Roles and Actions—Definition and role of First Responder Operations personnel, explanation of appropriate (defensive) actions during hazardous materials incidents.
- General Response Procedures/Emergency Response Plan—Standard hazardous materials response procedures: types of incidents, dispatch criteria, techniques for approaching incidents, isolation of hazard, denial of entry, etc.
- Recognition and Identification—Information gathering (container characteristics, shipping papers, markings, labels, etc.), use of reference materials and contacts (e.g., Emergency Response Guide, CHEMTREC), hazard categorization and assessment.

- Notification—Reporting requirements, reporting protocols, requesting assistance (hazmat teams, mutual-aid resources, other agencies), incident updates, documentation.
- Site Management and Scene Setup—Identification of hazmat incident levels, use of hazard zones and perimeters, location of decontamination area, placement of vehicles and supplies, etc.
- Emergency Decontamination—Emergency decontamination of personnel and equipment exposed to hazardous substances: methods of decontamination, decontamination procedures, handling and transporting victims.
- Defensive Actions—Procedures for specific First Responder defensive actions (e.g., damming, diking, diversion, using sorbents, application of firefighting foam).

SPECIAL HAZMAT OPERATIONS — Procedures covering special hazardous materials response situations and operations.

- Operating with Hazmat Teams—Pre-designated procedures for working with a hazmat team.
- Public Protection Options—Procedures for public evacuation or sheltering in-place: decision making, alerting the public, coordinating with law enforcement and community services agencies, initial and secondary evacuation, sheltering in-place, incident termination and re-entry.
- Environmental Restoration—Procedures for supporting and monitoring the activities of private remediation or cleanup contractors (may be the responsibility of another agency).

TECHNICAL RESCUE RISK MANAGEMENT — Procedures designed to minimize risk to responders and implement aspects of the department's health and safety program at technical rescue incidents.

- Personal Protective Equipment—Use of specialized technical rescue personal protective clothing and equipment at incidents.
- Lock Out/Tag Out—Procedures ensuring that all electrical and mechanical equipment at or near the rescue site is turned off and physically prevented from being inadvertently turned on.
- Air Monitoring—Procedures for conducting air monitoring at rescue incidents, addressing such factors as methods and action levels for air monitoring.

RESCUE OPERATIONS — Procedures that direct activities related to search and rescue operations, including vehicle rescue, agricultural rescue, and extrication from industrial equipment.

- Scene Stabilization—Assessment and control of hazards, stabilization of vehicles involved in motor vehicle accidents, crowd/bystander control.
- Rescue Equipment—Types, use, and protection of specialized rescue equipment.
- General Rescue Operations—Basic procedures for coordinating with other response agencies, locating endangered persons, setting rescue priorities, patient stabilization and protection, performing technical rescue, dealing with relatives/family liaison, etc.
- Rescue Teams—Procedures describing the use, structure, equipment, and operations of special rescue teams (may be a separate document/section from the general standard operating procedures).

SPECIAL RESCUE OPERATIONS — Procedures covering special rescue activities or programs.

1. Water Rescue—Response to and operations during surface, swift water, or dive rescues; may include specific information about equipment use and maintenance.
2. Confined Space Rescue—Response to and operations during confined space rescue situations; may also include information on equipment use and maintenance.
3. Structural Collapse Rescue—Response to and operations during a structural collapse; may also include information on equipment use and maintenance.
4. Rope Rescue—Response to and operations during a rope, vertical, or high-angle rescue situation; may include information on equipment use and maintenance.
5. Trench and Excavation Collapse—Response to and operations during a trench or excavation collapse incident; may include information on equipment use and maintenance.
6. Aircraft Extrication—Extrication of patients from aircraft; may include information on equipment use and maintenance.

EMERGENCY MANAGEMENT/DISASTER OPERATIONS

ORGANIZING FOR DISASTER SITUATIONS — Procedures that address modified organizational missions and personnel assignments during disaster operations.

1. Disaster Management—Activation of the department’s disaster operations plans and systems: emergency finance and procurement, resource management, personnel, information management, public information, etc.
2. EOC Organization—Functional structure of disaster operations to facilitate coordination with other community agencies and federal/state resources, including EOC functions (e.g., use of Emergency Support Function categories), staffing, and operational procedures.
3. ICS/EOC Interface—Local response agency coordination, mutual aid organization coordination, EOC/ field communications and documentation.
4. Activation Levels—Categories that define organizational mobilization requirements and actions depending on the nature of the emergency.
5. Personnel Assignments and Responsibilities—Changes in normal operating assignments and responsibilities to accommodate new disaster missions and responsibilities (family issues, temporary roles, teams, task forces, etc.).
6. Personnel Notification Procedures—Steps to locate and assign personnel, both during and after normal work hours in a disaster: communication methods, information conveyed, and procedures for tracking the process and resolving problems.
7. Disaster Training—Special systems and procedures to brief and train personnel on new roles, assignments, and work requirements.
8. Disaster Preparation—Procedures for securing department facilities and verifying the identity of personnel under disaster conditions; may include procedure for securing responders’ personal residences and families.

DISASTER OPERATIONS RISK MANAGEMENT — Procedures designed to minimize risk to responders and implement aspects of the department’s health and safety program in disaster operations.

1. Personal Protective Equipment—Use of turnout gear, SCBA, PASS devices/ alarms, and other equipment in disaster operations.
2. Disaster Operations Personal Safety—General precautions and procedures for department and responder actions to reduce risk during disaster operations.
3. Protection of Facilities and Equipment—Methods to protect fire department facilities, apparatus, and equipment from hazard impacts before and during disaster response.
4. Accountability of Personnel—Procedures for monitoring disaster operations and personnel to ensure that tasks are completed safely and effectively.

5. Suspending Operations—Designation of conditions in which personnel and apparatus are to remain in/ return to quarters or other safe location; may include notification of the EOC and the public of operational status.
6. Member Injuries and Fatalities—Procedures to evaluate and treat member injuries and to document and report injuries and fatalities that occur during disaster operations.

DISASTER OPERATIONS — Procedures providing general guidance for disaster operations, including methods and actions that differ from routine alarm response and coordination with other local, state, and federal disaster agencies and community groups.

1. Disaster Operations Center—Implementing and staffing “area commands” or “fire operations centers,” and integrating field activities with the EOC and other response agencies.
2. Adjusted Levels of Response—Changes in standard response strategies and resource levels, including the use of task forces and strike teams.
3. Disaster Communications—Changes in standard communication roles, protocols, and procedures to facilitate coordination with outside agencies and groups.
4. Response Unit Routing and Placement—Routing and placing equipment and personnel on the disaster scene to reflect the nature and requirements of the emergency situation.
5. Damage Assessment—Procedures for rapid damage assessment of response areas immediately following a disaster; may include a more thorough assessment of damage at fire department facilities.
6. Specialized Equipment—Identifying, accessing, and operating specialized equipment during disaster situations, including equipment controlled by outside agencies, private sector companies, and members of the public.
7. Building Safety Evaluations—Inspection priorities, initial rapid evaluation of damage to individual residential and commercial buildings, building posting classifications, working with building owners.
8. Community Emergency Response Teams—Integrating and working with CERTs and other emergent volunteer groups during disasters.
9. Mitigation Activities—Actions taken during disaster operations that reduce or eliminate the risk of future incidents: identifying opportunities, assessing options, establishing partnerships and collaborative activities, setting priorities, financing and accounting procedures, implementation and evaluation of activities.

10. Curtailing Disaster Operations—Steps for monitoring the disaster situation, evaluating hazards and response requirements, terminating disaster operations, and making the transition to normal operations.

DISASTER-SPECIFIC GUIDELINES — Procedures to address disaster missions and response requirements that are specific to different types of hazards. The need to develop SOPs in this category will vary significantly from community to community depending on potential hazard vulnerability and local comprehensive emergency management plans.

Potential hazards that might be addressed include the following:

1. Flood/dam break
2. Hurricane
3. Tornado
4. Earthquake/tsunami
5. Volcano eruption
6. Snow/ice storm
7. Drought
8. Civil Disturbance
9. Mass casualty
10. Aircraft crash
11. Train accident
12. Ship fire/accident
13. Terrorism incident
14. Explosion
15. Gas pipeline incident
16. Severe storm
17. Building collapse
18. Cave-in
19. Radioactive material emergency
20. Special events (Olympics, dignitary visit, etc.)
21. Disease epidemic

Some fire departments have never developed a formal set of SOPs. In other departments, operating procedures are incomplete, out-of-date, badly written, poorly understood, or inadequately enforced; the Study Team finds this to be the case with the CCVFRA SOPs. The CCVFRA has some SOPs, however, many are in need of updating and further

development. The Study Team took note of the lack of clerical support for the CCVFRA, which contributes to the problem of writing and updating SOPs.

Given the obvious advantages of well-designed SOPs, the Study Team recommends that Culpeper County conduct a systematic analysis of operations and activities for the purpose of determining the overall effectiveness of SOPs on an annual basis.

CONSISTENT DISPATCH BOX ASSIGNMENTS

Dispatch box assignments are utilized by the 9-1-1 Center in the dispatch process for all fire and EMS incidents occurring in the County. The Study Team noted several concerns regarding the current computer aided dispatch (CAD) program as being limited to assure that box assignments across the County are standard and based on dispatching the closest available unit of the proper number and type. The Study Team recommends further study regarding the CAD system to determine if the needs of the Culpeper County fire and rescue system are being met and what, if any, changes can be implemented to address concerns.

STAFFING

The Study Team considered criteria from the Commission on Fire Accreditation International (CFAI) as current and future staffing needs were reviewed as part of this Study.

The CFAI accreditation criteria related to fire department staffing are as follows:

Criterion 5A: Fire Suppression

5A/2 There is adequate staffing to meet objectives established by the agency...

Criterion 5G: Emergency Medical Services

5G.2 There is adequate staffing to meet the agency objectives.

These points and related details of the CFAI accreditation assessment process were considered by the Study Team as part of this effort.

Additionally, the Study Team considered the NFPA 1720 standard. The NFPA treats volunteer and career departments differently when it comes to response time standards. For those departments that are substantially (>80%) career, the applicable standard is NFPA 1710. For departments that are substantially (>80) volunteer, the applicable is NFPA 1720. NFPA 1720 that applies to volunteers who typically don't have personnel on-duty in stations and instead respond to from home, work or elsewhere. It is this fact of volunteer response that introduces a key variable into the picture. Volunteers cannot guarantee availability like career, on-duty staff can, unless the volunteers are in the station when actually alerted.

In NFPA 1720, Chapter 1, Administration defines the scope of the standard as containing minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by volunteer and combination fire departments.

The requirements in NFPA 1720 address functions and outcomes of fire department emergency service delivery, response capabilities, and resources. The standard contains minimum requirements for managing resources and systems, such as health and safety, incident management, training, communications, and pre-incident planning. More specifically, this standard addresses the strategic and system issues involving the organization, operation, and deployment of a fire department and does not address tactical operations at a specific emergency incident.

The purpose of the NFPA 1720 standard is to specify the minimum criteria addressing the effectiveness and efficiency of the volunteer and combination public fire suppression operations, emergency medical service, and special operations delivery in protecting the citizens of the jurisdiction.

Chapter 4, Organization, Operation, and Deployment, Section 4.3 Staffing and Deployment, states that the fire department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.

Figure 8.8 should be used by the authority having jurisdiction (AHJ) to determine staffing and response time objectives for structural firefighting, based on a low-hazard occupancy such as a 2000 ft² (186 m²), two-story, single-family home without basement and

exposures and the percentage accomplishment of those objectives for reporting purposes as required in the standard.

Figure 8.8
NFPA 1720 STAFFING DEPLOYMENT

Demand Zone	Demographics	Minimum Staff to Respond	Response Time (minutes)	Meets Objective (%)
Urban area	>1000 people/mi ²	15	9	90
Suburban area	500–1000 people/mi ²	10	10	80
Rural area	<500 people/mi ²	6	14	80
Remote area	Travel distance ≥ 8 mi	4	Directly dependent on travel distance	90
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

NFPA 1720 requires that personnel responding to fires and other emergencies shall be organized into company units or response teams and shall have required apparatus and equipment. Standard response assignments and procedures, including mutual aid response and mutual aid agreements predetermined by the location and nature of the reported incident, shall regulate the dispatch of companies, response groups, and command officers to fires and other emergency incidents.

Sustained Firefighting Operations requirements in NFPA 1720 require that the fire department shall have the capability for sustained operations, including fire suppression; engagement in search and rescue, forcible entry, ventilation, and preservation of property; accountability for personnel; the deployment of a dedicated rapid intervention crew (RIC); and provision of support activities for those situations that are beyond the capability of the initial attack.

INPUT FROM SERVICE PROVIDERS

As a point of information to the reader, the members of the fire and EMS services provided input to the Study Team relating to fire and EMS staffing, including the following:

1. I am a strong supporter of the volunteers, but some type of career back-up is needed;
2. Several companies need supplemental (career) staffing 24-hours per day, some need daytime and some night time;
3. Phase-in paid staffing;
4. Immediately implement better recruitment and retention for better staffing;
5. Some type of career service is needed;
6. Fix our stations so we can have volunteers in-house*;
7. Paid administrative and command personnel are needed to support the volunteers;
8. The County is in need of a combination paid/volunteer fire staffing system due to the volume of calls and population;
9. Implement volunteer live-in program – station fixes needed;
10. Educate the residents that the volunteers can't provide the same level of response that paid people can, we save them money;
11. The State needs to get rid of National Registry, that has caused staffing to fall;
12. We need one leader that has the authority to support the volunteers; and
13. There are no staffing issues, only urban expectations in a rural county.

* The need for significant station improvement was a central theme throughout the County.

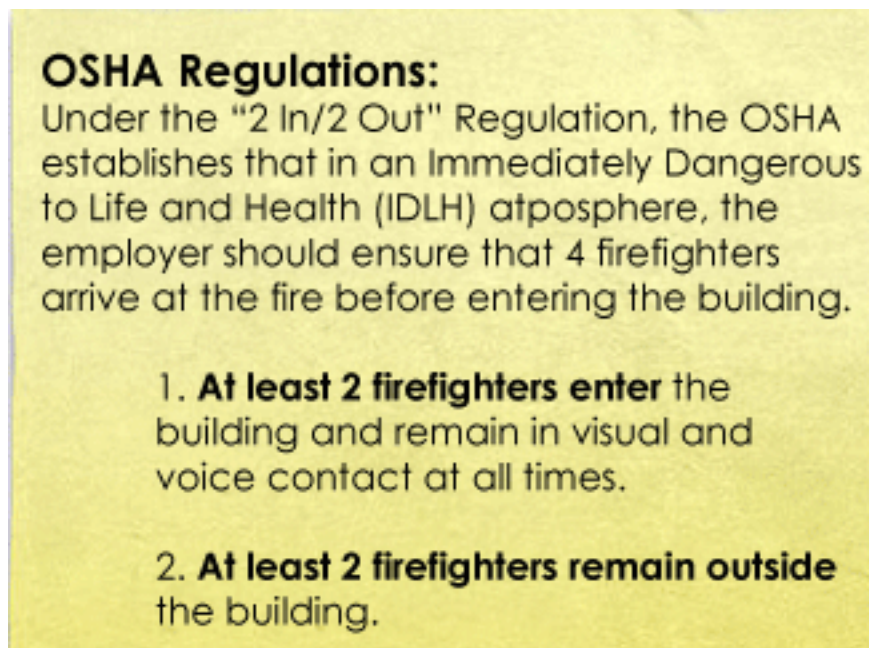
DETERMINING STAFFING NEEDS

In a career fire service, the major costs are associated with personnel. In Culpeper County, volunteer personnel perform firefighting services. In this type of system, the major costs relate to apparatus, equipment and stations because volunteer personnel provide the staffing. Notwithstanding the consideration of salaries, there is a need to fully and properly staff fire, rescue and EMS apparatus to ensure that an incident can be handled safely and effectively.

Depending on which of the various fire service philosophies is utilized, staffing has been justified from three individuals per piece of apparatus to as many as six. Through the

years, debate has continued over crew size. The focus of this debate has been the effort by firefighting groups to develop nationally recognized standards mandating firefighting crew sizes. Such standards have yet to be established. Crew size remains a local fire department or municipal decision to allow appropriate flexibility in dealing with the local environment. Whether the crew is formed in the fire station and responds to the scene on the apparatus or is formed at the scene as personnel arrive is also a local decision. However, there is little debate that the OSHA two in, two out rule applies regardless whether career or volunteer personnel are responding.

Figure 8.9
OSHA TWO IN, TWO OUT RULE



Source: OSHA website.

The variables in this crew size decision process involve a number of the following considerations that must be considered when applying the standards above:

1. Demographics of the community;
2. Numbers of fire and EMS calls to which the units respond;
3. Location of the fire stations and distance of travel for back-up;
4. Availability of mutual aid;
5. Type and age of buildings in the community;
6. Type of manufacturing and commerce which exists within the community;

7. Funding availability for staffing;
8. General physical condition of firefighter personnel;
9. Level and type of training provided to the firefighter personnel; and
10. Operational strategies and procedures utilized by the fire department.

These are some of the key factors that should be considered by a fire department or community to determine acceptable crew size. The decision regarding acceptable apparatus crew size is critical because of its direct impact on the level of fire and rescue service provided to the public and the safety of emergency response personnel. The size of the crew determines what life/property saving evolutions (fire attack, search and rescue and/or exposure protection, or EMS service) can be performed at the emergency incident and how quickly the evolutions can be completed.

A discussion of some examples of firefighter utilization may assist the reader to understand what types of functions they must perform and the impact of the crew size.

Firefighter Utilization

One might assume that if there are three personnel on an engine or truck, all three of those personnel are available for interior fire attack when they arrive on the scene of a working fire. That perception is not accurate. Most often, the unit driver/firefighter remains with the unit to operate the pump or the aerial ladder and set up equipment to support firefighting operations.

In a real situation, using engine company operations as an example, these are the functions initially performed by a crew of three:

Apparatus Operator

1. Remains with the pumper and sets and operates the pump;
2. Develops water supply;
3. Provides equipment to part of building;
4. Relays radio communications; and,
5. Guides apparatus placement for incoming units.

Officer

1. Provides initial incident command;
2. Sizes up the incident;
3. Performs circle check of building;
4. Directs crew of one in interior attack;
5. Is part of two-person interior fire attack crew;
6. Handles radio communications for crew; and,
7. Provides interior command as necessary.

Third Person

1. Lays out supply line;
2. Pulls and advances hand lines; and,
3. Begins interior fire attack with officer as crew of two.

The example above assumes there are no immediate incident complexities, such as medical or rescue emergencies. A similar example could be outlined for the staffing of a ladder truck. Raising ladders for rescue requires two to three firefighters, depending upon the length of the ladder. Ground ladders longer than 35 feet, such as those carried on an aerial truck, require as many as four firefighters to raise in place. If a rescue is to be made, ground ladders must be removed from their storage by firefighters, carried to the correct location and raised in place. Without sufficient personnel, this activity can be delayed, resulting in injury or death to civilians.

The purpose of these examples is to point out the need for the on-scene staffing of engines and ladder trucks with three personnel as the absolute minimum. Personnel on units staffed by one or two crewmembers cannot function as independent crews on the scene of emergencies. The firefighters must join with personnel from other units or await the arrival of volunteer personnel responding in personal vehicles to develop crews for fire attack. This very fact is often the reason for numerous apparatus responding to seemingly small incidents— a common concern of many elected officials.

The approach to unit staffing of one or two firefighters can seriously hinder successful fire attack operations, in addition to creating significant safety risks for firefighter injuries and liability exposure for the municipality. A study conducted by the Johns Hopkins University concluded that there were 38% more injuries per 100 alarms on companies (engines and trucks) where fewer than four firefighters are involved as the attack

crew—the crew initiating the interior fire attack. Recent studies conducted by the U.S. Department of Commerce’s National Institute of Standards and Technology (NIST) shows that the size of firefighting crews has a substantial effect on the fire service’s ability to protect lives and property in residential fires.

STAFFING OPTIONS

The Study Team has been asked about career staffing, volunteer staffing and combined staffing. To provide the reader with information on which to base opinions, the following information may be useful. Conceptually, there appears to be three basic alternatives for staffing fire and rescue units in Culpeper County. These are:

1. Option A: All paid staffing;
2. Option B: Combination of career and volunteer personnel; and
3. Option C: All volunteer staffing.

Option A - Provide all paid staffing of fire and rescue units.

The Culpeper County fire companies are staffed with volunteer personnel and supplemented by career Culpeper OES Units stationed in Central Culpeper. If the fire companies were to become fully paid, it would conservatively entail fully staffing eight-to-ten pumpers, two ladder trucks, two heavy rescue squads, and six to eight BLS/ALS ambulances. This staffing level, which doesn’t include command officers, would need to be maintained 24 hours a day, seven days a week. To staff one position on a 24-hour basis and allow time off for training, vacations and sick leave and on-the-job injuries requires 4.8 employees.

Estimated at the current primary apparatus level the number of paid personnel required for this option would be:

8 pumpers × 4 staff × 4.8	=	153.6 staff
2 ladder trucks × 4 staff × 4.8	=	19.2 staff
2 rescue squads × 4 staff × 4.8	=	19.2 staff
6 ALS/BLS Ambulances x 2 staff x 4.8	=	57.6 staff
TOTAL	=	<u>249.60 staff</u>

If the average cost of personnel, including fringe benefits, were \$57,000, the annual personnel costs would be approximately \$14,227,200.

The significant advantage of this alternative is:

1. There would be adequate personnel available at all times to immediately respond to an emergency and to meet all national standards;
2. Because they are available in the station, training could be conducted on a continuing basis and pre-planning could be completed; and
3. Officers would be available at all times to supervise the on-duty personnel.

The disadvantages to this alternative are:

1. The cost of providing fire and EMS service.
2. This staffing scenario would eliminate volunteer involvement in the system.

The Study Team does NOT recommend this approach.

Option B - Combination of volunteer and paid staffing of units.

Under this alternative, some paid firefighting personnel would be placed in the fire and rescue stations to ensure that there is a rapid initial response to calls, with the volunteers supplying the additional personnel to handle the incident. To ensure continuity of supervision, career officers could be assigned; they would ensure that all station work is performed, the career personnel conduct training, pre-planning is completed, discipline is enforced, and career personnel conduct the required building inspections.

The advantages of this alternative are:

1. Some savings — allows for maintaining part of the major cost savings since volunteers are utilized;
2. Ensures a rapid response for some of the emergency fire/EMS apparatus;
3. Allows the career personnel to handle small incidents without having to call out the volunteers; and,
4. Allows the career personnel to do the pre-planning and then train the volunteers.

The disadvantages of this alternative are:

1. More costly than an all-volunteer system;
2. No assurance that volunteers would be available at any given time to provide minimum staffing;
3. Potential conflict between career and volunteer personnel in the station; and,
4. A possible reduction in volunteers responding because they feel the career personnel will handle it.

Based on the experience of other similar jurisdictions, including a number in Virginia, this alternative can realistically work in Culpeper County for the long-term if an action plan to provide supportive actions to encourage and maintain strong volunteer activity is in place. **While this option may be needed in the future, the Study Team is not recommending this option at this time.**

Option C - Provide fire protection with an all-volunteer fire system, combination EMS staffing and career support staff.

This alternative provides fire protection using volunteers for fire protection, a combination of career and volunteer EMS providers and career support staff. To make this option viable, renovation of stations must occur to allow for duty crews and live-in fire and EMS personnel. The Study Team would recommend that the County create “one department,” with the current volunteer companies remaining intact and partnering with the new Department, that provides oversight, leadership and career support positions such as those outlined in this report (County Chief of Director, Fire Marshal, Training Officer and personnel, Volunteer Coordinator, Fleet and Facility Maintenance, etc.)

The advantages of this alternative are:

1. The costs are maintained at a low level;
2. The volunteers maintain their interest in continuing to provide service; and
3. There is community involvement in the provision of fire, rescue and EMS service delivery.

The major disadvantage of this alternative is the potential inability to rapidly respond to a call. The citizens of the community have no assurance that there will always be a rapid response to a call for help or that sufficient equipment to handle the incident will actually respond.

In summary, the citizens of Culpeper County are gaining major substantial benefits from its current volunteer fire, rescue and EMS system. To provide the same level of service with full-time paid personnel in the fire, rescue and EMS stations would be cost prohibitive. However, going forward, the County must fund major capital improvements to bring many of the fire and rescue stations up to standards and must fund the needed oversight and support staff to ensure the quality of services for the citizens and to support the volunteers needs so that they can continue to provide serviced long into the future.

STATION AND APPARATUS STAFFING

Moving forward with the recommendation of the Study Team in mind, the following sections discuss fire station and apparatus staffing in Culpeper County by the fire and rescue companies.

Station Staffing

For many years, Culpeper County operated under a strictly volunteer fire and rescue response system. However, in 1999, prompted in part by the increasing growth in population and the subsequent increases in emergency fire and rescue related calls, a decision was made to provide full-time supplemental staffing to the volunteers. The goal at that time was to ensure that the citizens of Culpeper County had additional emergency responders on duty and dedicated to respond when the volunteer providers were unavailable or when they were simply unable to respond to additional calls within a specific district when their own resources became exhausted.

The career Culpeper County staff work a four-shift system of rotating 24 hour duty assignments that ensure that the County continuously staffs a minimum of two advanced life support units. These career personnel are cross-trained to provide other levels of service to include:

- Hazmat Operations
- Vehicle Extrication
- Water Rescue
- Rope Rescue
- Trench Rescue
- Confined Space Rescue

- General Aviation Rescue
- Fire Ground Operations
- Structural Search And Rescue
- Wild Land Fire Operations
- Mass Casualty Operations
- Terrorism Awareness And Response

Since 2009, the career staff has been stationed at Culpeper County Station 12 located behind the Department of Emergency Services at 14022 Public Safety Court in Culpeper, Virginia.

While some companies attempt to staff their stations, onsite volunteer staffing at most of the fire and rescue stations is sparse. It appears that most of the Culpeper County fire and rescue companies do not place a high priority on volunteer onsite staffing of the stations. There are limited records available regarding station staffing by volunteers. However, as noted before, many of the comments received by the volunteer companies indicate that their reason for not requiring “onsite” staffing is due to fire station facility limitations.

Fire Apparatus Staffing

An important measure of the level of fire and EMS service delivery is the staffing on responding apparatus (engines, ladders, ambulances, heavy rescue squads, etc.). The fire and rescue companies vary in regard to the maintenance of consistent records regarding apparatus staffing.

It has been the Study Team’s experience that, nationally, most volunteer fire companies do not maintain and analyze specific apparatus and incident scene staffing data. However, for the future, the Study Team recommends that collecting and analyzing these data be a priority. For example, company and County officials need to be aware of the level of service provided, based on unit staffing data. When staffing shortages are identified based on specific data, action can then be considered, e.g., recruiting additional volunteer personnel or considered career firefighters.

The Study Team recommends that the County implement an emergency incident response staffing-related records management systems to include the following:

1. Number of personnel responding on each unit;
2. Number of officers responding on each unit;
3. Number and type of personnel responding in personal vehicles, and arrival times; and
4. Number and type of personnel responding to the station during an incident and remaining in the station to staff other apparatus not responding to the incident.

In addition, the Study Team recommends that a countywide policy requiring the gathering and periodic analysis of station and apparatus staffing data be adopted.

In-Station Standby Programs

There are a number of organized programs, such as in-station standby programs and live-in programs, used by volunteer departments to encourage or require volunteers to remain in the station. Standby refers to remaining at the station, available to respond. A standby can include a sleep-in, which refers to staying at the station overnight and responding to alarms that occur during that period.

The fire protection and EMS services in Culpeper County serve both a developed suburban area with residential and commercial areas and a vast rural area. It is the Study Team's observation that many volunteer fire and rescue companies serving similar communities organize their volunteer apparatus staffing by planning in-station standby programs or implementing live-in programs and rely on the immediate response of volunteers on apparatus to the emergency scene.

The establishment of in-station standby programs improves the consistency of station staffing and provides the opportunity for volunteer members to plan the use of their available time. Many successful in-station volunteer standby programs require each volunteer to serve on a volunteer crew and remain, for example, in the station from 5:00 p.m. to 7:00 a.m., one night a week. Each of the seven standby crews (Monday night crew, Tuesday night crew, etc.) would cover a weekend day shift (7:00 a.m. to 5:00 p.m.) on rotation to cover all weekend hours.

Implementation of volunteer standby programs decreases attrition of volunteer members by reducing "burn-out," which results from excessive time expectations. Expecting a small number of volunteer members to respond to all emergency incidents on a 24-hour

basis, every day, places significant pressures on individuals. Over a period of time, this type of demand can result in experienced, trained volunteers leaving the service.

As mentioned numerous times in the report, the Study Team recommends that the County fund the needed renovations of the fire station to accommodate onsite staffing and, the County should consider implementing other programs that encourage personnel to remain in the fire stations on a scheduled basis. Some items for consideration include:

1. Offer a standby food program to supplement the cost of meals for volunteers serving on standby crews;
2. Provide physical fitness equipment in the station;
3. Provide access to computer equipment for study or other productive uses;
4. Establish library and study areas in the station; and
5. Provide a living area to accommodate many members in a social setting.

The objective of any such programs should be to encourage volunteer personnel to remain at the station in order to provide timely response.

Career Fire and EMS Staffing

It is known that the implementation and integration of career firefighter and EMS staffing in a county that has historically been served by an all-volunteer service is a very sensitive issue. As previously discussed, there can be very negative impacts on future levels of volunteer participation, if the decision to utilize career staffing is not carefully considered. The current use of career EMS staffing in Culpeper County in a separate facility seems to work well. However, challenges can occur when career personnel are integrated into all volunteer facilities.

There are significant costs associated with the hiring of career personnel that must be clearly justified during a time of fiscal constraints. Such a decision must be based on the evidence that such a step is essential. And, to ensure success, such a decision should be made with the involvement and support of the volunteer leadership.

There are three key data elements that may be used to help determine the need for paid firefighter staffing:

1. The number of personnel responding on individual pieces of apparatus;

2. The time from department dispatch until apparatus is enroute; and
3. The rate of primary apparatus failure to respond when dispatched.

The high frequency of response of under-staffed apparatus, long times from dispatch to enroute and failures of apparatus to respond are strong indicators that additional volunteer personnel or career staffing is needed to maintain a reasonable level of fire and EMS service to the public.

As the number of emergency incidents increase, it becomes more difficult for volunteer personnel to meet the service demands, particularly during the daytime hours when many volunteers have their own full-time jobs.

In the judgment of the Study Team, the key data elements discussed above are not available at this time. In order for the County and the volunteer leadership to make appropriate staffing decisions in the future, a system to collect, correlate and analyze this type of data is needed.

As indicated previously, criteria should be established to determine the point at which career personnel would need to be hired in the future. In essence, these criteria represent the level at which the service to the public is considered to be severely negatively impacted by lack of staffing to justify the hiring of career firefighters and additional EMS personnel.

Lastly, if career firefighting personnel are hired at some point in the future in Culpeper County to staff fire, rescue and/or EMS stations, these positions should be supported by tax funds and should be County employees. This approach should assure consistent personnel administration and budgeting since all fire and EMS employees paid for by County tax funds could function under policies and procedures established by the County for all County employees and under policies and standard operating procedures established for all Culpeper fire and EMS services.

SUMMARY

Fire ground operational decisions must be made rapidly and consistently and not by committee after consultation. Even though every fire situation differs, the fire officer must make decisions based on hastily gathered available information.

The organization and operation of special operations functions appears to be adequate for the present call volume relating to hazmat, water and technical rescue incidents in Culpeper County. Establishing program goals and mutual aid partnerships will be important for each type of special operation service provided. In some cases, perhaps the best way to meet the established goals will be to utilize outside, mutual aid or regional resources instead of trying to be the sole-source provider of the service. The Culpeper County fire and rescue companies are to be commended for recognizing their limitations and securing mutual aid resources.

As with any specialty response force, access to good equipment and training are critical to the success of the organization. The County should dedicate funding to any approved special operation function above and beyond normal company funding.

Fire departments improve their effectiveness and the safety of their personnel with the initiation of pre-fire planning, incident command systems, policies and procedures and comprehensive firefighter safety programs. Reportedly, the fire companies do not conduct regular pre-fire planning and have not adopted consistent incident command system procedures or important safety-related SOPs in a number of important areas.

Culpeper County fire and rescue companies are staffed with volunteer personnel and backed up by County emergency services employees. These employees staff two ALS ambulances and many are cross-trained to assist in firefighting operations. County officials, residents and business owners should be very proud of the current fire and EMS services primarily due to existing volunteer staffing and effort.

For the future, there seems to be an opportunity to place more emphasis on volunteer, on-site staffing in some of the stations. Many very successful volunteer organizations place a high priority on taking action to maintain volunteers in the stations, such as standby-by programs, availability of computers and regularly used and well-managed facilities to accommodate overnight staff.

In order for the County to make appropriate staffing decisions in the future, a goal should be set to collect, correlate, and analyze basic service staffing and response time data.

OPTIONS & RECOMMENDATIONS

- 8-1 The Study Team found that a central database for pulling countywide data, to include system performance, fire loss, etc., does not exist. The Study Team recommends that developing and implementing such a database should be a priority.
- 8-2 The Study Team recommends that centralized reporting; data collection and performance management statistics should be required of all fire and rescue providers in the county and should be codified by County Ordinance.
- 8-3 The Study Team believes that the fire and rescue system workload should be monitored and reported monthly. and this data should be used in the determination of future needs of the service providers.
- 8-4 The Study Team recommends no change in the present level of heavy-duty extrication (rescue) services.
- 8-5 The Study Team encourages the County to aggressively promote the installation of automatic sprinklers in all new, residential structures regardless of structure size regardless of structure size and non-residential structures that have over 1,500 square feet of enclosed space.
- 8-6 The Study Team recommends that there be more water supply interoperability training between the departments.
- 8-7 The Study Team recommends that standard water tanker apparatus specifications be developed to assure maximum effectiveness in rural fire flow (water) delivery.
- 8-8 The Study Team recommends that Culpeper County appoint a Water Supply Coordinator (WSC) with the following responsibilities:
- Maintain the countywide water supply map book/resource guide that identifies the location and capability of all water supply sites within the County;
 - Recommend additional water supply sites for underground storage tanks and/or dry fire hydrants and manage state grants for such;

- Possess review sign-off authority on new fire protection water supply development; and
 - Coordinate the implementation of interoperability water supply training with the County Training for the local Fire and Rescue companies.
- 8-9 The Study Team recommends that the County fully implement the pre-fire planning SOG to strengthen its ability to be prepared for incidents.
- 8-10 The Study Team recommends that a Standard Operating Procedure (SOP) relating to post-incident analysis on defined fire, rescue, EMS, HAZMAT incidents and other special issue incidents be developed and implemented.
- 8-11 The Study Team recommends that one Incident Command System (ICS) be adopted, implemented and utilized countywide.
- 8-12 The Study Team recommends that there be regular and comprehensive training in the ICS and that the ICS must be utilized to the appropriate level on every emergency incident.
- 8-13 The Study Team recommends that all organizations be mandated to participate by joint training exercises involving the use of the ICS.
- 8-14 The volunteer officers operate on a “hand-shake” agreement, which currently allows any qualified command officer to take charge at an incident, irrespective of whose volunteer company jurisdiction the incident may be in. The Study Team recommends that an SOP codifying this practice be developed and adopted.
- 8-15 The Study Team recommends that a standard that establishes an integrated chain of command within Culpeper County should be developed and adopted.
- 8-16 The Study Team recommends establishing a standard requiring the establishment of company and countywide duty schedules.
- 8-17 The Study Team recommends that Culpeper County conduct a systematic analysis of operations and activities for the purpose of determining the overall effectiveness of SOPs on an annual basis.

- 8-18 The Study Team recommends further study regarding the CAD system to determine if the needs of the Culpeper County fire and rescue system are being met and what, if any, changes can be implemented to address concerns.
- 8-19 The Study Team would recommend that the County adopt Staffing Option C (provide fire protection with an all-volunteer fire system, combination EMS staffing and career support staff) at this time and create “one department,” with the current volunteer companies remaining in-tact and partnering with the new Department, that provides oversight, leadership and career support positions such as those outlined in this report (County Chief of Director, Fire Marshal, Training Officer and personnel, Volunteer Coordinator, Fleet and Facility Maintenance, etc.).
- 8-20 The Study Team recommends that collecting and analyzing specific apparatus and incident scene staffing data be a priority.
- 8-21 The Study Team recommends that the County implement an emergency incident response staffing-related records management systems to include the following:
- Number of personnel responding on each unit;
 - Number of officers responding on each unit;
 - Number and type of personnel responding in personal vehicles, and arrival times; and
 - Number and type of personnel responding to the station during an incident, and remaining in the station to staff other apparatus not responding to the incident.
- 8-22 The Study Team recommends that a countywide policy requiring the gathering and periodic analysis of station and apparatus staffing data be adopted.

- 8-23 The Study Team recommends that the County fund the needed renovations of the station to accommodate onsite staffing, and the County should consider implementing other programs that encourage personnel to remain in the fire stations on a scheduled basis. Some items for consideration include:
- Offering a standby food program to supplement the cost of meals for volunteers serving on standby crews;
 - Providing physical fitness equipment in the station;
 - Providing access to computer equipment for study or other productive uses;
 - Establishing library and study areas in the station; and,
 - Providing a living area to accommodate many members in a social setting.
- 8-24 The Study Team recommends the County dedicate funding to any approved special operation function above and beyond normal company funding.

CHAPTER NINE HEALTH AND SAFETY

This chapter provides a review of information on the important subject of firefighter and EMS provider safety and wellness. In addition, national standards and federal regulations that should be examined in order to determine applicability and compliance are reviewed. This information is provided as background with the understanding that it is important to know what impacts the well-being of emergency response personnel so fire service leaders and local government officials can plan and work toward providing the safest response environment as possible for their personnel. This chapter also provides an assessment of safety and health provisions in Culpeper County

OVERVIEW

Over the last 20 years, there has been an increasing focus on the safety of emergency responders, especially those who are engaged in the delivery of fire, rescue and EMS services. Several factors have contributed to this increased safety focus, including:

- An increase in the personal concerns of firefighters and medical responders for their own health and well-being;
- An increase in the costs associated with occupational illnesses and injuries;
- A better understanding of the impact that poor physical fitness has on a firefighter's ability to perform his or her job; and
- An increase in the regulation of occupational health.

Much of the emphasis on firefighter health and safety seems to have come from career fire departments or fire departments with paid staffing; primarily from those states where Occupational Safety and Health Administration (OSHA) standards apply to municipal workers. While this is the case, it must be recognized that the health and safety of volunteer emergency responders is equally as important.

Research has repeatedly shown that the physical and mental demands associated with firefighting and emergency medical care operations, coupled with the environmental dangers of extreme heat, humidity, and cold, create conditions that can have an adverse impact on the safety and health of firefighters or medical responders.

Throughout the course of their work, emergency responders come in contact with many health hazards (e.g., blood borne pathogens and hazardous materials). In addition, firefighting has been recognized for many years as one of the most hazardous occupations in the nation due to its number of occupational-related deaths and injuries. Several years ago, a United States Fire Administration (USFA) report said, “Firefighting is extremely strenuous physical work and is likely one of the most physically demanding activities that the human body performs.” It is important for all communities that provide fire protection services to remember that the best way to help their citizens in time of crisis is to have an emergency response force physically ready and capable of assisting those in need. This, of course, must be accomplished without the emergency responders themselves falling victim.

Over the last ten years, there have been more than 300,000 fire-scene related injuries and more than 1,000 firefighters have lost their lives in the line of duty in the United States. According to the USFA’s report, 106 firefighters died in the line of duty in 2013; 47 of these were volunteer firefighters.

Commission on Fire Accreditation International (CFAI)

The Commission on Fire Accreditation International (CFAI) emphasizes the importance of risk management and personnel safety in modern-day fire department operations. Progressive fire departments use this criterion, and others, as a benchmark for determining the best and safest service possible. These criteria are applicable to career, combination and volunteer departments. The CFAI *Risk Management and Personnel Safety* Criterion Performance Indicators, as referenced by the Study Team, are provided below:

Criterion 7F: Occupational Health and Safety and Risk Management

Occupational health and safety and risk management programs are established and designed to protect the organization and personnel from unnecessary injuries or losses from accidents or liability.

7F.1. A specific person or persons are assigned responsibility for implementing the occupational health and safety and risk management programs.

7F.2. Procedures are established for reporting, evaluating, addressing, and communicating workplace hazards as well as unsafe/unhealthy conditions and work practices.

7F.3. The agency documents steps taken to implement risk reduction and address identified workplace hazards.

7F.4. Procedures are established and communicated specifically to minimizing occupational exposure to communicable diseases or chemicals.

7F.5. An occupational health and safety training program is established and designed to instruct the workforce in general safe work practices, from point of initial employment through each job assignment and/or whenever new substances, new processes, procedures, or equipment are introduced. It provides specific instructions on operations and hazards specific to the agency.

7F.6. The agency uses near miss reporting to elevate the level of situational awareness in an effort to teach and share lessons learned from events that, except for a fortunate break in the chain of events, could have resulted in a fatality, injury or property damage.

7F.7. A process is in place to investigate and document accidents, injuries, legal actions, etc., which is supported by the agency's information management system.

NATIONAL FALLEN FIREFIGHTER SAFETY INITIATIVES

In 2005, the National Fallen Firefighters Foundation (NFFF), in conjunction with other United States fire service organizations, released a program known as the "16 Firefighter Life Safety Initiatives (FLSI)." The goal of the program is to develop a "blueprint for change" for the fire service. This national program is often referred to as the "Everyone Goes Home Program," and it aims to reduce the number of firefighter line-of-duty fatalities. With the number of firefighter line-of-duty deaths still a major concern, fire service leaders and organizations are convinced that dedicated, aggressive measures are needed if departments are to be serious about increasing firefighter safety.

The NFFF's "16 Firefighter Life Safety Initiatives" are as follows:

1. Define and advocate the need for a cultural change within the fire service relating to safety, incorporating leadership, management, supervision, accountability and personal responsibility.
2. Enhance the personal and organizational accountability for health and safety throughout the fire service.

3. Focus greater attention on the integration of risk management with incident management at all levels, including strategic, tactical, and planning responsibilities.
4. All firefighters must be empowered to stop unsafe practices.
5. Develop and implement national standards for training, qualifications, and certification (including regular recertification) that are equally applicable to all firefighters, based on the duties they are expected to perform.
6. Develop and implement national medical and physical fitness standards that are equally applicable to all firefighters, based on the duties they are expected to perform.
7. Create a national research agenda and data collection system that relates to the initiatives.
8. Utilize available technology wherever it can produce higher levels of health and safety.
9. Thoroughly investigate all firefighter fatalities, injuries, and near misses.
10. Grant programs should support the implementation of safe practices and/or mandate safe practices as an eligibility requirement.
11. National standards for emergency response policies and procedures should be developed and championed.
12. National protocols for response to violent incidents should be developed and championed.
13. Firefighters and their families must have access to counseling and psychological support.
14. Public education must receive more resources and be championed as a critical fire and life safety program.
15. Advocacy must be strengthened for the enforcement of codes and the installation of home fire sprinklers.
16. Safety must be a primary consideration in the design of apparatus and equipment.

National fire service organizations, such as the International Association of Fire Chiefs (IAFC), the International Association of Fire Fighters (IAFF) and the National Volunteer Council, see these initiatives as key elements in a plan to reduce firefighter injuries and deaths. In 2014, the National Fallen Firefighters Foundation convened another summit, “Tampa 2,” to assess how the fire service has responded in implementing the initiatives and, even more importantly, have they impacted the number

of line of duty deaths (LODD). It was also felt that the 16 life safety initiatives needed to be assessed to see if they are still applicable and to determine what actions need to be taken in the upcoming decade. It was the general consensus that the FLSI have helped the fire service over the last decade reduce firefighter injuries and LODDs and that at this time the 16 initiatives should remain. What was suggested is that more specific actions be recommended to achieve each goal and that there be consideration of actions that firefighters and officers can relate to and implement. The report from the summit, “Tampa 2: Carrying the Message into the Future,” is available for download online.

According to the National Fire Protection Association’s (NFPA) report, *Firefighter Fatalities in the United States—2014*, there was a total of 64 firefighter deaths while on duty in the U.S. This is one of the lowest losses since the NFPA started maintaining these statistics in 1977. The report sites that the majority of deaths (22) occurred while the firefighter was operating at a fire, while 11 firefighters died while responding to or returning from an emergency call. Nine firefighters died at non-fire emergencies, five at medical emergencies. The remaining occurred during training or at a variety of non-emergency on-duty activities.

The report also listed the causes of the fatal injuries or illnesses. The highest number of deaths (37) was caused by overexertion, stress and medical issues. Thirty-five of these were classified as sudden cardiac arrest. This has been the trend in almost every year since 1977.

While the emphasis in looking at firefighter health and wellness has focused on heart disease, in recent years we have seen concerns focused on other life threatening diseases. There are currently numerous research studies being done on various populations within the fire service on the incidence of what are believe to be occupational related cancers in firefighters. These are long-term studies, but even early results indicate a higher incidence of certain cancers in firefighters.

Another area of concern and study has been behavioral health issues. In recent years, there appears to be a high rate of suicides in the fire service. This is a difficult area to obtain data, but several groups have secured funding and are collecting data.

NATIONAL STANDARDS AND REGULATIONS

OSHA Regulations

Traditionally, safety and health regulations, whether federal, state, or local, are most often enacted due to an event or series of events that have caused death or harm to employees. For example, perhaps several workers unfortunately die while working in an underground storage tank (confined space). An investigation reveals that the workers had little training, poor safety equipment, and no plan for rescue. From that event and a series of other similar events nationwide, a federal regulation might be enacted that addresses working in and around confined spaces. In fact, 29 CFR 1910.146 *Permit-Required Confined Spaces* is an OSHA regulation (standard) that was enacted following that type of scenario.

There are numerous OSHA standards that affect private industry across the nation. Industry often protests that these standards cost millions of dollars in training and equipment just to be in compliance; however, the safety professionals realize that compliance with the standards improves worker health and safety, and that a healthy and safe workforce is a more productive workforce. Virginia has an OSHA-approved state plan that applies to private and public sector employees.

In relation to fire department operations, there are several OSHA regulations that have implications: 29 CFR 1910.95 *Occupational Noise Exposure*, 29 CFR 1910.120 *Hazardous Waste Operations and Emergency Response*, 29 CFR 1910.134 *Respiratory Protection*, 29 CFR 1910.146 *Permit-Required Confined Spaces*, and 29 CFR 1910.1200 *Hazard Communication*.

In terms of fire department safety and health, many of the OSHA regulations have been adopted into the National Fire Protection Association (NFPA) standards—especially NFPA 1500 *Standard on Fire Department Occupational Safety and Health Program, 2013 Edition*. For those municipal fire departments in the non-OSHA states, NFPA 1500 has proven to be a very effective tool when it comes to worker health and safety.

While volunteers may not be considered employees and, therefore, may not have to abide by OSHA regulations, the safety of volunteers is as important as that of career personnel. There are various interpretations of the OSHA regulations, however, many volunteer

services in Virginia and other states have decided to follow the regulations for the following reasons:

1. OSHA regulations have been developed to provide safe work environments for employees. If volunteers are working under the same circumstances, they should have the same protection.
2. While the law does not require compliance, if there is an incident involving injury or death of a volunteer, the department may be liable to the injured person or the survivors for allowing unsafe conditions that may have contributed to the harm.
3. If volunteers work with paid personnel who are covered by OSHA, it seems prudent to have everyone function under the same standards and work conditions.

In keeping with this philosophy, the Volunteer and Combination Officers Section (VCOS) of the International Association of Fire Chiefs (IAFC) published a statement regarding the 2-in/2-out provision of the OSHA Respiratory Standard, 29 CFR 1910.134.

“Yes, it is the opinion of the IAFC Volunteer Chief Officers Section that this regulation is applicable in all situations where interior firefighting operations are being conducted. VCOS believes it is applicable to the vast majority of volunteer departments in the United States. The VCOS supported the concept of 2-in/2-out when it was originally proposed and VCOS still supports these new regulations since they deal directly with the safety and well-being of our firefighters.”

While OSHA has stated that volunteer fire departments will not be affected by the regulation, VCOS believes that this will not be the case since 25 states align with the federal OSHA. The standard also applies to private incorporated fire and EMS companies including “employees” of incorporated volunteer companies. In addition, other non-OSHA states are giving the regulation consideration under the U.S. Environmental Protection Agency (EPA), the federal entity that takes the lead in non-OSHA states.

“The application of the 2-in/2-out rule can be argued by volunteer fire departments in many states. The reality is that 2-in/2-out is the right thing to do for the safety of our firefighters and each volunteer fire department should seek to implement new 2-in/2-out.” This powerful statement by VCOS has had a significant impact on volunteer departments. It clearly indicates that the demands and dangers of firefighting are the same whether one is paid or performs the job on a volunteer basis. Over the years the debate about adopting

and implementing policies and procedures for 2-in/2-out has almost disappeared. The process of having 2-in/2-out has become a standard of practice and safety.

National Standards

An industry “standard” is often thought of as an “accepted practice” that has been developed and considered a best practice for the industry which developed the standard. For the fire service, the industry standards are the NFPA Standards: they are known as consensus standards and are recognized by fire service professionals worldwide as the “best practices” for fire service related issues. Although none of the NFPA standards are regulatory in nature, they carry much of the same weight as a regulation where civil litigation is involved. Because the NFPA standards are recognized by fire service peers as industry practices, noncompliance with NFPA standards is often considered a “bad” business practice that can expose a fire department to liability issues. When fiscally possible, it is important for all fire departments to either comply with the NFPA standards or be in the compliance planning and development process.

CULPEPER COMPLIANCE WITH STANDARDS AND REGULATIONS

The Study Team’s review of Culpeper policies and procedures reveals a very limited number of safety-related policies. In talking with representatives from the various fire and rescue companies, it is obvious that they are aware of the existing national standards and are attempting to conform both at the department level and on a countywide basis. Some departments have a greater number of policies and procedures addressing safety and health situations, but there is a need for consistency countywide in order for recommendations for improvements in health and safety to be addressed on a countywide system basis.

NFPA 1500

Perhaps the most well-known fire service safety standard is NFPA 1500 *Standard on Fire Department Occupational Safety and Health Program, 2013 Edition*. First issued in 1987, NFPA 1500 was the first national fire service standard to ever address a comprehensive approach to fire department safety and health programs. The 2013 edition is the most current edition of the standard, which has been revised six times since 1987.

Even though NFPA 1500 is a voluntary consensus standard, it is the accepted industry practice for the fire service and has in many instances been used as an enforcing document when applying safety practices to traditional fire department operations. Senior fire officials all over the United States have used NFPA 1500 to improve the safe operation of their fire departments and to justify to state and local authorities the improvements needed in order to meet the standard.

The Study Team finds that Culpeper County Fire & Rescue departments are in compliance with a few parts of NFPA 1500. Significant work is needed in improving Culpeper County's safety programs. The following is a review of each chapter of NFPA 1500 in relationship to Culpeper County's operations.

Fire Department Administration

The NFPA 1500 standard requires various written documents in the forms of policies, procedures, and programs. The purpose of the written documents is to clearly define and communicate all of the department's safety programs to its personnel. By having established procedures and following those procedures, a fire department is more likely to take a safer approach in all of its operational arenas. This chapter of the standard identifies items such as:

1. Having written policies and standard operating procedures that document the requirements and operations of the department for both the emergency and non-emergency settings.
2. Having a written risk management plan that addresses all facets of the fire department's operations from scene safety to injury reporting to facility inspections.
3. Having a written occupational safety and health program that identifies specific goals and objectives for the prevention and elimination of accidents and occupational injuries, exposure to communicable disease, illnesses, and fatalities.
4. Ensuring that the department establishes and enforces rules, regulations, and standard operating procedures throughout the department.
5. Developing and implementing an accident investigation program that investigates all accidents, injuries, fatalities, illnesses and exposures as well as the investigation of all accidents involving fire department vehicles, equipment, and facilities.

6. Forming an Occupational Health and Health & Safety Committee for the purpose of conducting research, developing recommendations, and reviewing matters related to occupational safety and health within the department.
7. Having a recordkeeping system that requires the fire department to maintain a database on all accidents, injuries, illnesses, exposures, and deaths that are job related; this record keeping requirement also includes comprehensive health records (confidential), training records, and vehicle and equipment maintenance records.
8. Appointing a health and safety officer to the fire department in compliance with NFPA 1521 *Standard for Fire Department Safety Officer*. The responsibilities of the health and safety officer are many and they all relate to the communication and management of the department's risk management plan.
9. Having the health and safety officer ensure that all members of the department receive safety-related training for all aspects of their assigned duties and responsibilities; ensure that all accident and injury investigations are completed; ensure that safety supervision is provided at all training exercises and that all live fire training events are done in compliance with NFPA 1403 *Standard on Live Fire Training Evolutions*; and ensure that health and safety training programs and information are provided to the members of the department.
10. Having the department's health and safety officer be responsible for managing an accident and injury prevention program that includes items such as the evaluation of safe work practices in both the emergent and non-emergent settings, the training and certification of all fire department apparatus drivers and operators (NFPA 1002 *Standard for Fire Apparatus Driver/Operator Professional Qualifications*), the implementation of an accident and injury reporting system that accurately reflects causes and corrective actions, and the conducting of periodic facility inspections to ensure that workplaces are hazard-free for the employees.
11. Having the department's health and safety officer be responsible for ensuring that injury and accident data is gathered in a correct and useful manner, and responsible for issuing an annual report to fire department senior staff on the accidents, injuries, and exposures that occurred in the department.

Some of the individual departments in Culpeper County have various policies and procedures related to health and safety. When questioned about them, department representatives usually cited that they follow Culpeper County Volunteer Fire & Rescue Association's (CCVFRA) policies. CCVFRA has adopted several safety related policies such as Workers Compensation, Personal Accountability, Mayday and Survival, Rapid

Intervention Team and Emergency Incident Rehab. Many of the policies were adopted in 2008 and there is no indication that they have been reviewed since. There are a few that are more recently developed in 2014.

Over the past five years, there have been 38 Workers Compensation claims made by members of the CCVFRA through their insurance carrier and 16 claims by the career personnel. The recommendation below covers review of such claims internally, following HIPPA regulation, to determine where prevention efforts should be focused.

The Study Team recommends that the safety related policies and procedures be in a separate category. Right now they are found among the Operations policies and procedures. There is a need to develop additional safety related policies and procedures. To facilitate this and other actions that are needed to address safety and to come into compliance with more of the safety standards in the county, the Study Team also recommends that CCVFRA establish a Health and Safety Committee. Each department, including the career department, should have representation on the committee. Some of the duties and responsibilities of the committee should include:

- Development of a comprehensive risk management plan that not only addresses operational incident safety but incident reporting (injuries etc.) and in house safety at the stations. The NFPA 1500 has a template for a risk management plan as Appendix D and should be used to help develop the Culpeper County Risk Management Plan.
- Identification and prioritization of policies and procedures that need to be developed in addition to review of current documents.
- Coordination with the Training Coordinator to develop Safety Officer training program.
- Identification and development of safety training for operational members of the fire and rescue departments in Culpeper County.
- Development of a safety awareness program to ensure that safety is a priority consideration with all volunteer members in all of their activities.
- Develop a process for monitoring compliance with safety policies and procedures. This includes maintenance of data with quarterly review of incidents.
- Development of a prevention program to prevent injuries.

When the Study Team inquired regarding vehicular collisions, the data reported was limited. Information was available on three collisions since 2010; two involving emergency services' vehicles and one a pumper owned by a volunteer department. There were no privately owned vehicle (POV) collisions reported responding to a station to respond to emergency calls.

The Volunteer & Combination Section Officers of the International Association of Fire Chiefs along with the Safety, Health & Survival Section and National Volunteer Fire Council recently published and disseminate a document called "Let's Make a Difference." This document describes the best practices to minimize injuries and deaths, while using POV for emergency responses.

Although Culpeper County has been fortunate not to have any significant incidents involving volunteers responding in POVs to their stations, the national statistics are of concern. The VCOS document states that since 2003, 52 volunteers and paid on call firefighters have been killed responding or returning from calls in their POVs. This accounts for 13.4% of all volunteer fatalities during this period of time. Of those killed in POV responses 32.1% were 21 years old or younger.

The Study Team recommends that the CCVFRA develop and adopt policies and procedures for POV response. Several departments have a policy regarding responding in POV and these can be used as a start in development of a countywide policy. These should include age requirements, prerequisites, safe driving record, proof of personal auto liability insurance, inspection of POV for safety requirements, completion of an emergency vehicle driving course or equivalent and understanding of applicable department (association) policies and local and state laws. All driving related policies should include mandatory wearing of seat belts. The VCOS document contains several model policies and procedures for POV response that would be a good starting point for the CCVFRA in development of a countywide policy.

Since the introduction of safety initiatives, the issue of seat belt usage has risen in importance. Over the past 30 years, USFA statistics have shown that motor vehicle collisions are the second leading cause of firefighter line of duty deaths. In three-fourths of these fatalities it was found that the firefighters were not wearing their seat belts and that nearly one-fourth of all firefighters who died in motor vehicle collisions were ejected from the vehicle (Comstock & Maxwell, *Fire Engineering* January 2004).

Comstock and Maxwell (*Fire Engineering* January 2004) have asserted that although the service preaches safety, at times they act otherwise. Firefighters who drive without due regard and without wearing seat belts place their lives in jeopardy, as well as the lives of the passengers, other motorists, other firefighters and civilians. ALL fire departments should strive to lead by example in their communities.

The CCVFRA with the help of the Health and Safety Committee should put a high priority on developing and implementing a mandatory seat belt usage policy. There may be some modifications needed to current apparatus. Modifications need to be identified and funds made available for purchase and installation of seat belts. With the adoption of the policy the chiefs in each department should be held responsible to ensure compliance. Lives depend on it.

In line with efforts to improve vehicular safety the Study Team suggests a comprehensive written vehicle collision reporting policy that addresses all aspects of emergency vehicle collisions: driver training and certification; collision investigation and report writing; post-collision drug and alcohol screening; and driver remedial training. It is recommended that the Health & Safety Committee provide a report annually to the CCVFRA on any collisions and follow-up recommendation for prevention. The information from that report should be used to determine if there is a need for additional training requirements or policies and procedures.

Culpeper County does not have a designated health and safety officer as outlined in NFPA 1500. The Culpeper County Training Coordinator functions as an on-scene safety officer at significant emergency incidents and has some safety related duties and responsibilities. This position should also be the designated Health and Safety Officer for the County fire and rescue departments in accordance with NFPA 1500 and NFPA 1621 *Standard for Fire Department Safety Officer, 2015 Edition*. This individual should be responsible for supporting and working with the Health and Safety Committee as it takes on the responsibility for development of a comprehensive health and safety program.

The Study Team believes that the role of the fire department health and safety officer is as important as the role of the training coordinator: both serve critical functions of being the point of contact and manager for their areas of responsibility. Since the Training Coordinator will be handling training duties and responsibilities as well as health and safety and other miscellaneous duties, all of which are important to the fire

and EMS services in Culpeper County, the CCVFRA should consider adding an additional position to assist the Training Coordinator in support of the fire and EMS agencies in Culpeper County.

Training and Education

In terms of training and education, NFPA 1500 requires that the “fire department establish and maintain a training and education program with a goal of preventing occupational deaths, injuries, and illnesses.” The standard requires that all personnel be trained in the duties and responsibilities that they are expected to perform and that the training is in compliance with recognized standards. Other requirements identified in this chapter include:

1. Having all members who engage in firefighting activities trained to meet the requirements of NFPA 1001 *Standard for Fire Fighter Professional Qualifications*.
2. Having all apparatus drivers/operators meet the requirements of NFPA 1002 *Standard for Fire Apparatus Driver/Operator Professional Qualifications*.
3. Having all personnel required to perform technical rescue operations meet the requirements of NFPA 1006 *Standard for Rescue Technician Professional Qualifications*.
4. Having all officers (company and chief) meet the requirements of NFPA 1021 *Standard for Fire Officer Professional Qualifications*.
5. Having all personnel who respond to hazardous materials incidents meet the operational requirements of NFPA 472 *Standard for Professional Competence of Responders to Hazardous Materials Incidents*.
6. Having all personnel trained in accordance with the guidelines established in NFPA 1581 *Standard on Fire Department Infection Control Program*.
7. Ensuring that all training exercises are conducted under the supervision of a qualified instructor.
8. Ensuring that all personnel are trained in the use and care of their personal protective clothing and equipment.
9. Implementing a recurring training program that is based on a proficiency cycle with the goal of preventing the degradation of skills.

10. Providing training and education activities that are needed to support the certifications of the department's personnel.
11. Ensuring that all personnel practice assigned skill sets on a regularly scheduled basis.
12. Ensuring that all respiratory protection training is conducted in accordance with NFPA 1404 *Standard for Fire Service Respiratory Protection*.

Basically, NFPA 1500 requires that a fire department have a response force that is trained in accordance with national standards, that is given ample opportunity to practice their skills in training exercises, and that is expected to maintain the level of proficiency needed to perform their jobs safely and effectively.

As described in Chapter 6 (Training), Culpeper County emergency personnel do not fully meet many of the nationally recognized standards and practices for training and certification of its personnel. Recommendations for improvement are contained in that chapter.

Fire Apparatus, Equipment and Driver/Operators

NFPA 1500 addresses many areas related to the design, selection, and use of fire department apparatus and equipment. The standard also addresses the training requirements of drivers/operators. This section of the standard “considers health and safety as the primary concern in the design, construction, acquisition, operation, maintenance, inspection, and repair of all fire department apparatus and equipment.” Items addressed in this section of the standard include:

1. Ensuring that all new, fire department apparatus meet the requirements set forth in NFPA 1901 *Standard for Automotive Fire Apparatus*.
2. Ensuring that all fire department apparatus that is refurbished meet the requirements of NFPA 1912 *Standard for Fire Apparatus Refurbishing*.
3. Ensuring that all apparatus is operated by personnel who have successfully completed an approved driver training program. (NFPA 1451 *Standard for a Fire Service Vehicle Operator Training Program*.)
4. Having established response guidelines in the form of written and enforceable operating procedures.

5. Ensuring that all personnel use seat belts and other passenger restraint devices.
6. Having an established procedure for vehicle inspection, at least on a weekly basis, but within 24 hours of last use.
7. Having an established inspection and preventive maintenance program that meets the requirements of NFPA 1915 *Standard for Fire Apparatus Preventive Maintenance Program*.
8. Ensuring that all pumps, aerial devices, fire hoses, and ground ladders are tested annually in accordance with their corresponding NFPA standards.

The list shown above illustrates that almost every aspect of fire apparatus and equipment design, use, and maintenance is addressed by at least one NFPA standard. In the case of Culpeper County's apparatus, equipment, and operators, the Study Team is of the opinion that the department does a marginal job of maintaining the apparatus fleet and its equipment.

In terms of Culpeper County's compliance with this section of NFPA 1500, it was reported that all of the departments' operating fire and rescue apparatus have a contract with certified vendors for annual pump and ladder testing. Annual pump tests are important for a department's ISO rating and for the maintenance of fire department pumping apparatus. The Study Team commends the County departments for striving to be compliant with this part of the NFPA1500 standard.

Similarly, the department's ground ladders and aerial devices are also in need of an annual testing and preventive maintenance program. The ladder testing, as well as testing the aerial device, is contracted and being performed annually.

Protective Clothing and Equipment

One of the most comprehensive portions of the NFPA 1500 standard is the chapter on personal protective clothing and equipment. The primary focus of the protective equipment chapter is to ensure that each firefighter is provided with safe protective clothing and equipment, and that the clothing and equipment is cleaned and maintained on a regular basis in accordance with recommended practices. Items identified in this chapter include:

1. Ensuring that each firefighter is provided the protective clothing and equipment needed for the hazards to which he/she is expected to be exposed.
2. Ensuring that a written protective clothing and equipment use policy and program are in place and enforced by the department.
3. Ensuring that all structural firefighting protective clothing is cleaned at least once every six months in accordance with NFPA 1851 *Standard on the Selection, Care, and Maintenance of Structural Fire Fighting Protective Ensembles*.
4. Having all station/work uniforms comply with NFPA 1975 *Standard on Station/Work Uniforms for Fire and Emergency Services*.
5. Having all structural firefighting clothing design and manufacturing comply with NFPA 1971 *Standard on Protective Ensemble for Structural Fire Fighting*.
6. Having a written protective clothing and equipment inspection and maintenance program.
7. Ensuring that all EMS providers are provided with adequate protective clothing and equipment to reduce the likelihood of exposure to blood-borne and air-borne diseases.
8. Ensure that all hazardous materials incident responders are provided adequate protective clothing and equipment to protect them from the known chemical hazards.
9. Having a written, hazardous materials protective clothing and equipment inspection and maintenance program.
10. Having a written, respiratory protection program that addresses the selection, safe use, care, maintenance, and air quality of respiratory protection devices.
11. Having a written standard operating procedure for the use of respiratory protection equipment.
12. Ensuring that all personnel receive annual training and recertification on the use of respiratory protection equipment.
13. Ensuring that adequate breathing air (quality and quantity) exists for the recharging of respiratory protection equipment. (NFPA 1989 *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection*.)

14. Ensuring that all self-contained breathing apparatus (SCBA) meet the requirements of NFPA 1981 *Standard on Open-Circuit Self-Contained Breathing Apparatus for the Fire Service*.
15. Ensuring that all personnel receive an annual face-piece fit test.
16. Ensuring that all SCBA are equipped with a functional personal alert safety system (PASS) device.
17. Ensuring that all life safety rescue ropes are selected, used, maintained, and stored in accordance with NFPA 1983 *Standard on Fire Service Life Safety Rope and System Components*.
18. Ensuring that all personnel are provided eye protection and hearing protection devices that meet applicable design standards.

When reviewing compliance with this part of the NFPA 1500 standard, the Study Team found that Culpeper County departments are mostly in compliance. While the volunteer departments have their own preferences for the type and manufacturer of their PPE, they all have contracts with a laundry/cleaning vendor that cleans their protective gear annually (in lieu of at least once every six months or as needed following any major incidents). The Study Team was told that these contracts also include inspection of the gear to insure that seams and fabric are intact. While each individual department appears to be in compliance with the standard, it is recommended that the Safety and Health Committee develop a policy regarding care and maintenance of personal protection equipment to ensure standard compliance by all agencies in the Association. The policy should follow the recommendations of NFPA 1851 *Standard on Selection, Care and Maintenance of Structural Fire Fighting Protective Ensembles, 2014 Edition*.

A second area of deficiency concerning this section of the NFPA 1500 standard is the failure to have a written, respiratory protection program. The County recently secured an AFG grant to provide SCBA for all of the departments and standardize the equipment. All departments comply with annual fit testing of the face pieces and utilize representatives of the SCBA company for repair and testing of the equipment. The new SCBA also have PASS devices integrated into the equipment.

The Study Team recommends that the CCVFRA, through the Health & Safety Committee, develop and implement a written respiratory protection program that includes the use, maintenance, and repair of SCBA, as well as annual training and recertification

for personnel. This respiratory protection program must also include annual, face-piece fit testing and annual medical evaluations for all personnel expected to use SCBA (29 CFR Respiratory Protection). This will ensure that all departments are following the same practices and compliance.

During interviews it became apparent that providing hearing protection was not a priority for the departments. When asked, several departments stated that funds were not available to provide headsets for front line apparatus. The Study Team recommends that the Health and Safety Committee look into this issue and develop recommendations and a policy on hearing protection.

Emergency Operations

NFPA 1500 provides significant direction in the area of incident scene management. The goal of the standard is to provide a safe, organized approach to mitigating all emergencies with the intent of utilizing resources in an effective and efficient manner. Items identified in this part of the standard include:

1. Using an incident management system that meets the requirements of NFPA 1561 *Standard on Emergency Services Incident Management System*.
2. Creating and using an incident action plan during the mitigation of all emergencies.
3. Dividing the management of an incident into tactical level management components that maintain an effective span of control.
4. Implementing an accountability system that keeps track of all personnel working on the incident scene.
5. Ensuring that dispatch and radio communications are effective and uncomplicated, and that emergency procedures are clearly identified.
6. Ensuring that risk management occurs at each emergency scene so that the risks taken are appropriate for the benefits acquired.
7. Ensuring that a written accountability procedure is in place and that all personnel follow the procedure on a regular basis.
8. Ensuring that adequate staffing is present on-scene to initiate a safe and effective fire attack. (NFPA 1710 *Standard for the Organization and Deployment of Fire*

Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2010 Edition.)

9. Ensuring that all personnel assigned to a hazardous environment work in teams of two and that no one ever works alone.
10. Ensuring that before entry is made into a hazardous atmosphere, a “standby” or initial rapid intervention company made up of two personnel is available and in position to affect the rescue of firefighters entering the atmosphere (2-in/2-out policy).
11. Ensuring that as the incident grows and additional resources arrive on-scene that a designated rapid intervention company be established for the rescue of fire department personnel.
12. Having a written procedure for the rehabilitation of all personnel at incident scenes.
13. Having a written post-incident analysis procedure that requires the written review of all major incidents including major property losses, civilian deaths, significant firefighter injuries, and firefighter deaths. All post-incident analyses must be made available to all fire department personnel.

In terms of emergency operations, the Study Team found a limited number of written incident management policies and procedures. While the lack of written incident management procedures does not mean that response personnel fail in their mission, it does leave room for different crews to respond to and handle incidents differently. Perhaps more importantly, the lack of more definitive incident management procedures provides easier opportunity for operational liability matters to arise than when sound operational procedures are established and enforced.

The Study Team recommends that the CCVFRA immediately:

- Develop clear and consistent incident management policies and procedures.
- Implement consistent command officer training that requires all chief officers to be certified to the Fire Officer I level (and eventually to higher levels of Fire Officer certification as identified in the training chapter of this report) (NFPA 1021), Incident Scene Safety Officer, and ICS 300 and 400 levels (NIMS).

Culpeper County has no effective written policy or procedure regarding the protection (and rescue) of the initial arriving response crew. The standard practice in today's fire service is that no one operates alone in a hazardous environment unless a known civilian rescue exists; an initial team of firefighters cannot enter a hazardous atmosphere until a standby rescue team is available and in direct communication with the crew working inside a structure. This practice is commonly known as a 2-in/2-out policy. While the 2-in/2-out policy has been greatly debated throughout the fire service, it is the recommended business practice and is part of OSHA 29 CFR 1910.134 *Respiratory Protection*. The International Association of Fire Chiefs stated in an information document regarding the OSHA regulation that the "two-in/two-out provision may be one of the most important safety advances for firefighters in the past decade." The Fire Chief issues a memorandum in February 2014 regarding the importance of two-in/two-out and what the standard requires. There needs to be a procedure developed and implemented as to how and when this procedure is to be accomplished on incidents.

The Study Team realizes that the fire departments in Culpeper County engage the use of Rapid Intervention Teams (RIT); there is a SOG that calls for the third arriving Engine to assume RIT responsibilities. The Incident Commander should make sure that a qualified, trained RIT is available and established before entry into a hazard area.

The purpose of a RIT is to ensure that there is a dedicated team of properly trained and equipped firefighters on the scene at working incidents. The team's sole responsibility is to rescue any downed or trapped firefighters should that need arise. History has repeatedly shown that when a firefighter becomes trapped (a.k.a. MAYDAY) in a structure fire, it takes an entire team of individuals to locate and remove that trapped firefighter. History has also shown that when RIT crews are not used, the outcome for these trapped firefighters is often bleak. The recognized best practice in today's fire departments is the consistent use of RITs to help ensure firefighter safety on the incident scene.

The Study Team recommends that the CCVFRA develop a comprehensive structure fire response procedure that meets the requirements set forth in NFPA 1500. This procedure should address the use of an initial 2-out team, the transition to a RIT operation, and a process by which a MAYDAY situation is managed. The CCVFRA must also ensure that firefighting personnel are training in RIT procedures. During a

meeting with fire officials from Culpeper County, a fire instructor related that at the beginning of a Fire Fighter 1 class he asked how many students have served on a RIT. Over half of the class raised their hands — these were individual with no prior firefighting training.

During interviews, all of the departments were aware and said they use the countywide standard personnel accountability system. The purpose of an accountability system is to document and manage who is present on the incident scene. There are a number of different accountability systems in use throughout the United States today, but they all basically function the same—they keep track of where individual companies and firefighters are operating on the incident scene. The system utilized in Culpeper County consists of Velcro nametags, which are attached to a passport left with the Incident Commander. Should a MAYDAY situation occur, then the incident commander can refer to the accountability system (board or other tracking device) to quickly determine who is involved in the MAYDAY. As with the 2-out procedure and the RIT procedure, an accountability system (and procedure) is paramount to firefighter safety.

The final issue concerning this part of the NFPA 1500 standard is the lack of written post incident analyses (PIA). A PIA is an important tool in evaluating the operation of emergency response services. A PIA is not a disciplinary tool or a tool to find fault; it is a process by which a significant event is dissected and analyzed so that operational procedures can be validated and potentially lead to possible improvement.

A PIA plays an important role in a department's self-evaluation and growth. Without a formal PIA process, rumors can abound, false accusations can be generated, and a general distrust of other agencies can grow. Most departments said they frequently discuss incidents of any significance when they get back to the station and on occasion they may hold a more formal review and invite other departments that were engaged in the incident. The CCVFRA should develop and implement a post-incident analysis policy and procedure that is used for all significant fire/rescue/EMS incidents in which they respond. The definition of "significant" may be determined by the Fire Chief, but it should at least include multiple alarm fires, fires involving deaths and/or serious injuries, and mass casualty incidents.

Facility Safety

This part of the standard addresses the safe operation of fire department facilities. The goal is to ensure that all fire department personnel have a clean and safe environment in which to perform their non-emergency duties and responsibilities. Items included in this chapter are:

1. Ensuring that all fire department facilities comply with all legal, health, safety, building, and fire code requirements.
2. Ensuring that all fire stations have adequate facilities for disinfecting, cleaning, and storing various items in accordance with NFPA 1581 *Standard on Fire Department Infection Control Program*.
3. Ensuring that work sites have adequate fire and life safety protection systems in place such as smoke detectors, fire alarm systems, carbon monoxide detectors, and automatic sprinkler system.
4. Having a written procedure and program for the annual inspection of all work sites.

The Study Team found that several of the fire station facilities in Culpeper County are in need of attention. During its station visits, the Study Team found no presence of carbon monoxide detectors. Carbon monoxide is a lethal byproduct of internal combustion engines—such as a diesel engine—and is often known as the “silent killer” because of its chemical and physical properties. The Study Team recommends the fire and EMS departments immediately install carbon monoxide detectors in all fire stations.

Finally, the Study Team recommends that the CCVFRA in conjunction with the newly created Health & Safety Committee develop and implement a Facility Safety Inspection Program that complies with NFPA 1500 and ensures that a comprehensive safety inspection is completed at each of the CCVFRA facilities on an annual basis at a minimum. Stations that are determined to have safety concerns that need to be remedied should submit requests for funding in the recommended annual budget cycle.

Medical and Physical Requirements

An important feature of any firefighting force is the health and well-being of the firefighters. NFPA 1500 clearly identifies several key areas of health and wellness that directly impact the ability of firefighting forces to perform their duties. This chapter addresses health areas such as:

1. Ensuring that all candidates and active personnel meet the medical requirements of NFPA 1582 *Standard on Comprehensive Occupational Medical Program for Fire Departments*.
2. Ensuring that all personnel receive annual medical certification for the use of SCBA.
3. Ensuring that all personnel receive a physical performance evaluation in accordance with NFPA 1583 *Standard on Health-Related Fitness Program for Fire Fighters*
4. Having an established health and fitness program for all personnel in accordance with NFPA 1583 *Standard on Health-Related Fitness Program for Fire Fighters*.
5. Having a confidential and permanent personal health file maintained on each firefighter, which includes the results of all physical and medical evaluations; a history of all occupational injury and illnesses; and an accounting of all hazardous materials and communicable disease exposures.
6. Ensuring that the department has a written infection control program in accordance with NFPA 1581 *Standard on Fire Department Infection Control Program*.

The medical and physical requirements in the NFPA 1500 standard are best practices and something all departments should work towards and use in planning and allocating resources. In Culpeper County, physical examinations and assessment of physical capabilities are not part of the initial acceptance into the volunteer agencies nor are they incorporated as a requirement for emergency response. All of the departments have a medical history section as part of their application process. None perform physical assessments. Most felt this occurred as the individual went through training and their probation period. Individuals who lacked the strength necessary to perform required skills and procedures were helped to improve. Those that could not perform the necessary skills, which was reported as being rare, were dropped from membership.

Providing physical examinations especially to comply with the NPFA standards is costly. While members of the various departments were not opposed to having physicals for their members they expressed that they didn't have the financial resources and did not feel that the County would support the cost of physicals with all of the other needs in the service. There are many career firefighters who are volunteer members in Culper County and these individual usually receive complaint medical evaluations where they are employed.

The Study Team recommends that the CCVFRA consider asking the County for funding of physical examinations as a benefit for those members that do not receive them with their employment. The physicals do not have to initially be a requirement for membership, but the contracting medical group should provide data and recommendation as to whether this should be a requirement if they determine lack of medical assessment is a threat to health and safety of operational personnel.

The Study Team also found that the CCVFRA does not require any medical evaluation prior to a member being approved to wear a SCBA. It is made very clear in both the OSHA *Respiratory Protection* Standard and in NFPA 1500 that annual medical evaluations are needed for SCBA use—just like the requirement for an annual face-piece fit test. The CCVFRA and Health & Safety Committee should develop and implement a medical evaluation program for all active emergency responders who are expected to wear SCBA.

Each fire and EMS agency in Culpeper County is provided with Hepatitis B immunizations, which members can decline if they choose. Each department is responsible for identifying an Infection Control Coordinator to oversee mandatory infection control training and reporting and follow up of exposures. The Training Coordinator/Health and Safety Officer should be charged with oversight of this program.

Member Assistance and Wellness Program

Another important part of any fire department health and wellness program is access to help for substance abuse and/or work-related stress and exposures. Professionals in the emergency response field understand that the stresses associated with emergency response operations often lead to both physical and mental problems in responders.

This chapter of NFPA 1500 addresses the need for personnel assistance and wellness programs; it includes items, such as:

1. Providing personnel with a professional assistance program for help with substance abuse, stress, and personal problems that affect fire department work performance.
2. Having a written policy statement on alcohol and substance abuse.
3. Providing a wellness program for all personnel.

Career and volunteers alike are vulnerable to the stresses of emergency response. Both are faced not only with the situations they encounter on emergency calls that impact them as people, but they all have the stresses of balancing their personal lives with being part of an emergency response department. The most important component of any emergency response organization is its people; therefore, an organization should strive to take care of its members, both physically and mentally.

There needs to be provisions for individuals to access professional help when they find that they are experience personal issuing impacting their emotional health and well-being. The County should ensure that these types of services are available for the employees of the Emergency Services Department as well as volunteer members. The CCVFRA should have a written substance abuse policy that addresses aspects of alcohol and substance abuse as related to fire department operations.

Culpeper County has “Exposure Policy and Procedure” (SOG 130), which is NFPA compliant and addresses the various topics relevant to the prevention of contagious disease exposures and treatment thereof.

SUMMARY

The health and safety of firefighters and EMS personnel should be a major concern of those delivering the services, those receiving the services, and those helping to pay for the services. Individuals working in public safety, particularly firefighting and EMS personnel, perform one of the most physically demanding, and mentally stressful, and dangerous occupations in the nation. Quite often, fire and emergency medical personnel are subjected to environments that require rapid, physical and mental response with a minimum of preparation.

Traditionally, at the national level, there has been limited attention paid to the wellness and fitness of firefighters. However, over the past decade, the safety and health of all emergency services providers has come to the forefront of discussion. Fire and EMS departments nationwide are implementing programs that help improve and support the health and wellness of their workforce.

The fire and rescue departments in Culpeper County lack a comprehensive safety and health program and fall short in many areas of compliance with NFPA 1500. Many professionals in the fire service say that safety is an attitude that must be believed in, that must be communicated, and, most importantly, must be enacted. Much work is needed in order for Culpeper County to attain that position. The leadership and members of the County fire and rescue services and individual departments seem to be committed to the health and safety of personnel. They need to model the behaviors they expect from the membership. Resources, continued work in development of policies, procedures, practices and funds need to be made available to move forward in these efforts.

OPTIONS AND RECOMMENDATIONS

- 9-1 The Study Team recommends that the safety related policies and procedures be in a separate category in the CCVFRA SOGs.
- 9-2 The Study Team recommends that the CCVFRA establish a Health and Safety Committee. Each department, including the career department, should have representation on the committee. Some of the duties and responsibilities of the committee should include:
- Development of a comprehensive risk management plan that not only addresses operational incident safety but incident reporting (injuries, etc.) and in house safety at the stations. The NFPA 1500 has a template for a risk management plan as Appendix D and should be used to help develop the Culpeper County Risk Management Plan.
 - Identification and prioritization of policies and procedures that need to be developed in addition to review of current documents.
 - Coordination with the Training Coordinator to develop Safety Officer training program.

- Identification and development of safety training for operational members of the fire and rescue departments in Culpeper County.
 - Develop a process for monitoring compliance with safety policies and procedures. This includes maintenance of data with quarterly review of incidents.
 - Development of a prevention program to prevent injuries.
- 9-3 The Study Team recommends that the Training Coordinator should also be the designated Health and Safety Officer for the County fire and rescue departments in accordance with NFPA 1500 and NFPA 1621 *Standard for Fire Department Safety Officer, 2015 Edition*. This individual should be responsible for supporting and working with the Health and Safety Committee as it takes on the responsibility for development of a comprehensive health and safety program.
- 9-4 The Study Team recommends that the CCVFRA consider adding an additional position to assist the Training Coordinator in support of the fire and EMS agencies in Culpeper County.
- 9-5 The Study Team recommends that the CCVFRA develop and adopt policies and procedures for privately owned vehicle (POV) response. These should include age requirements, prerequisites, safe driving record, proof of personal auto liability insurance, inspection of POV for safety requirements, completion of an emergency vehicle driving course or equivalent and understanding of applicable department (association) policies and local and state laws. All driving related policies should include mandatory wearing of seat belts.
- 9-6 The Study Team recommends that the CCVFRA, with the help of the Health and Safety Committee, put a high priority on developing and implementing a mandatory seat belt usage policy and a process for ensuring compliance.
- 9-7 The Study Team suggests a comprehensive written vehicle collision reporting policy that addresses all aspects of emergency vehicle collisions: driver training and certification; collision investigation and report writing; post-collision drug and alcohol screening; and driver remedial training.

- 9-8 It is recommended that the Health & Safety Committee provide a report annually to the CCVFRA on any collisions and follow up recommendation for prevention.
- 9-9 The Study Team recommends that the Safety and Health Committee develop a policy regarding care and maintenance of personal protection equipment to ensure standard compliance by all agencies in the Association. The policy should follow the recommendations of NFPA 1851 *Standard on Selection, Care and Maintenance of Structural Fire Fighting Protective Ensembles, 2014 Edition*.
- 9-10 The Study Team recommends that the CCVFRA, through the Health & Safety Committee, develop and implement a written respiratory protection program that includes the use, maintenance, and repair of SCBA, as well as annual training and recertification for personnel.
- 9-11 The Study Team recommends that the Health and Safety Committee look into the lack of hearing protection for response personnel and develop recommendations and a policy on the purchase and use of hearing protection.
- 9-12 The Study Team recommends that the CCVFRA immediately:
- Develop clear and consistent incident management policies and procedures;
 - Implement consistent command officer training that requires all chief officers to be certified to the Fire Officer I level (and eventually to higher levels of Fire Officer certification as identified in the training chapter of this report) (NFPA 1021), Incident Scene Safety Officer, and ICS 300 and 400 levels (NIMS).
- 9-13 The Study Team recommends that the CCVFRA develop a comprehensive structure fire response procedure that meets the requirements set forth in NFPA 1500. This procedure should address the use of an initial 2-out team, the transition to a RIT operation, and a process by which a MAYDAY situation is managed.
- 9-14 The Study Team recommends that the CCVFRA develop and implement a post-incident analysis policy and procedure that is used for all significant fire/rescue/EMS incidents in which fire and EMS units respond.

- 9-15 The Study Team recommends the fire and EMS departments immediately install carbon monoxide detectors in all fire stations.
- 9-16 The Study Team recommends that the CCVFRA in conjunction with the newly created Health & Safety Committee develop and implement a Facility Safety Inspection Program that complies with NFPA 1500 and ensures that a comprehensive safety inspection is completed at each of the CCVFRA facility on an annual basis at a minimum.
- 9-17 The Study Team recommends that the CCVFRA consider asking the County for funding for physical examinations as a benefit for those members that do not receive them with their employment.
- 9-18 The Study Team recommends that the CCVFRA and Health & Safety Committee develop and implement a medical evaluation program for all active emergency responders who are expected to wear SCBA.
- 9-19 The Study Team recommends that the Training Coordinator/Health and Safety Officer should be charged with oversight of an Infection Control program.
- 9-20 The Study Team recommends that the County ensure that these types of employee assistance services are available for the employees of the Emergency Services Department, as well as volunteer members.
- 9-21 The Study Team recommends that the CCVFRA develop a written substance abuse policy that addresses aspects of alcohol and substance abuse as related to fire department operations.

CHAPTER TEN VOLUNTEER RECRUITMENT AND RETENTION

Recruitment and retention is one of the biggest challenges facing volunteer fire departments today. Volunteers comprise 70% of our nation's fire service, and it is critical that we keep the volunteer fire service strong, both now and in the future. This chapter provides information relative to fire, rescue and EMS volunteer recruitment and retention. Additionally, options and recommendations are outlined for consideration by Culpeper County.

The Study Team, as a very important aspect of this Study, noted that maintaining a strong volunteer focus for the staffing of the fire and EMS services provided in Culpeper County was essential. This fact was reiterated numerous times by officials, stakeholders and service providers during the interview process.

OVERVIEW OF VOLUNTEERISM

The Study Team's experience in volunteer fire, rescue and EMS services reflects various approaches and motivations for volunteer participation. This experience is useful in clarifying some opinions of volunteer service constraints and benefits.

Nationally, some volunteer fire departments seem to have a continual supply of individuals who want to volunteer their services. Others, however, have problems trying to recruit enough volunteers to maintain minimal staffing of units and subsequently may have difficulty retaining members and developing qualified volunteer leaders. The key seems to be meeting the needs or expectations of the volunteers, which are different in many respects from career personnel.

When an individual becomes a career firefighter/EMT, his/her initial concerns may be material needs, such as salaries, benefits and financial security, in addition to their desire to serve the public. The reason people volunteer their services are for much different reasons. Therefore, a review of accepted principles of motivation may be helpful. As Maslow's "Hierarchy of Needs" states that individuals are motivated by five levels of needs. These needs are in order of highest to lowest:

1. Physiological needs, such as food, water and shelter;
2. Safety needs, such as security, order and stability;
3. A sense of belonging, involving friendship, identification and love;
4. Esteem involving prestige, success and self-respect; and,
5. Self-actualization needs, which involve psychological needs from within.

Maslow said that people must meet their first need before being able to proceed to meeting the second need. The first need is usually met through regular employment and, in some cases, through a second job. In order to meet this first need, sometimes both spouses must work.

As employment and salary also provide for the safety and security needs, individuals move to the third level, which involves the need for a sense of belonging. One way to satisfy this need is by volunteering to provide some level of community services. It is from this pool of people that volunteers are available for firefighting and emergency medical services.

VOLUNTEERISM: THE PENNSYLVANIA EXPERIENCE

Nationally, fire service leaders across the United States and many municipal officials have come to realize that the volunteer fire service is in crisis. Likewise, in recent years, many knowledgeable people have determined that the volunteer fire service in a number of states, in particular, is at a crossroads. The Commonwealth of Pennsylvania is a case in point. A review of the current Pennsylvania experience could be beneficial as a tool to illustrate what may happen with substantial reduction in volunteer firefighters and what one state is doing to mitigate the problem.

According to Pennsylvania officials, there has been a significant reduction in recruitment and retention of individuals serving as volunteer fire/EMS service providers in recent years. As a result of this reported trend and the apparent resulting problems, the Commonwealth's Legislative Budget and Finance Committee developed and issued a report entitled "The Feasibility of Regionalizing Pennsylvania's Volunteer Fire Companies," commonly referred to as the House Resolution 148 report.

In the opinion of the Study Team, who have participated as members, managed volunteer systems and assessed and developed plans for more than 100 volunteer fire service

agencies over the last 30 years, the Pennsylvania House Resolution 148 report was a groundbreaking report shedding light on the challenges facing the volunteer fire and EMS service.

The 155-page comprehensive report, although issued in 2005, still holds true today and addresses many findings and recommendations relating to the problems resulting from the reduction in the availability of community members interested or willing to serve as volunteer fire and EMS service providers in Pennsylvania.

As stated in the report:

“For many years, volunteer fire companies functioned independently and were relatively stable both operationally and financially. This has changed dramatically over the past 20 years as fire companies and other emergency service providers face mounting challenges and service demands.”

The report continues by stating that “significant changes have occurred throughout the state (and the nation) in the past two decades that have altered the organization of volunteer fire services...,” including:

- Large losses of volunteer members;
- Challenges in recruiting new volunteers;
- Difficulties in retaining existing volunteers;
- Changing demographics;
- Changing work habits;
- Changing work locations; and
- Changing personal living habits.

These and other issues have reportedly had a negative impact on the volunteer fire services in Pennsylvania.

Some of the negative results identified were:

- Delayed responses;
- Failure to respond to calls;
- Insufficient staffing on apparatus for emergency calls;
- Greatly reduced ability to function as a business;

- Loss of revenue;
- Loss of personnel;
- Inability to maintain apparatus;
- Inability to maintain fire stations and facilities; and,
- Increased liabilities for volunteers and local governments.

The primary findings, relating to the problems and challenges facing the volunteer fire service outlined in the report include:

1. Pennsylvania is experiencing significant losses in the number of citizens who are willing to volunteer to provide fire, rescue, and emergency medical services.
2. Rising operating costs and fundraising demands are placing serious strains on the state's volunteer fire companies.
3. The history of the relationship between volunteer fire companies and local governments has been marked by independence rather than interdependence.
4. Pennsylvania has more fire companies than any other state and, in some cases, multiple companies in close proximity resulting in an unnecessary and inefficient overlap and duplication of firefighting resources.

These same findings could be said of the volunteer fire and EMS services in the Commonwealth of Virginia.

VOLUNTEERISM: THE VIRGINIA EXPERIENCE

In 2010 and 2012, the Virginia Department of Fire Programs (VD FP) conducted its Annual Needs Assessments Survey in the Commonwealth of Virginia. The results indicated that 76% (2010) and 72% (2012) of the departments needed more volunteer firefighters (Virginia Fire Service Needs Assessment: An annual profile of critical needs as identified by Virginia's Fire Service).

As a result of these findings, the Virginia Fire Chiefs Association identified the need to address the difficulties with finding, recruiting, training, and retaining qualified volunteer firefighters recruits in order to boost the numbers of overall volunteer firefighters. Partnering with the International Association of Fire Chiefs (IAFC), the VFCA applied for and received a Staffing for Adequate Fire and Emergency Response (SAFER) Grant

from the U.S. Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA) to recruit and retain front line volunteer firefighters.

Over the course of the grant performance period, the Virginia Fire Chiefs Association (VFCA) in partnership with the IAFC, George Mason University and the Environmental Systems Research Institute studied recruitment and retention best practices throughout the Commonwealth of Virginia. The program, called the Virginia Volunteer Workforce Solutions (VWS), compared traditional recruitment methods against newer technology-driven methods over a 16-month period between June 2011 and October 2012; 20 departments participated with 10 using traditional recruitment methods and 10 using technology-driven methods. Culpeper County participated in this study.

The major findings of the Virginia VWS program are:

1. The study had 1,539 potential recruits across 20 participating departments: 956 using traditional methods and 583 using the GIS methodology.
2. Referrals and the *personal asking* are key. Personal interaction with a potential firefighter is the overwhelming impetus to join; technology can help departments reach the right people at the right place in order to make the personal ask. GIS reports, social media, QR codes and online videos are all great tools to use in recruitment if done well and in conjunction with other more traditional recruitment methods.
3. For the GIS group, recruitment nights, printed and distributed materials, community posters, community-business contacts and media activities proved to be significant.
4. Fall had the highest recruitment totals (30%), with the highest monthly total in October. Summer had a similar total (29%) followed by winter (21%) and spring (20%). December had the lowest monthly total for each group.
5. Recruits listed special events (19%), friend/family referrals (17%) and webpage/internet searches (8%) as the leading mechanisms for learning about volunteer opportunities.
6. Service to the community (17%), EMS response (14%) and fire response (12%) were the top three motivators for recruits. The top five motivators accounted for 60% of the motivating factors for recruits.

7. The top three primary recruit occupations, which accounted for more than half of the responses, included student, health care and the military.
8. 73% of recruits thought social media was a good recruiting tool.
9. Overall, the majority of recruits volunteered for passive reasons (42%), such as referrals, combinations, memberships and departments, compared to active reasons (39%), such as events, displays, media and face-to-face activities.
10. Tenured firefighters are more likely to enjoy administrative duties and less likely to enjoy response duties and community outreach.
11. Firefighters believe people leave the fire service due to a lack of leadership, poor fit with others and politics within the departments.
12. Departments with a full-time volunteer recruitment coordinator, a centralized application process and standardized policies and procedures were more successful in their recruiting efforts.
13. Departments with antiquated bylaws, application processes and a lack of an immediate and coordinated response to potential recruits were less successful in their recruiting efforts.
14. Departments with mentorship and leadership programs were more successful in their recruitment and retention efforts.
15. Based on these findings, departments should examine three main areas to improve volunteer recruitment and retention: leadership, processes and personnel. Following are recommendations based on the findings of the VWS program.

The Virginia VWS program recommended that volunteer leadership:

1. Ensure all personnel create an environment that includes a sense of belonging, achievement, increased responsibility, self-respect, challenge, recognition, reward, growth and development. Make sure personnel are treated equally and eliminate all hostile work environments.
2. Implement a leadership program to enhance leadership on the fire ground and in the firehouse.
3. Establish and enforce leadership and promotional guidelines and training requirements to ensure solid leadership and equity within your organization.
4. Implement a mentorship program.

The Virginia VWS program recommended that the process to be used include:

1. Create a recruitment and retention plan and stick to it. Develop strategies that will work for *your* department.
2. Recruitment and retention are ongoing processes and they must be managed and executed on a continual basis, not every couple of months or years.
3. Establish policies, procedures and standards so members know how to perform as agents of the organization (operations, training, communication, etc.).
4. Update bylaws and the recruit application and approval processes to meet today's challenges.
5. Establish a centralized application process.
6. Conduct exit interviews in order to identify the reasons for leaving, then address any issues.

Lastly, the Virginia VWS program found that a solid volunteer recruitment and retention program required:

1. Involvement of *all* personnel in recruitment and retention efforts.
2. That the best recruiters are current, satisfied volunteers who can relate their positive experiences and encourage others to become involved. Ensure that current volunteers act, speak and appear in a positive light. Personnel should be trained on department information and talking points.
3. Maintaining amicable relationships between independent fire companies and between volunteer and career personnel to achieve positive recruitments efforts.
4. Assigning a full-time volunteer coordinator.

Earlier in this report (Chapter 2, Organization and Administration), the Study Team recommended that the County hire a full-time volunteer recruitment coordinator. In addition, the Study Team recommends that the County formally adopt the recommendations (outlined above) of the Virginia VWS report.

The specific Culpeper County findings outlined in the Virginia VWS program found that more than one-third of Culpeper County recruits listed friend/family referral as their method of learning about volunteering in the fire service. Service to the community was

the leading motivator for recruits, and the remainder of the top five motivators includes EMS response, friendship, keeps me in shape, and personal fulfillment.

The Virginia VWS study found that the analysis results for Culpeper would need further evaluation with the collection of additional activities in future months – beyond the study period. However, in reviewing this data, our Study Team found that our evaluation of the current volunteer recruitment efforts correlated with the findings of the Virginia VWS program.

Essentially, there is little, if any, organized and consistent effort to recruit volunteers. In fact, Figure 10.1, the analysis of Culpeper County volunteers recruitment activities conducted during the VA VWS study, is illustrative of this situation and our Study Team found this to still be the case.

To put this into further perspective, Culpeper County ranked sixth within the VA VMS study group for population. Neighboring Fauquier County ranked seventh for total population. However, Fauquier County reported 246 new recruits (see Figure 10.2). Sixty-four percent of the recruits attended special events prior to taking the additional step of contacting the department and inquiring about volunteer initiatives. A combination of factors (3%) and posters (13%) brought in another 16% of the recruits. The leading motivations for the recruits in Fauquier County were service to the community, EMS response, and friendship.

Figure 10.1
VA VWS REPORT - CULPEPER RECRUITMENT ACTIVITY ANALYSIS

Culpeper Departmental Activities									
Month	Recruit Tracking Forms	Outreach events	Recruitment night/event	Potential recruits	New members	Fire station recruitment activities	Fundraising events	Public safety events	School visits
May	0	0	0	0	0	0	0	0	0
June	7	0	0	7	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0
Sept	0	0	0	0	0	0	0	0	0
October	4	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	6	0	0
December	0	0	0	0	0	0	0	0	0
January	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0
May12	0	0	0	0	0	0	0	0	0
June12	0	0	0	0	0	0	0	0	0
July12	0	0	0	0	0	0	0	0	0
August12	0	0	0	0	0	0	0	0	0
September12	0	0	0	0	0	0	0	0	0
October12	0	0	0	0	0	0	0	0	0
Totals	11	0	0	7	0	0	6	0	0

Culpeper Promotional Materials				Face to Face Contact Activities		
Month	Distributed promotional materials	Banner display	Community posters	Speaking engagements	Community business contacts	Who contacted
May	0	0	0	0	0	0
June	2	0	14	0	0	0
July	0	0	0	0	0	0
August	0	0	0	0	0	0
Sept	0	0	0	0	0	0
October	0	0	0	0	0	0
November	0	1	0	0	0	0
December	0	0	0	0	0	0
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	0	0	0	0	0
April	0	0	0	0	0	0
May12	0	0	0	0	0	0
June12	0	0	0	0	0	0
July12	0	0	0	0	0	0
August12	0	0	0	0	0	0
September12	0	0	0	0	0	0
October12	0	0	0	0	0	0
Totals	2	1	14	0	0	0

Figure 10.2
VIRGINIA VWS REPORT –
FAUQUIER COUNTY RECRUITMENT ACTIVITY ANALYSIS

Fauquier Departmental Activities									
Month	Recruit Tracking Forms	Outreach events	Recruitment night/event	Potential recruits	New members	Fire station recruitment activities	Fundraising events	Public safety events	School visits
Sept	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0
January	0	2	0	0	0	1	2	0	1
February	7	2	1	9	3	0	9	0	3
March	8	3	0	11	3	0	11	0	0
April	4	0	0	0	0	0	0	0	0
May12	23	4	4	23	2	1	3	3	0
June12	22	6	5	24	3	3	9	0	0
July12	77	7	5	75	2	0	3	4	0
August12	24	4	4	2	1	0	2	0	0
September12	38	0	0	0	0	0	0	0	0
October12	43	11	8	3	5	2	12	2	5
Totals	246	39	27	147	19	7	51	9	9

Fauquier Promotional Materials				Face to Face Contact Activities		
Month	Distributed promotional materials	Banner display	Community posters	Speaking engagements	Community business contacts	Who contacted
Sept	0	0	0	0	0	0
October	0	0	0	0	0	0
November	0	0	0	0	0	0
December	0	0	0	0	0	0
January	16	2	50	0	2	Local businesses and libraries
February	900	2	75	1	75	local businesses, churches, schools
March	35	4	47	2	173	Local businesses, Churches, Lodges, Clubs, Chamber of Commerce
April	0	0	0	0	0	0
May12	500	3	40	1	41	Nokesville FD; Businesses
June12	278	1	70	3	70	Businesses
July12	200	0	63	0	60	Businesses and organizations
August12	400	3	350	1	345	Businesses, organizations, churches, clubs
September12	0	0	0	0	0	0
October12	185	3	27	0	35	Businesses
Totals	2514	18	722	8	801	See Above

The federally funded Staffing for Adequate Fire and Emergency Response Grants (SAFER) Grant Program, offered through the U.S. Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA), Grant Programs Directorate (GPD), Assistance to Firefighters Grant Program (AFG) provides funding directly to fire departments and national, state, local, or tribal organizations representing the interests of volunteer firefighters to assist them in increasing the number of firefighters to help fire departments meet industry minimum standards and attain 24-hour staffing to protect communities from fire and fire related hazards, and to fulfill traditional missions of fire departments. The SAFER Grant Program is comprised of two categories:

1. Hiring of Firefighters

- Including subcategories for rehiring, retention, attrition, and new hires.
- Career, combination, and volunteer fire departments are eligible to apply

2. Recruitment and Retention of Volunteer Firefighters

- Combination fire departments, volunteer fire departments, and national, state, local, or tribal organizations that represent the interests of volunteer firefighters are eligible to apply

Applicants must correlate the activities for which funding is being requested and the identified recruitment or retention problems or issues being addressed. Applicants who propose to focus on retention of volunteers will receive equal consideration as applicants focusing on recruitment of volunteers. A focus on retention may include providing incentives for volunteer firefighter members to continue service in a fire department.

All funded activities under Recruitment and Retention must be governed by formally adopted Standard Operating Procedures (SOPs). Minimally, these SOPs should specify who qualifies for each of the incentives, specific requirements for earning the incentives, and the disposition of the awarded incentives if an individual fails to fulfill the stipulations.

FEMA will not fund any activities that are covered under a department's normal operating budget. Much like the rules governing the Virginia Fire Programs and "Four-for-Life" funding, federal funding should not be used to supplant an existing activity or program.

Examples of initiatives that may receive funding include, but are not limited to:

- Nominal stipends for firefighters where the primary duty is an operational assignment (fire suppression) regardless of collateral duties.
- Insurance packages such as Accidental Death and Dismemberment (AD&D), disability, health, dental, life, etc.
- Reimbursement to members while attending required basic training (e.g., compensation for lost wages, mileage, lodging, per diem). Note that costs for mileage, lodging, and per diem will only be reimbursed at the Federal Government rate.
- Marketing costs to recruit new volunteer members
- Station internet access
- Computers in common areas
- LED/electronic signs (note: 75 percent of usage must be dedicated to Recruitment and Retention activities – additional restrictions apply; see the full FOA, Section IV. Funding Restrictions, A. Restrictions on Use of Award Funds, iv. Other Cost Requirements, Environmental Planning and Historic Preservation [EHP] Compliance)
- One set of station duty uniforms for each new recruit only (pants, shirts, hats, and boots)
- Non-uniform clothing (t-shirts, jackets, or pullovers) as part of an award program only
- Station modifications (e.g., converting space into bunkroom - restrictions apply)
- Salary and benefit costs for a recruitment and retention coordinator. Salary and benefit costs should be based on reliable market research (see earnings information published by the US Bureau of Labor Statistics).
- Physicals for new recruits only. All grant-funded physicals must meet NFPA 1582 standards (Chapter 6, Medical Evaluations of Candidates 6.1 and Chapter 9, Essential Job Tasks — Specific Evaluation of Medical Conditions in Members). The cost of physicals should be based on local physician or health center prices.
- Explorer, cadet, and mentoring programs.
- Staffing needs assessment
- Administrative costs up to three percent of the total awarded amount in accordance with 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Applicants may apply for administrative costs if the costs are directly related to the implementation of the program for

which they are applying. Administrative costs are identifiable costs directly associated with the implementation and management of the grant and cannot exceed three percent of the award.

- Tuition assistance for higher education (including college tuition and not limited to firefighter training or education) and professional certifications (Note: coursework or certifications in this category should be more advanced than what the department typically funds for required minimum-staffing requirements)
- Books and lab fees for higher education or professional certification (not including computers)
- Costs for training not currently covered under the department's operating budget. Training requests must be detailed in the Request Details and Narrative Statement sections of the application and must closely correlate to the applicant's recruitment and/or retention goals.
- Awards program for participation in operational activities, like operational training and/or responding to incidents (e.g., length of service plaques, gift cards, non-uniform clothing)
- New Length of Service Award Programs (LOSAP)
- Mileage reimbursement for operational activities (NOTE: mileage will only be reimbursed at the Federal Government rate)
- Applications for funding in the Recruitment and Retention category could include activities requiring up to four years to complete (with proper justification)
- Indirect costs for national, state, local, or tribal volunteer firefighter interest organizations that have a federally approved indirect cost rate agreement
- Exercise equipment and gym memberships limited to no more than \$10,000 (total per grant award).
- Grant writer fees.

The Study Team recommends that the County apply for SAFER funding, as often as allowed, to assist with the implementation of the recommendations for recruitment and retention in the chapter.

INPUT FROM CULPEPER FIRE AND EMS SERVICES PROVIDERS

The Study Team was provided with a substantial amount of input from Culpeper County fire and EMS service providers that should be considered as part of this Plan. The points made include:

1. With the increase in responses and the training required, there are few people that can take the time from their normal jobs to volunteer;
2. The life span for service of a young volunteer is shorter today because of job opportunities in the emergency services field;
3. National Registry requirements for EMS providers are driving away volunteers;
4. Real, tangible volunteer retention incentives are needed beyond the “free” county sticker;
5. More effective use of the media should be incorporated in the program;
6. The County should offer a property tax credit for active volunteers who own homes in the County;
7. There should be a big public awareness program by THE COUNTY so that the community would be more aware of what the volunteer fire and EMS members do;
8. A college tuition reimbursement program is needed to attract student volunteers;
9. Use of “live-in” volunteers;
10. Decent facilities that make volunteers want to be on station for immediate response; and
11. Full time volunteer recruiter.

RECRUITMENT OF VOLUNTEERS

Each volunteer for the Fire and EMS Services is an ambassador who can encourage individuals to apply for membership. While incentives, as listed in this section, are very important, personal recruitment by the current members is vital to the continued success of the volunteer program.

Many counties and cities with volunteer fire departments use the following methods to recruit new volunteers:include:

1. Development and distribution of brochure material;
2. Word of mouth;
3. Family tradition;
4. Interest after having been a customer of the fire/EMS service;
5. Area-wide poster placement in businesses, etc.;
6. Door-to-door neighborhood recruitment;
7. CPR and EMT-A classes open to the public;
8. Televised public service announcements;
9. Radio public service announcements; and
10. Speakers sent to community group meetings and high schools to promote volunteerism.

High School Cadet Program

High school cadet programs have been utilized by many fire departments across the United States to recruit and train high school students in fire and EMS work. This approach can be an excellent recruiting tool. and the Study Team recommends that this program should be reconsidered in Culpeper County.

Junior Firefighter/EMT Program

Many fire and EMS services across the U.S. have implemented junior firefighter/EMT programs. Junior firefighter programs are for teenagers between the ages of 16 and 18. These young men and women join a fire or EMS department, participate in appropriate training, fire department activities and provide support in limited ways in active operations. As these members become 18 years old they become eligible to be active full-service firefighter EMTs.

Properly managed junior firefighter/EMT programs have successfully been a source of productive fire/EMS staffs when becoming age 18. Culpeper County now allows for junior firefighter/EMT's to "fully participate." The Study Team addressed this issue in Chapter 2 of this report, recommending that the County amend the County Code to only allow those individuals 18 years and older to participate "fully in all activities of a

volunteer fire company.” And, while this recommendation may be seen as a hindrance in recruiting volunteers, the Study Team believes that policies can be put in place to allow the volunteer companies to recruit and utilize 16 to 18 year olds in many capacities, including obtaining all necessary training so that they ready to fully participate in the activities of the department when they reach the age of 18.

Student Live-in Programs

A firefighter recruitment tool that has been used very effectively by a number of volunteer fire and EMS companies that are in reasonably close proximity to colleges and universities is the implementation of a student live-in program. A number of Baltimore and Washington D.C area fire departments have successful student live-in programs.

A student live-in program essentially provides students interested in serving as volunteers a “rent free” place to live in return for staffing the fire station on nights and weekends, while attending their chosen educational institution during normal daytime class hours. The host fire or rescue company provides program organization, oversight, bunkroom and related facilities at the fire station. Typically, prospective students entering such a program at a fire company would enter the program with at least basic firefighter rescuer training. Subsequent to becoming part of the program, participating students would normally be expected to take additional training courses, as determined appropriate, and would be expected to participate in ongoing in-station drill and other required activities.

To be effective, student live-in programs need to be well organized and well managed through comprehensive rules and guidelines, as well as have direct oversight provided by the officers of the fire company. If left unmanaged, student live-in programs can present significant disciplinary and other more serious problems that must be dealt with by company leaders. Additionally, fire station facilities would need to be remodeled or constructed with this program in mind.

As an example, one of the most successful student live-in programs observed by the Study Team has been that of the College Park (MD) Volunteer Fire Department, which is located near the campus of the University of Maryland, College Park Campus. That student live-in program has been very productive through the years in providing the volunteer fire department with trained volunteer staffing while at the same time providing the participating students with housing, as well as on-the-job training and experience in

fire and EMS work. Many of these participating students have gone on to very successful careers in their chosen areas, especially fire, rescue and EMS public service. This and other well-known student live-in programs throughout the region and the country could serve as models for the expansion of current efforts in this area by possible establishment of one or more student live-in programs at Culpeper County volunteer fire and rescue stations.

It should be noted that the Study Team has found that most of the current Culpeper County fire and rescue stations do not provide adequate facilities for current volunteers. Prior to considering the initiation of a student live-in program, adequate facilities would need to be available at the fire station.

The Study Team recommends that the County seriously consider this option as a bridge before career firefighting staff is hired for county stations.

RETENTION OF VOLUNTEERS

Clearly, the management of public safety personnel resources is a critical task, since human resources generally determine the quality of services delivered to the public. A conservative estimate to replace the volunteers with a full career staff that could handle the area would cost the taxpayers an additional \$15 to \$20 million annually.

A critical time period for efforts to retain volunteers is the first four years of membership. Experience demonstrates that if a new member completes the first four years of service, he/she will most likely remain for many years. Programs aimed to retain volunteers during their first four years of membership should be identified as a priority.

Based upon interviews and the Confidential Member Survey form completed by volunteer personnel participating in this Study, it seems there has been a reduction in some volunteer memberships. Additionally, as the area has developed and become less rural and more suburban, recruiting and retaining volunteer personnel has become more difficult.

The overall philosophy of the leadership of the County and companies is consistent with a very important volunteer retention approach. Pride in the organization and treating the volunteer personnel “right” seem to be important to the leadership.

Typically, when people are asked why they continue to be volunteers, they give a number of reasons, including:

1. Pride in the organization;
2. Pride in the community;
3. Continuing need to help the public;
4. Keep up the friendships;
5. The great personal satisfaction received;
6. Physical activity; and
7. Continuing involvement is an enjoyable activity for those who are career or volunteer firefighters in other jurisdictions.

The efforts to retain volunteer personnel seem to vary by fire and rescue company. There is no official program focused on the retention of volunteer fire and EMS members at the County level. The retention programs for volunteer fire and EMS personnel should be broad-based and countywide. The various fire and rescue companies may be competing against each other for a very limited and valuable human resource. In fact, the Study Team noted that some former Culpeper volunteers moved to out-of-county volunteer companies for better equipment and facilities, as well as retention incentives.

The County leadership clearly appreciates the services of its volunteer personnel. However, the Study Team recommends that the County implement a comprehensive retention incentive plan.

There are a number of very successful incentive programs to retain volunteers that can be considered. Several of the programs that have been successful in helping to retain volunteers in other localities, some of which Culpeper offers, include:

1. Comprehensive awards program;
2. Social events, such as banquets and dinners;
3. Education tuition assistance programs;
4. Workers Compensation coverage;
5. Length of service awards programs;
6. Free training and experience for career preparation in fire, rescue, emergency medical and other related areas;
7. Free passes or tickets to community activities;
8. Physical fitness facilities and equipment;

9. Insurance coverage, including medical, dental and life insurance;
10. Various compensation programs, such as out-of-pocket expenses for fuel, clothing, education and training materials, and meals; hourly pay rate (“paid on call” volunteers); and compensation based on an activity-related point system;
11. Reduced rates for county provided utilities (water, sewer, etc.);
12. Housing assistance programs in areas with costly housing;
13. Property tax percentage reduction; and
14. Uniforms, clothing with the department’s logo and individual tools, such as flashlights and stethoscopes.

Recruitment and retention of volunteers are of prime importance to the continuation of the volunteer fire and EMS services in the County. Therefore, it is important that the County and each of the volunteer companies work together to develop and implement programs that are intended to attain and maintain a high degree of volunteerism in the system. Figure 10.3 and 10.4 illustrate the Volunteer Incentive Plans in Roanoke and Albemarle Counties in Virginia.

Figure 10.3 ROANOKE COUNTY VOLUNTEER INCENTIVE PLAN

VIP Rules & Regulations

- | | | |
|---|---|---|
| <p>A. The VIP program is an incentive program that rewards Roanoke County volunteer firefighters and EMS providers with an annual bonus for meeting a minimum service requirement.</p> <p>B. The maximum benefit as of January 2006 is \$500.00 per volunteer annually to be paid in April of the following calendar year.</p> <p>C. The V.I.P Plan Year is January 1st – December 31st of each year with point records due by January 15th of the following calendar year and no exceptions. Incentive bonus checks are issued in April.</p> <p>D. A volunteer member is required to answer 10% of the total calls dispatched to their station during volunteer hours as a pre-qualifier for the VIP program, unless they are a member of a "high call volume" station (defined by dispatched calls during volunteer hours totaling more than 1000 calls per calendar year). Volunteers who are members of "high call volume" stations are required to answer 3% of the total calls dispatched to their station during volunteer hours. Your station's total calls are figured based on calls dispatched to your station during volunteer hours, however you may count your calls answered during any time of the day. Additionally, the VIP board will look at any large variability in call volume from year to year, either in a positive or negative direction to see if the required percentages need to be adjusted.</p> <p>E. You must earn a minimum of 80 points on the VIP point record during the calendar year to be eligible for this program.</p> <p>F. Refer to the Roanoke County Fire and Rescue VIP Point Record for criteria on how to earn points.</p> <p>G. To qualify for this program you must be a Roanoke County Fire and Rescue Department Volunteer and you must be at least 16 years of age; and an active member of a Roanoke County Fire and Rescue organization.</p> <p>H. To remain eligible for this program volunteers must be in good standing with Roanoke County as of the last day of the incentive year. Any disciplinary action involving a felony would result in the volunteer being disqualified and not eligible for the VIP benefit.</p> | <p>I. A VIP eligible member is defined as:</p> <ol style="list-style-type: none"> 1. A volunteer member who is at least 16 years of age and has been approved by the Roanoke County Fire and Rescue Department application process as a Firefighter/Rescuer; 2. & been accepted by a Roanoke County Volunteer Fire/Rescue Organization as a Firefighter/Rescuer; 3. & meet Firefighter/Rescuer SOP's, certifications, etc as indicated by Roanoke County Fire & Rescue Department and Fire/Rescue Organization; 4. Firefighters/Rescuers must be certified at minimum level within 18 months of acceptance into organization. This means a Firefighter must have Firefighter I within 18 months of acceptance into organization; and Rescuers must have EMT-B within 18 months of acceptance into an organization. Prior to 18 months a volunteer may earn their 80 points and incentive if they are actively working toward becoming certified. Additionally, a volunteer must remain certified at the minimum level to be eligible for the VIP program. 5. The Department Chaplain shall be a VIP eligible member subject to the following; The Chaplain is the designated department Chaplain as set forth in County Policy # A-01-004. The Chaplain shall record monthly points based on a point system constructed by the VIP Board specific to the Chaplain position. Points submitted shall be verified by the Chief of Fire/Rescue, or their designee in lieu of a volunteer Chief Signature. <p>J. All policies, procedures and the point system of this program are to be interpreted as a whole, and individual statements shall not be construed so as to undermine the overall intent of the documents.</p> <p>K. The VIP Point Sheet should be filled out weekly or monthly in order to ensure its accuracy.</p> <p>L. If a volunteer is a member of multiple organizations, he/she must earn 80 points with one organization and is only eligible to receive one annual bonus per year.</p> <p>M. No points will be awarded for any activity performed for individual monetary compensation.</p> <p>N. It is the responsibility of the volunteer member to maintain an accurate record of your points, which shall be verified by the leader of your organization</p> | <p>and authorized by their signature at the end of the year.</p> <p>O. The principle reason for a member being at the station shall be used to determine in which category points will be awarded. (i.e. training, business meetings, station duty, running calls, etc.)</p> <p>P. The VIP Board of Trustees recommends that the leadership of each organization periodically review the point records to assure that each member is given due credit for active participation.</p> <p>Q. A current roster of active members (as defined above) must be maintained in the Fire/Rescue Office. It is the responsibility of the volunteer organization to update the county roster as changes in membership and/or activity status occurs.</p> <p>R. VIP Point Records are subject to random annual independent audits.</p> <p>S. The VIP Board of Trustees reserves the right to modify all policies, procedures and the point criteria, with adequate notice to the participants, in order to maintain an effective program.</p> <p>T. The VIP Board of Trustees shall be the ultimate authority on management, policy making decisions and eligibility in the program.</p> <p>U. All concerns with the program shall be handled through the VIP Board of Trustees. A volunteer must put their concern in writing and send it to the Official Board address listed on this master plan.</p> <p>V. If a VIP eligible volunteer is called to active military duty-their Chief may request to address the VIP Board of Trustees seeking authorization for that volunteer to receive the VIP benefit. (Approved at the 10-18-2007 VIP Board meeting.)</p> |
|---|---|---|

R C F R D

VIP Board of Trustees
Roanoke County Fire & Rescue Department
5925 Cove Road
Roanoke, Virginia 24019

Phone: 540-777-8706
Fax: 540-777-9773

Figure 10.4 ALBEMARLE COUNTY VOLUNTEER INCENTIVE PLAN

FREE COUNTY VEHICLE DECAL

- Same eligibility requirements apply as Personal Property Tax Discount.
- Eligible volunteers are issued vouchers for exemption from vehicle decal fee.

PREFERRED PRICING PROGRAM

- See additional pamphlet or visit www.ACFireRescue.org for more information.
- In order to receive the benefits of the Preferred Pricing Program, volunteers must present a valid Department photo identification card in order to receive any discount or incentive.
- Volunteers must identify him/herself and present the photo id before the purchase is made or services are rendered.
- If a vendor refuses to provide a discount or incentive, don't dispute this with the business or vendor. Report this information to us.
- Be courteous. Rude and/or inappropriate behavior on the part of the volunteer will not be tolerated. If a vendor or business reports such behavior, loss of individual or group benefits is likely.
- Look for a decal on the door/window of participating businesses/vendors.



- Contact us about businesses/vendors that are not yet participating but may want to. Let us know of vendors/businesses that are no longer offering preferred pricing or services.

EMPLOYEE ASSISTANCE PROGRAM

- Through a unique and valued partnership with the University of Virginia Health System's Faculty & Employee Assistance Program (FEAP), Albemarle County Fire Rescue has added the services of the Employee Assistance Program to the volunteer benefits plan (for operational volunteer staff).
- The purpose of the EAP is to maximize employee productivity and to help employees identify and resolve personal concerns that may affect job performance. The EAP offers individualized, confidential assessments based on clinically-sound standards, brief counseling and appropriate community referrals as necessary. The EAP also provides consultation to supervisors and managers to assist in addressing employee/team challenges.
- The EAP program is available to career staff and operational volunteer staff. This is a free and confidential program.
- To make an appointment or talk with a consultant, please call 800.847.9355 or 434.243.2643.

CREDIT UNION MEMBERSHIP

- Everyone who lives, works, or attends school in Central Virginia is eligible to join the University of Virginia Community Credit Union.

PARKS & RECREATION PASSES

- All active volunteer personnel are provided family season passes to Albemarle County parks.
- Season passes are issued annually.
- Passes are distributed at stations or personnel may pick up his/her passes at the Department of Fire Rescue.
- Season passes must be surrendered upon inactive status (resignation, termination, etc.).

NETWORK OPPORTUNITIES

- Networking – career and social – is one of the most important, if not the most important, activities that individuals need to master to be truly successful.
- Individuals need to have a network of contacts that can provide support, information, and guidance.
- Ready to start building your network? There's no better way to network in your community than to volunteer with your local fire or rescue organization.

CAREER DEVELOPMENT

- No matter your age, career development is a priority for most individuals.
- Volunteering with Albemarle County Fire Rescue will expose you to experienced and well-rounded career and volunteer mentors.
- These mentors will help you develop the knowledge, skills, abilities, and leadership skills to ensure your success.

FIRE OR RESCUE LICENSE PLATES

- To receive your firefighter or rescue squad license plates, complete DMV Form #VSA 124. This form is available at www.ACFireRescue.org.
- Have your Chief sign the form.
- Present it to the Department of Motor Vehicles (DMV).

FEDERAL & STATE TAX DEDUCTIONS

- Consult with your tax advisor or accountant about how you can receive federal and state tax deductions by volunteering.

ACCIDENT/HEALTH & LIFE INSURANCE

- Accident, death, and dismemberment insurance provided for volunteers if killed or injured in the line of duty.
- Visit www.ACFireRescue.org to view the policy schedule.

County of Albemarle
Department of Fire Rescue
460 Stagecoach Road, Suite F
Charlottesville, VA 22902-6489
Voice: 434.296.5833
FAX: 434.972.4123
www.ACFireRescue.org

VOLUNTEER BENEFITS

*Striving toward cost-neutrality
for our fire, rescue, and
emergency medical volunteers*



FIRE RESCUE

ALBEMARLE COUNTY

www.ACFireRescue.org





VOLUNTEER BENEFITS

National, state, and local economies are substantially strengthened by the service of its volunteer fire and emergency medical services (EMS) providers. Volunteer fire and EMS are a long-standing tradition in the United States that often encompass families generation after generation.

While an increased number of career fire and EMS personnel is universally accepted as a necessity to ensure adequate levels of fire protection and emergency medical services, Albemarle County continues to make significant investments in its strong volunteer-based emergency services delivery system. This investment has proven successful in maintaining a strong volunteer-base throughout the County.

Incentives help defray expenses and promote cost-neutrality and have the psychological aspect of helping volunteers rationalize to themselves and their families that they are getting some tangible benefit from the extra hours. As a general rule, volunteers must sacrifice not only time to attend training, pull duty, answer emergency calls, etc. but use their own out-of-pocket money to pay for expenses relating to his/her volunteer service.

For more information on volunteer benefits or to learn how you can help,

www.ACFireRescue.org
volunteer@ACFireRescue.org
 Voice: 434.296.5825

UNIFORMS & PROTECTIVE EQUIPMENT

- Uniforms and personal protective equipment are provided to all active personnel.

FIRE & EMS TRAINING

- A world-class Training Division delivers certification and continuing education training for the department's career and volunteer personnel.
- Quality training services are offered through a training staff dedicated to supporting the needs and goals of the County, the department, and the individual.

EARN COLLEGE CREDIT

- Many of the courses you take as a volunteer can earn you college credit toward an Associate of Applied Science (AAS) Degree in Fire Science Technology or Emergency Medical Technology.
- Credits are awarded by the Virginia Community College System. Visit www.ACFireRescue.org for details or more information.

FITNESS & WELLNESS PROGRAMS

- Exercise & fitness equipment is available at all fire rescue stations.
- The department maintains a continuing proactive wellness and fitness program for volunteer and career personnel including peers trained as fitness trainers.
- Volunteers are also eligible for reduced membership fees at various fitness facilities and gyms as part of the Preferred Pricing Program.

COMPUTER & HIGH-SPEED INTERNET ACCESS

- All stations have computer terminals and high-speed internet access for personnel.
- Users are subject to acceptable use guidelines.
- Eligible personnel also receive user IDs and accounts.

PERSONAL PROPERTY TAX DISCOUNT

- To be eligible for the personal property tax discount, volunteers must have completed minimum training requirements and must have contributed a minimum of one-hundred (100) hours of volunteer activities for the organization during the preceding twelve (12) month period.
- Eligible hours are accumulated for attending meetings, responding to calls, training, and some other volunteer activities.
- All vouchers are valid for the calendar year of issuance.
- Volunteer must be owner or partial owner of the vehicle(s) or other personal property or leased by the volunteer who is obligated under the terms of the lease to pay the personal property tax.
- The voucher(s) may be used for either the first, second, or third cycle billings. Both vouchers may be used at the same time if desired.
- A voucher, when used, must be used in full. No credit is given for any unused portion of a voucher.
- Lost, misplaced, or stolen discount tax vouchers are not replaced.

ON-DUTY MEAL REIMBURSEMENT

- Volunteers are reimbursed for one (1) meal per person, per eight (8) hour duty shift.

PHOTO IDENTIFICATION CARDS

- Photo ID cards are issued to all active personnel.
- To receive your photo ID card, submit your authorization to the Department of Fire Rescue.
- Photo identification cards may be obtained on Tuesdays and Thursdays from 1300-1600 Hours or by appointment. Please contact staff (434.296.5833 or cdavis@albemarle.org) in advance to make an appointment or to ensure card availability.
- Volunteers must present a valid government-issued photo identification (driver's license) to obtain an ID.
- ID cards expire two (2) years from issue date. Personnel must make application for a new ID card upon expiration.
- All ID cards must be surrendered to the Department upon inactive status (resignation, termination, etc.).
- Personnel must report lost or stolen ID cards to the Department immediately.
- Lost ID cards will be replaced for a fee of \$2.00.

VACCINATIONS

All active personnel are provided influenza vaccinations and Hepatitis-B vaccinations free-of-charge, if desired. Family members are not eligible for the free vaccination. The vaccinations are administered through a contracted provider.

FLU VACCINES

- Schedules for flu vaccinations are determined annually by the Department of Human Resources. Personnel must present a valid Department identification card at the administration site to receive the vaccination. No other form of ID (badge, uniform, etc.) will be accepted.
- Personnel may choose to have his/her family physician administer the vaccine. Personnel will be reimbursed for the vaccine up to a cost established annually by the Department of Human Resources. Personnel must submit the signed and authorized reimbursement form to receive the reimbursement.

HEPATITIS-B VACCINES

- All personnel who have patient contact should receive the Hepatitis-B vaccination.
- To receive your vaccination series, submit your authorization to the Department of Fire Rescue (COB-5th Street) to receive additional forms and instructions.
- Vaccinations may be obtained at UVA WorkMed or Martha Jefferson Hospital Emergency Department. An appointment and/or registration is not necessary at MJH. An appointment is required at UVA WorkMed.
- Additional instructions will be given to you by the provider.

PUBLIC AWARENESS

The Study Team interviewed volunteer leaders and members who expressed concern that new residents moving into the County may not be fully aware of the volunteer nature of the fire rescue service and some may believe that they are being served by a fully paid fire department. Most citizens may know they have a local fire station, but some may not understand it is not fully staffed with paid firefighters and officers. The Study Team has noted that this lack of understanding increases when the community is near major metropolitan areas, e.g. Washington, D.C. metro area.

There appears to be a need to continually educate County citizens and business people on the programs and composition of the volunteer service delivery agency. The Study Team recommends that the County, working in concert with the volunteer companies, develop

and rollout a “Fire and Rescue System” awareness campaign to educate County citizens on their fire and rescue services.

RECRUITMENT AND RETENTION PLAN

The County, the Culpeper County Volunteer Fire & Rescue Association (CCVFRA), and volunteer companies are encouraged to develop recommendations for a comprehensive written volunteer recruitment and retention program. In developing such a program, the volunteers and the County should consider the program ideas presented in this chapter, as well as the experiences of other County companies. This will help to ensure program recommendations are both comprehensive and focused on the needs related to improving volunteerism in the County and the participating volunteer companies.

Any countywide volunteer recruitment and retention program recommendation should include a delineation of appropriate funding requirements. The County is encouraged to continue to approve the funding necessary to plan, develop, and implement a comprehensive countywide volunteer recruitment and retention program.

VOLUNTEER COORDINATOR

As recommended in Chapter 2, a full-time position is needed to recruit volunteers. A national trend in successful volunteer fire and EMS systems is the appointment of a “volunteer coordinator” to serve as a focal point of an aggressive volunteer recruitment program *and* a robust volunteer retention program. Investment in such a position provides significant long-term benefits in the recruitment and retention of volunteer personnel.

A full-time volunteer coordinator position could be beneficial if dedicated to the development and implementation of countywide and individual company focused volunteer fire and EMS personnel recruitment and retention programs. This individual should be part of the proposed Department and assigned to fully support and assist in the volunteer recruitment and retention programs of the CCVFRA and the recommended Volunteer Recruitment and Retention Committee.

SUMMARY

Currently, fire and EMS services are provided in Culpeper County largely by volunteer members who respond to emergencies. This staffing approach, utilizing volunteer members of the community, has provided cost-effective fire and EMS services. The viability of this volunteer staffing approach in the future will, to a large extent, be based on the level of effort placed on volunteer recruitment and retention by the fire and rescue companies and the County. It is quite apparent to the Study Team that Culpeper County officials and the volunteers understand the importance of attracting and retaining volunteers. This chapter outlined some potential opportunities to strengthen the current and prior initiatives.

Recruitment of volunteers for the fire and EMS services has been accomplished in a number of ways. Additionally, the volunteer companies have tried implementing a number of retention efforts. These programs appear to be only marginally successful in contributing to the maintenance of the volunteer fire and EMS personnel in Culpeper County.

Nationally, there are a number of very successful volunteer recruitment and retention programs in localities that continue to assist in providing the essential volunteer personnel for the provision of their fire and EMS services. This chapter outlined a number of recruitment and retention options for consideration by the County and the fire companies.

OPTIONS AND RECOMMENDATIONS

- 10-1 Earlier in the Study (Chapter 2, Organization and Administration), the Study Team recommended that the County hire a full-time volunteer recruitment coordinator. This recommendation is also made as a part of this chapter.
- 10-2 The Study Team recommends that the County formally adopt the recommendations regarding volunteer recruitment and retention outlined in the Virginia VWS report.
- 10-3 Study Team recommends that the high school fire and EMT training (cadet) program be reconsidered in Culpeper County.

- 10-4 The Study Team recommends that the County seriously consider the volunteer live-in option as a bridge before career firefighter staff are hired for County stations and appoint a group to study this option, the need and cost of station upgrade, and develop a cost benefit analysis to be presented to the Board of Supervisors.
- 10-5 The Study Team recommends that a comprehensive volunteer recruitment and retention program be developed and implemented, building on the prior and current initiatives of the CCVFRA and the companies. The program should be appropriately funded and include:
- The length of service awards program enhancements;
 - Recommendations for volunteer retention programs based on input received from volunteer exit interviews or forms;
 - Implementation of a property tax incentive and utility cost assistance retention initiatives;
 - Initiate recommendations for additional volunteer recruitment programs, such as possible medical and dental care;
 - Develop a volunteer handbook which can be given to prospective members of the fire departments, explaining the benefits and requirements of becoming a volunteer; and,
 - Focus volunteer programs toward retention of members during their first four years of membership.
- 10-6 The Study Team recommends that the County make application, as often as allowed, for SAFER funding to assist with the implementation of the recommendations for recruitment and retention in the chapter.
- 10-7 The Study Team recommends that the County, working in concert with the volunteer companies, develop and roll-out a “Fire and Rescue System” awareness campaign to educate County citizens on the County’s fire and rescue services.

CHAPTER ELEVEN IMPLEMENTATION

This chapter provides a suggested framework and timeline for considering the findings and recommendations in this Fire and EMS Services Study (Blueprint) for Culpeper County. County officials expressed to the Study Team their goal of providing qualitative and quantitative fire and EMS services through maximum use of volunteer service providers.

The suggestions in this report represent the Study Team's best judgment as of August 2015 of how to best accomplish that goal. Of course, keeping pace with "best business practices" in fire and EMS and future challenges in service delivery will require annual updates to this Blueprint for the Future. County officials and service providers should make the final decision on recommendations and timing.

REVIEW OF REPORT

In conducting fire and EMS studies, the Study Team typically suggests that a municipal government and its service providers take the necessary time to conduct a review of the entire report. Accordingly, the County is encouraged to consider the following:

1. Take an appropriate time to review the report/plan;
2. Consider relevant input relative to clarification on practices, procedures, manuals, data, and programs;
3. Reorder priorities based on the review and relevant input;
4. Take appropriate action as necessary;
5. Revise the report/plan as necessary;
6. Assess fiscal impacts after final decisions;
7. Move forward; and
8. Update the Plan annually.

Chapters Two through Eleven contain numbered stand-alone recommendations. To assist County officials and service providers in responding to the suggestions and monitoring progress, this chapter includes a list of all the numbered recommendations. For ease of reading, references to County Council, County Administrator, the CCVFRA, Chiefs and Companies have been removed from the numbered recommendations. In that respect, it is

important to note that the service providers will need the support of County officials (County Council, County Administrator, CCVFRA, and County staff) in a number of the recommendations. Those requirements are contained in the numbered recommendations in each chapter. In addition, to assist budget officials, an outline of the recommendations (some of which are ongoing by Culpeper County) that have obvious fiscal impacts is included for ease of calculating fiscal impacts, depending on the decisions by the County.

FISCAL IMPACTS

Culpeper County is in the process of planning for facilities improvements and a variety of programs are under development. This report recommends a department director to provide the necessary staff coordination and direction to implement a number of the recommendations and to strengthen the volunteer-based fire, rescue and EMS services. It also recommends a fire marshal and volunteer coordinator. The estimated personnel costs are approximately \$300,000, excluding vehicles or computer equipment.

As noted in Chapter Eight, **the citizens of Culpeper County are reaping major substantial benefits from its all-volunteer fire, rescue and EMS system. To provide the same level of service with full-time paid personnel in the fire, rescue and EMS stations would require at least \$14 million each fiscal year for personnel wages.** This estimate is based on the average cost of personnel, including fringe benefits, of \$57,000 on an annual basis. Of course, the five-year costs would be more than \$70 million.

In charting a course for the future delivery of fire, rescue and EMS, this estimate of a paid system should be uppermost in considerations about funding

Alternate Sources of Funding

The Study Team is aware of a number of potential current and future alternate sources of funding that should be considered by the County. These sources include:

1. United States Fire Administration (USFA) Assistance to Firefighters Grant Program for grants and funding;
2. U.S. Department of Homeland Security Commercial Equipment Direct Assistance Program for equipment for first responders;
3. USFA Staffing for Adequate Fire and Emergency Response (SAFER) program;

4. Federal Office of Hazardous Materials, Hazardous Materials Emergency Preparedness (HMEP) grant program;
5. Various Virginia State grants and low interest loans;
6. Fire inspection and plans review fees;
7. Patient billing for EMS transports;
8. False alarm registration and enforcement charges; and
9. National Fire Academy Training Assistance funding.

Some of these funding opportunities have the potential for substantial ongoing sources of revenue and others may be one-time project specific grants or funding. Fire departments that pursue alternate sources of funding find the revenue beneficial to service delivery and many times supplement the normal primary source/s of funding.

The County is encouraged to evaluate these opportunities and aggressively seek out these and other options for funding.

ANTICIPATED OUTCOMES

When conducting a review of the delivery of fire and EMS and projecting the needs of the future, it is not possible to delineate all the positive outcomes. Improving the quality of life in a community and saving lives for service providers and stakeholders do not necessarily involve quantitative analysis.

A number of the anticipated outcomes through implementation of the recommendations in this report/plan and the continuation of the outstanding services by fire/ and EMS volunteers in Culpeper County are as follows:

1. Improved public recognition of volunteer-based service delivery;
2. Enhanced data collection and utilization for operations, staffing, training, and volunteer participation;
3. Enhanced management and staff support from County employees and a department head for department direction;
4. Enhanced initiatives to recruit and retain volunteers;
5. Improved training of officers and supervisors;
6. Improved safety and efficiency of service providers through upgraded training;

7. Enhanced teamwork by service providers;
8. Improved delivery of fire and EMS services through upgraded apparatus;
9. Improved work environment through rehab and upgrades of stations;
10. Improved physical condition of members through fitness and health initiatives;
11. Improved utilization of the volunteer officers by establishing eligibility requirements;
12. Improved coordinated response through incident command training;
13. Reduced liability exposure through compliance with a number of national standards, e.g., driver training and other standards;
14. Improved self-development initiatives by volunteers through awards system for meeting specific certifications;
15. Improved coordination/management of apparatus-related replacement, records and maintenance programs; and,
16. Improved apparatus acquisition and timing through apparatus replacement schedule.

SUGGESTED TIMELINE

This Study Report (Plan and Blueprint) should be considered as a **strategic planning tool for use over the immediate, mid-term and future**. Additional issues may need consideration in the future; therefore, the Plan should be used as a flexible guide for decisions relative to the organization, management and provision of fire and EMS services.

Figure 11.1 provides a timeline that could be used as a guide for consideration of important changes. After relevant review and input, a final timeline should be established.

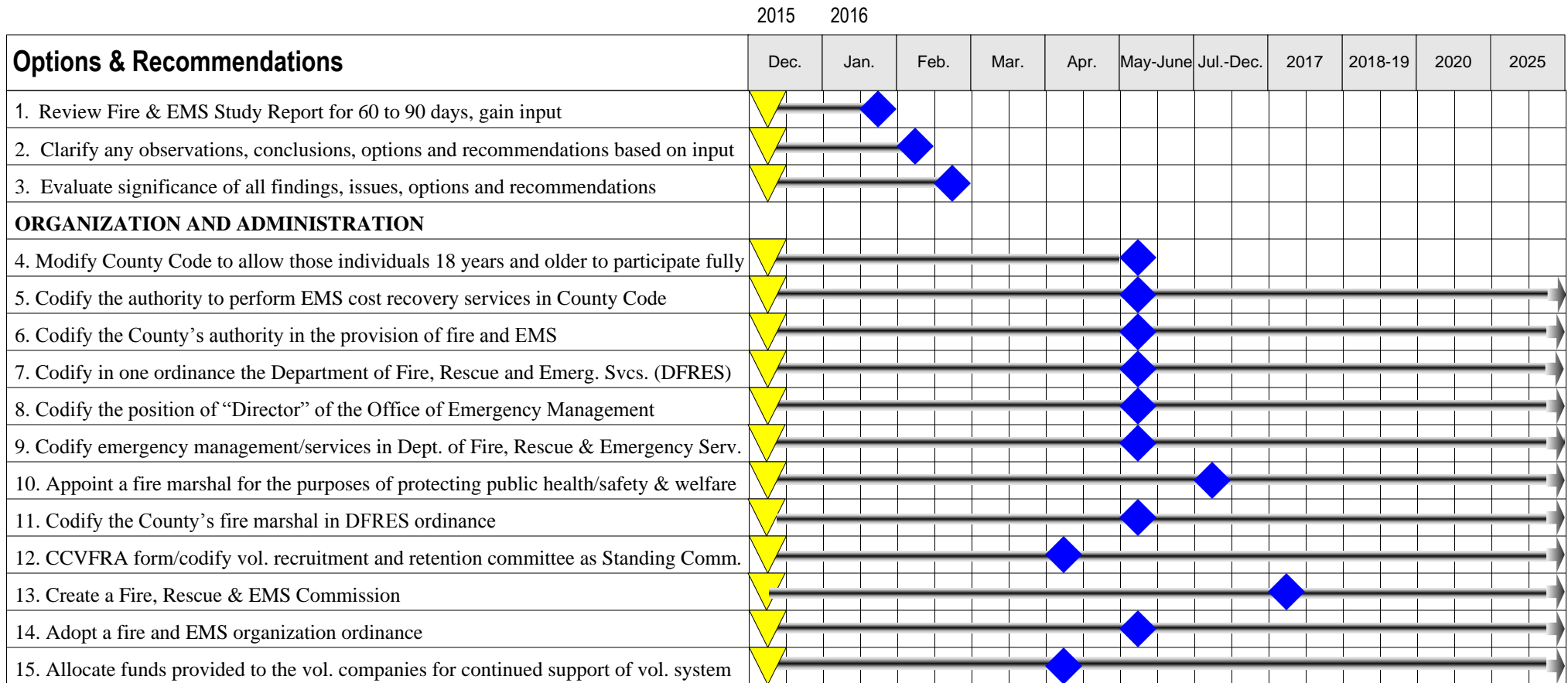
QUALITY OF SERVICE PROVIDERS

This blueprint builds on the current strengths of the many men and women providing fire and EMS services in Culpeper County. This includes all the volunteers and the County staff in the Office of Emergency Operations (dispatch). A number of recommendations in this Study came from volunteers providing the services. These very talented personnel work hard and deserve the trust, support, and respect of the stakeholders in Culpeper County. **Full County support of these volunteer service providers, financially and programmatically, is essential to retain a volunteer fire and EMS service for the long-term.**

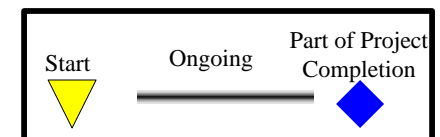


County of Culpeper Fire & EMS Study Suggested Timeline Page One of Eight

Figure 11.1



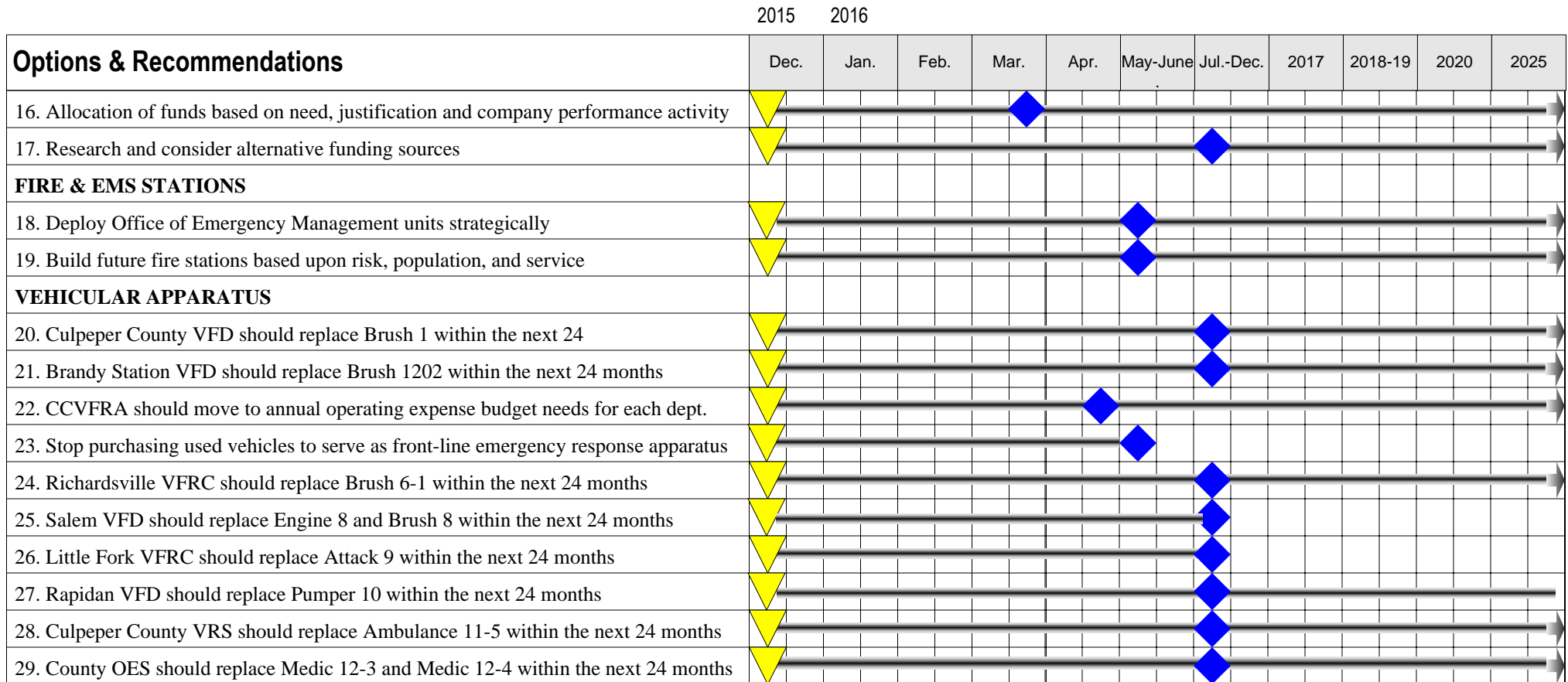
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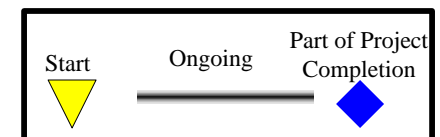


County of Culpeper Fire & EMS Study Suggested Timeline Page Two of Eight

Figure 11.1



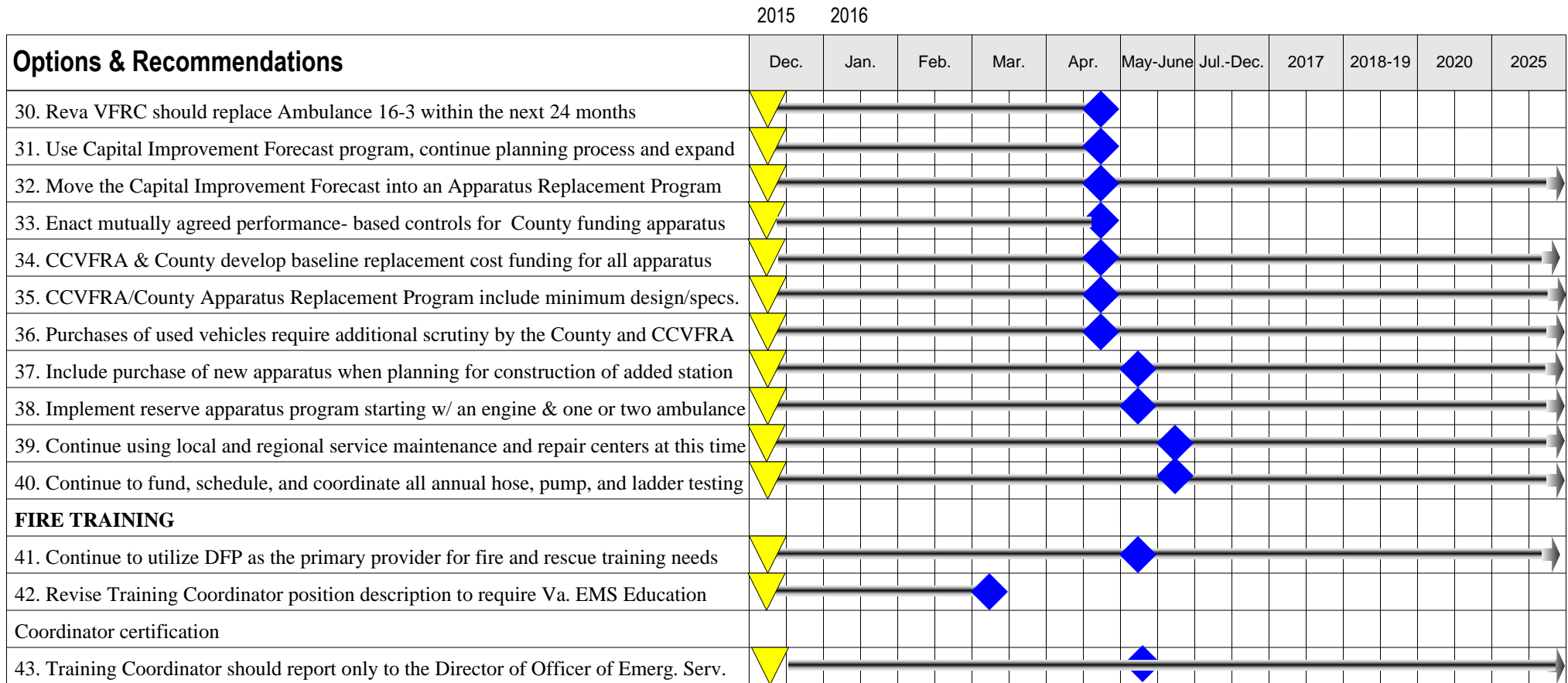
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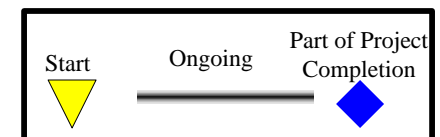


County of Culpeper Fire & EMS Study Suggested Timeline Page Three of Eight

Figure 11.1



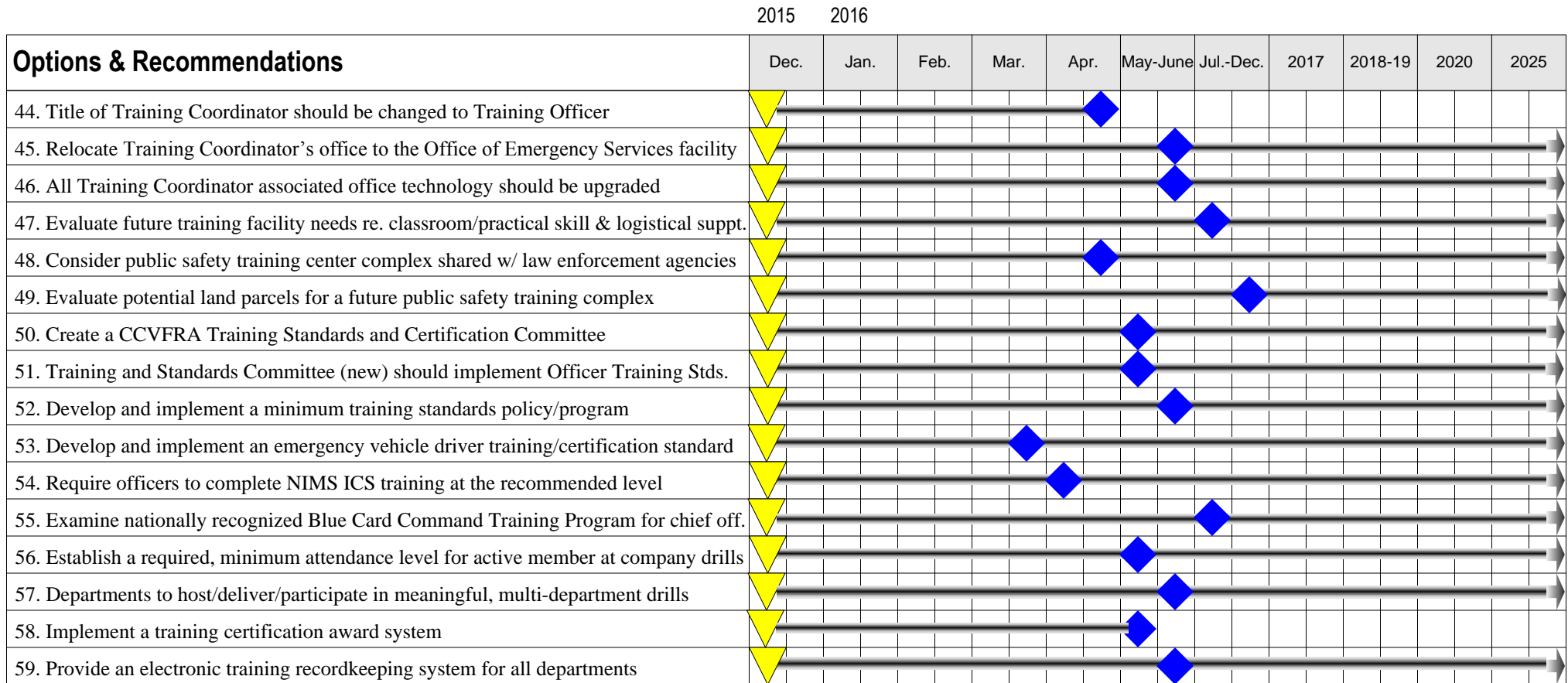
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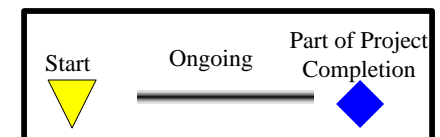


County of Culpeper Fire & EMS Study Suggested Timeline Page Four of Eight

Figure 11.1



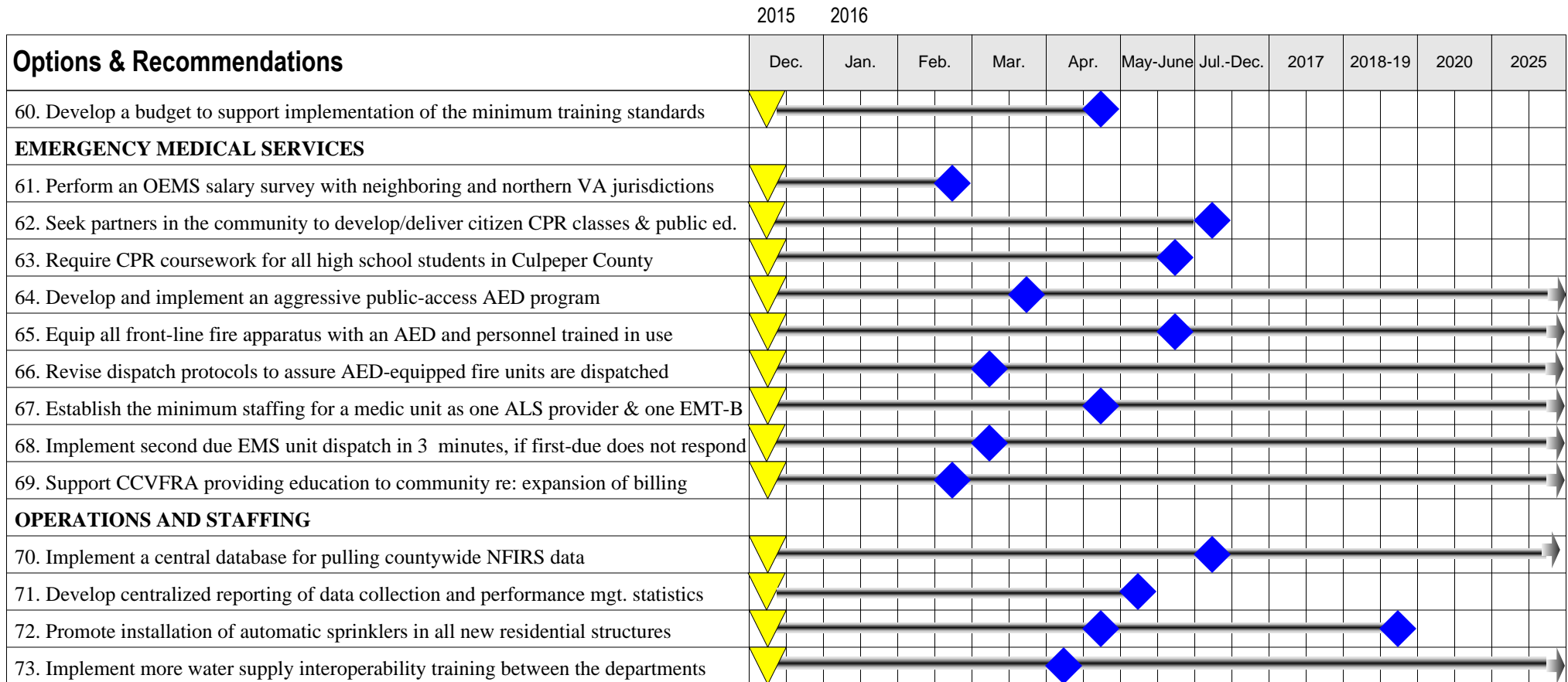
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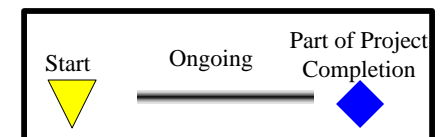


County of Culpeper Fire & EMS Study Suggested Timeline Page Five of Eight

Figure 11.1



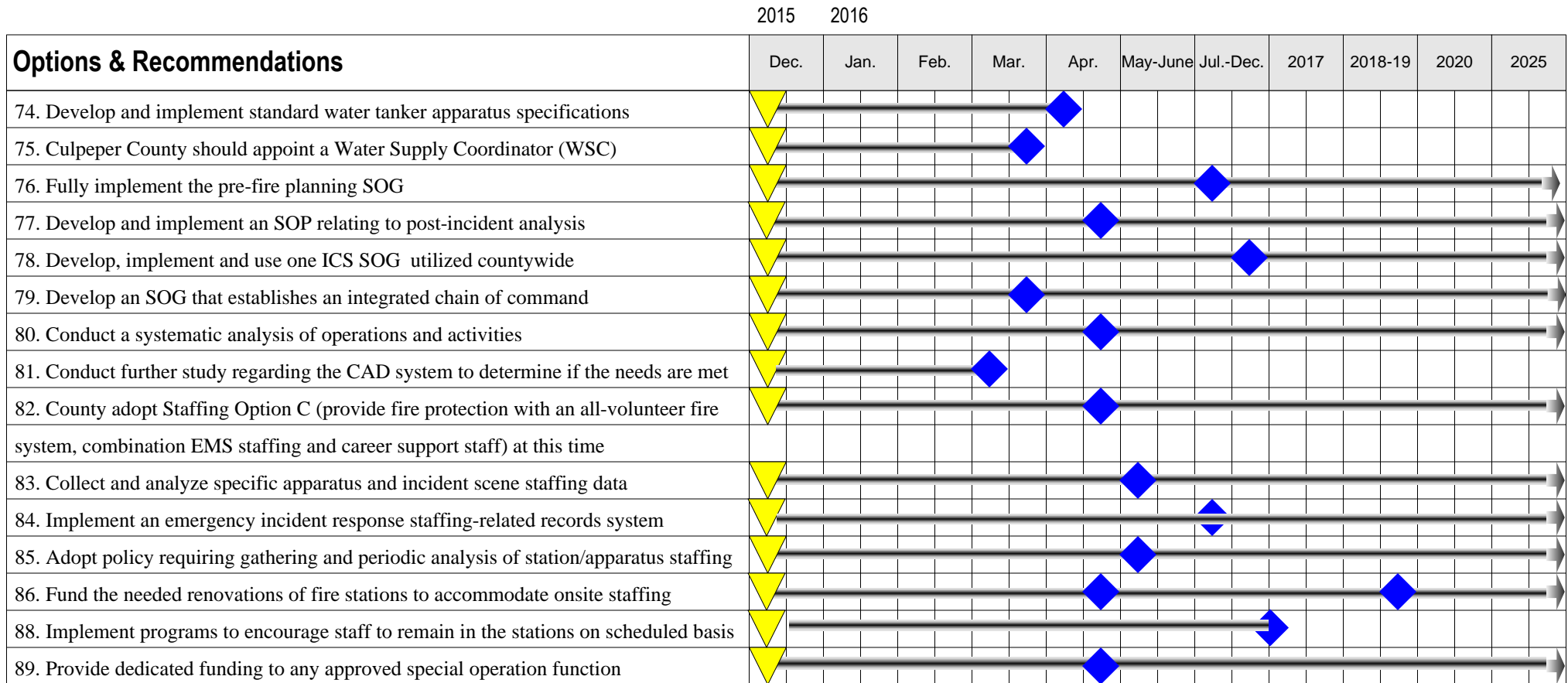
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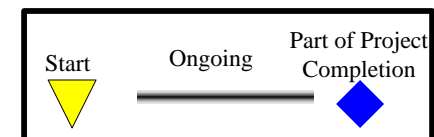


County of Culpeper Fire & EMS Study Suggested Timeline Page Six of Eight

Figure 11.1



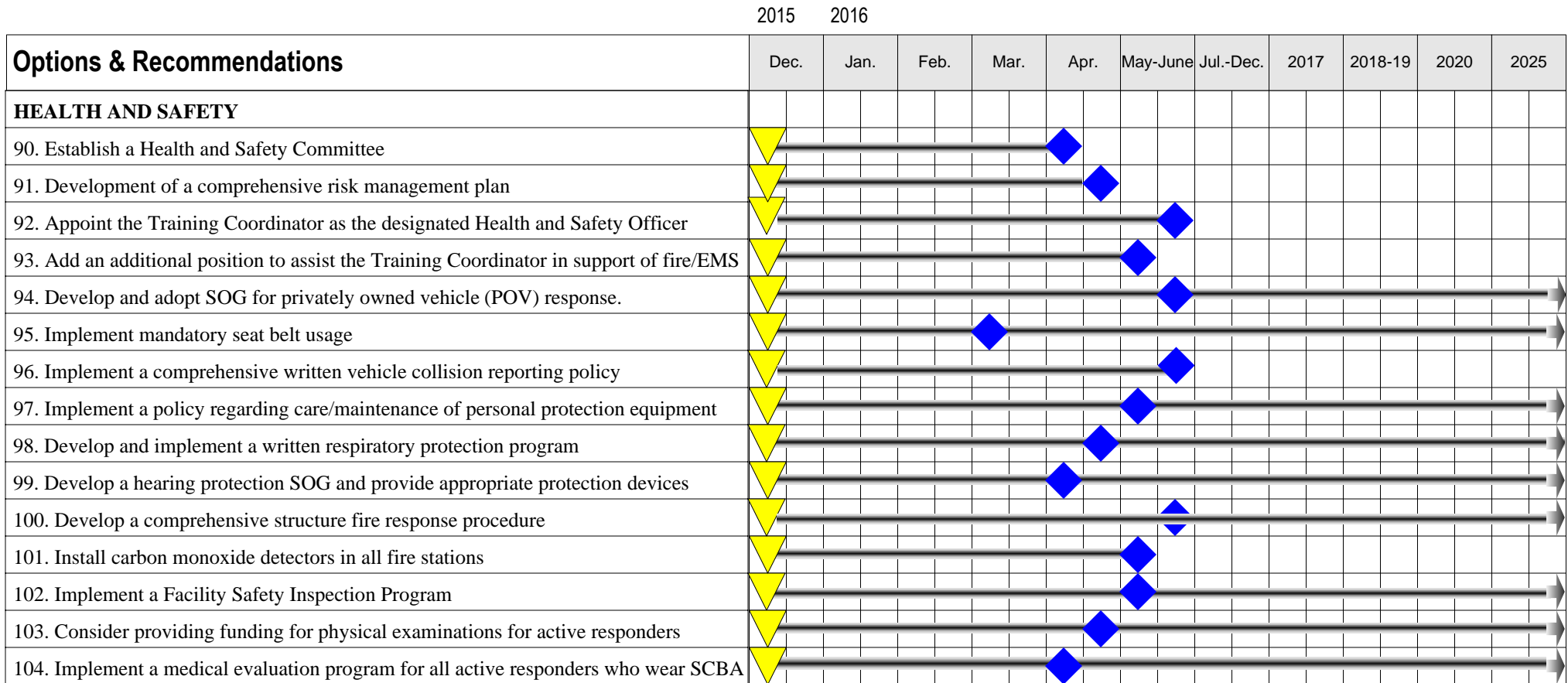
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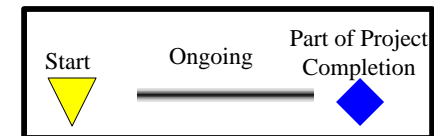


County of Culpeper Fire & EMS Study Suggested Timeline Page Seven of Eight

Figure 11.1



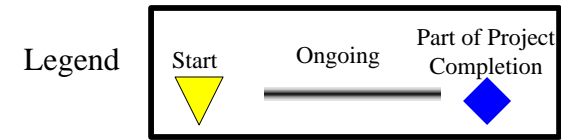
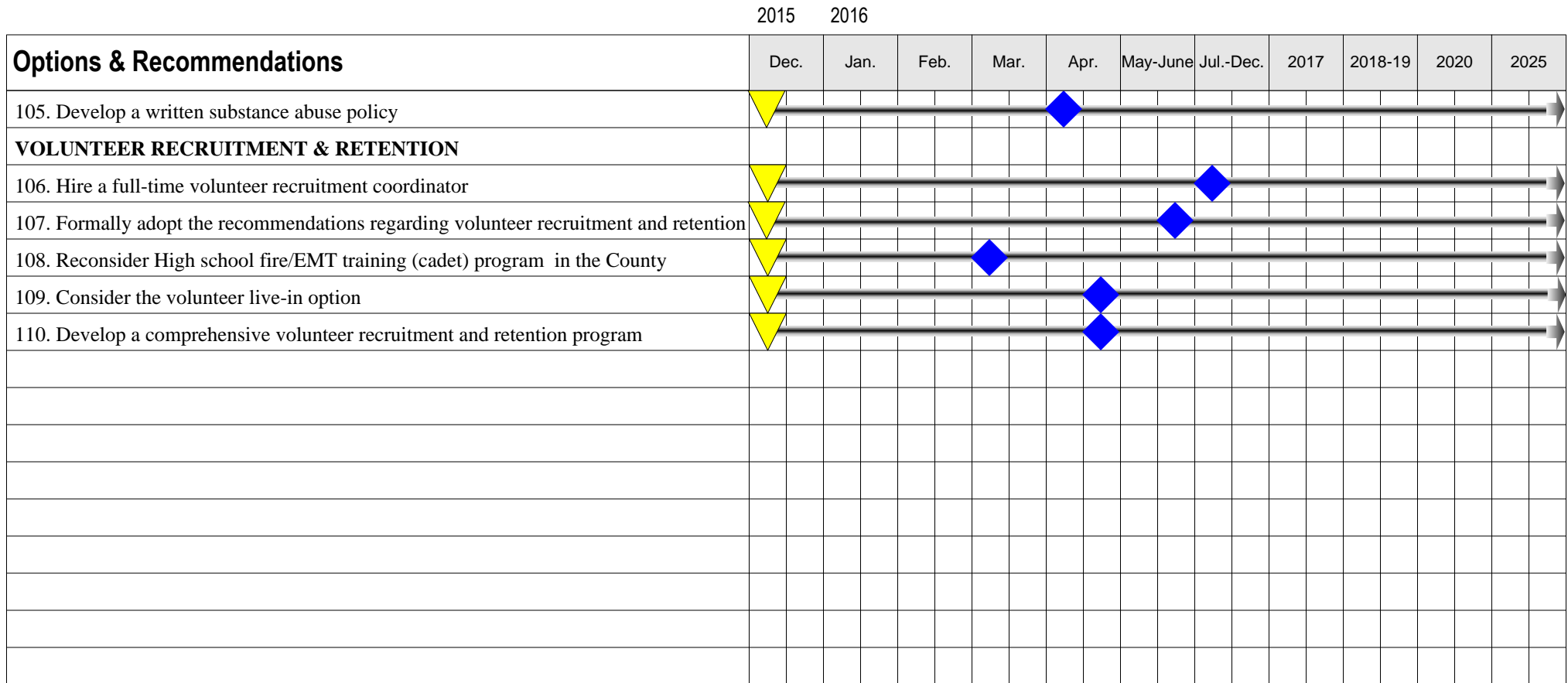
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County of Culpeper Fire & EMS Study Suggested Timeline Page Eight of Eight

Figure 11.1



STUDY OPTIONS AND RECOMMENDATIONS

OPTIONS AND RECOMMENDATIONS — ORGANIZATION & ADMINISTRATION

- 2-1 While State Code allows for persons between the ages of 16 and 18 years of age to fully participate in volunteer fire and EMS response, under certain conditions, the Study Team feels that putting minor children in physical or psychological harm's way is ill advised, and the Study Team recommends that the County amend the County Code to only allow those individuals 18 years and older to participate fully in all activities of a volunteer fire company.
- 2-2 The Study Team recommends that the authority to perform EMS cost recovery services be codified in the County Code.
- 2-3 The Study Team recommends that all references and regulations related to the County's authority, provision of fire and EMS and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
- 2-4 The Study Team recommends that the County more clearly define and codify the position of "Director" to reflect requirements in the State and County Code and the actual operation of the Office of Emergency Management (Emergency Services) in the county.
- 2-5 The Study Team recommends that all references and regulations related to the County's emergency management/services office and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
- 2-6 The Study Team recommends that Culpeper County appoint a fire marshal for the purposes of protecting public health, safety and welfare and for the purpose of enforcing regulations to safeguard life and property from the hazards of fire or explosion arising from the improper maintenance of life safety and fire prevention

and protection materials, devices, systems and structures, and the unsafe storage, handling and use of substances, materials and devices.

- 2-7 The Study Team recommends that all references and regulations related to the County's fire marshal and any and all administrative and operational expectations and responsibilities be codified in one ordinance titled Department of Fire, Rescue and Emergency Services.
- 2-8 With the importance placed on the need to recruit and retain volunteers, the Study Team recommends that the CCVFRA form and codify a volunteer recruitment and retention committee as a Standing Committee of the Association.
- 2-9 The Study Team recommends that the County address the issues and enhance and strengthen participation of the Culpeper County Volunteer Fire and Rescue Association; create a Fire, Rescue and Emergency Services Commission; create a Department of Fire, Rescue and Emergency Services; establish the position of Director to head the Department; establish a Chief Officers Board; employ support staff to provide volunteer recruitment and retention, fire and EMS training, fire code enforcement and planning, fleet and facility maintenance and volunteer staffing coordination.
- 2-10 The Study Team recommends that the long-term implementation career firefighting staff use the integrated volunteer/career staffing approach.
- 2-11 The Study Team recommends that a County fire and EMS organization ordinance be adopted and should include the recommendations previously outlined in this chapter and include primary sections relating to:
1. Statement of legislative intent regarding providing adequate public safety, health and welfare through a fire and emergency medical services that is highly competent and efficiently delivered by a combination of volunteer and career personnel;
 2. Objectives of the combination fire and EMS system;
 3. Maximum participation of volunteer fire and EMS personnel;
 4. Fire, Rescue and Emergency Services Commission's authority;

5. Culpeper County Volunteer Fire and Rescue Association's role and responsibilities;
 6. Independent volunteer fire and EMS companies' roles and responsibilities;
 7. Department of Fire, Rescue and Emergency Services, headed by the Director, authority and responsibilities;
 8. Assets purchased by County funds to be owned by the County;
 9. Additional Fire and EMS companies;
 10. Relocation/addition of facilities and apparatus;
 11. Equitable allocation of funding;
 12. Annual fire tax levy;
 13. EMS cost recovery;
 14. Emergency management;
 15. Fire prevention and code enforcement; and,
 16. Volunteer recruitment and retention incentives.
- 2-12 The Study Team recommends a complete overhaul of the allocation of funds provided to the volunteer companies in order to ensure the continued support of the volunteer system in Culpeper County.
- 2-13 The Study Team recommends, in overhauling the funds allocation, that funds be allocated based on need, justification and company performance activity.
- 2-14 The Study Team encourages the County research and consider alternate sources of funding.

OPTIONS AND RECOMMENDATIONS — FIRE STATION LOCATIONS

- 4-1 Office of Emergency Management units should be deployed strategically to provide coverage to zones that do not have a staffed ambulance, but within proximity of the Town of Culpeper, where the most frequent demand exists.
- 4-2 Future fire stations should be considered based upon risk, population, and service demand as monitored on a five-year basis.

OPTIONS AND RECOMMENDATIONS — FIRE AND EMS APPARATUS

- 5-1 The Culpeper County VFD should replace Brush 1 within the next 24 months due to its age and lack of current safety technology.
- 5-2 The Brandy Station VFD should replace Brush 1202 within the next 24 months due to its age and lack of current safety technology.
- 5-3 The CCVFRA should discontinue the practice of reimbursing for vehicle operating and maintenance expenses based on receipts and move to an annual operating expense budget requirement for each department, whereby the individual departments spend within their operating expense allocations.
- 5-4 Departments should stop purchasing used vehicles to serve as front-line emergency response apparatus.
- 5-5 The Richardsville VFRC should replace Brush 6-1 within the next 24 months due to its age and lack of current safety technology.
- 5-6 The Salem VFD should replace Engine 8 and Brush 8 within the next 24 months due to age and lack of current safety technology.
- 5-7 The Little Fork VFRC should replace Attack 9 within the next 24 months due to its age and lack of current safety technology.
- 5-8 The Rapidan VFD should replace Pumper 10 within the next 24 months due to its age and lack of current safety technology. Consideration should be given to renaming Tanker 10 as Engine 10 and purchasing a new tanker (2,500 gallons or larger).
- 5-9 The Culpeper County VRS should replace Ambulance 11-5 within the next 24 months due to its age and lack of current safety technology.
- 5-10 The County OES should replace Medic 12-3 and Medic 12-4 within the next 24 months due to age and lack of current safety technology.

- 5-11 The Reva VFRC should replace Ambulance 16-3 within the next 24 months due to its age and lack of current safety technology.
- 5-12 The CCVFRA and the County should take the current Capital Improvement Forecast program and continue that planning process and expand it as needed to create more uniform guidelines.
- 5-13 The CCVFRA and the County should move the Capital Improvement Forecast into an Apparatus Replacement Program that uses a recognized budget process and includes County funding.
- 5-14 The CCVFRA and the County should enact mutually agreed upon performance-based controls for the use of County funding in the Apparatus Replacement Program.
- 5-15 The CCVFRA must work with the County to develop baseline replacement cost funding for all of the various apparatus breeds and that funding must be established and distributed using the budgetary process.
- 5-16 The CCVFRA/County Apparatus Replacement Program should include minimum design and equipment specifications for each breed of apparatus vehicle. Departments must meet these minimum specifications when planning the purchase of replacement vehicles if County funding is to be used.
- 5-17 The CCVFRA/County Apparatus Replacement Program should deter the purchase of used vehicles for any type of front-line emergency response service. All purchases of used vehicles should require additional scrutiny by the County and the CCVFRA and should only be considered in emergent situations such as the sudden unexpected total loss of a critical vehicle.
- 5-18 The County should include the purchase of new apparatus when planning for the construction of any new additional fire, rescue, or EMS station.
- 5-19 The County and the CCVFRA should implement a reserve apparatus program starting with a reserve engine and one or two reserve ambulances. These reserve units would be owned and maintained by the County and available for loan to all nine departments/agencies on an as need basis to provide coverage

- 5-20 The County and CCVFRA should consider the purchase of Culpeper County VFD's Engine 1 as the first engine in the reserve apparatus program.
- 5-21 Until such time that County service agreements are needed, the CCVFRA and the local departments should continue to use local and regional service centers for apparatus maintenance and repair.
- 5-22 The County and the CCVFRA should continue to fund, schedule, and coordinate the annual hose, pump, and ladder testing for all departments.

OPTIONS AND RECOMMENDATIONS — FIRE AND RESCUE TRAINING

- 6-1 The County and the individual volunteer fire departments that serve within it should continue to utilize DFP as the primary provider for their fire and rescue training needs.
- 6-2 The Office of Emergency Services should revise the Training Coordinator position description to require Virginia EMS Education Coordinator certification and assign the Training Coordinator the responsibility for overseeing all fire, rescue, and EMS training course scheduling and delivery throughout the County.
- 6-3 The Training Coordinator should report only to the Director at the Office of Emergency Services.
- 6-4 The title of Training Coordinator should be changed to Training Officer in order to align with more traditional fire service terminology.
- 6-5 The Training Coordinator's office should be relocated to the Office of Emergency Services facility and all associated office technology should be upgraded to facilitate the proposed creation and management of a County-based personnel training record system.
- 6-6 The County, in conjunction with the CCVFRA, should evaluate the future training facility needs in terms of classroom and practical skill space and logistical support.

This evaluation should be completed by FY2020. At which time there should be more clear direction as to the needs of the County and its public safety providers.

- 6-7 The County/CCVFRA’s fire/rescue training facility evaluation should consider a public safety training center complex shared between fire/rescue and law enforcement agencies.
- 6-8 The County and the CCVFRA should begin now to evaluate potential land parcels for a future public safety training complex.
- 6-9 The County and the CCVFRA should work with the Virginia Fire Services Board and the respective Fire Service Grant program regarding the Burn Building Grant Program and the future construction of a public safety training center in the County.
- 6-10 The County and the CCVFRA should work with Culpeper County Public Schools to establish a relationship whereby school facilities (specifically classrooms and auditoriums) can be used as needed to host fire, rescue, and EMS training courses and programs until such time that department training rooms are upgraded or a training center is constructed.
- 6-11 The CCVFRA Training and Standards Committee (new) should implement the following Officer Training Standards using a two-phase approach:

Officer Training Standards –Phase I (3 years)

Rank	Training Requirements	Experience Requirements
Chief	<ul style="list-style-type: none"> • Fire Officer I • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as a chief officer in a Culpeper County fire department
Assistant or Deputy Chief	<ul style="list-style-type: none"> • Fire Officer I • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as an operational officer in a Culpeper County fire department

Captain	<ul style="list-style-type: none"> • Fire Fighter II • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	1 year experience as a lieutenant in a Culpeper County fire department
Lieutenant	<ul style="list-style-type: none"> • Fire Fighter II • CPR/AED • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	2 years' experience as a Firefighter II in a Culpeper County fire department

The Phase I training standards can be met through the completion of DFP training programs or through Pro Board certification and reciprocity. The Phase I training standards expire three years from implementation, at which time Phase II training standards go into effect.

Officer Training Standards –Phase II (2 years)

Rank	Training Requirements	Experience Requirements
Chief	<ul style="list-style-type: none"> • Fire Officer II • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, ICS400, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as a chief officer in a Culpeper County fire department

Assistant or Deputy Chief	<ul style="list-style-type: none"> • Fire Officer II • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, ICS400, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as an operational officer in a Culpeper County fire department
Captain	<ul style="list-style-type: none"> • Fire Officer I • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, ICS300, IS700, & IS800 • Vehicle Rescue – Level I • Intro to Technical Rescue – Module I 	1 year experience as a lieutenant in a Culpeper County fire department
Lieutenant	<ul style="list-style-type: none"> • Fire Officer I • EMT-B • Hazmat Operations • NIMS ICS100, ICS200, IS700, & IS800 • Vehicle Rescue – Level I 	2 years' experience as a Firefighter II in a Culpeper County fire department

The Phase II training standards can be met through the completion of DFP training programs or through Pro Board certification and reciprocity.

- 6-12 The CCVFRA should not require Pro-Board certification for fire officers or fire fighters until such time that requisite courses for those certifications are readily available in the County. Otherwise, the candidate pool for officer ranks could be restricted.

- 6-13 The CCVFRA should create a Training Standards and Certification Committee responsible for all of the training and certification related standards. The Committee should report directly to the leadership of the CCVFRA and possess the ability to suspend a department member from emergency scene operational authority if that department member fails to meet the applicable training and certification standard.

- 6-14 The CCVFRA and the newly created Training and Certification Standards Committee should develop a three-year phase-in plan for implementation of the

proposed Officer Training Standards. In the first three years, all existing officers and personnel desiring to serve as officers must complete coursework to comply with the Phase I requirements. At the end of Phase I, all officers must comply with the Phase II training and experience requirements or have their emergency scene operational authority removed by the CCVFRA.

- 6-15 The CCVFRA should not allow the practice of “grandfathering” existing officers to avoid additional training requirements. Equivalency for “like” training should be permitted using the DFP equivalency and Pro Board process.
- 6-16 Both now and in the future, all training standards developed by the Training and Certification Standards Committee should be made applicable to all fire, rescue, and EMS providers in the County of Culpeper regardless of affiliation.
- 6-17 The CCVFRA should immediately develop and implement a minimum training standards policy/program that clearly identifies the training requirements for probationary (new) members and that applies equally and equitably to all departments in the County. At a minimum, these standards must address the training requirements needed to ride on emergency apparatus as a crew assistant and as part of the minimum staffing crew.
- 6-18 The CCVFRA’s Training and Certifications Standards Committee should establish minimum training standards for the positions of Crew Assistant and Minimum Staffing Crew Member to include:
 - Firefighting/Rescue
 - Crew Assistant
 - Must complete training on the use of personnel protective equipment (PPE);
 - Must be trained to the Hazmat Awareness level;
 - Must be trained in CPR/AED; and
 - Must complete an orientation to the department’s equipment, apparatus, and standard operating procedures.
 - Minimum Staffing Crew Member
 - Must have been trained to the Crew Assistant level;
 - Must be trained to the Fire Fighter I level; and
 - Must be trained to the Hazmat Operations Level.

- 6-19 The CCVFRA’s Training and Certifications Standards Committee should develop and implement an emergency vehicle driver training and certification standard that is NFPA 1002 compliant and that is applied equally and equitably to the individual fire departments. The Emergency Vehicle Driver Standard should be phased in over a three- to five-year period in order to allow existing emergency vehicle drivers the opportunity to comply with the new requirements.
- 6-20 The CCVFRA should immediately require all chief officers to complete the NIMS ICS 300 incident command training and all captains and lieutenants to complete the NIMS ICS 200 incident command training. The CCVFRA should establish a deadline of no longer than eighteen (18) months for all officers to comply with this mandate. At which time the CCVFRA should remove incident command authority from those officers who have not met the requirement.
- 6-21 The County and the CCVFRA should examine the nationally recognized Blue Card Command Training Program and consider implementation of the command training program for all chief officers in the County.
- 6-22 The CCVFRA should establish a required, minimum attendance level for active members at company drill training sessions. This requirement should be applied equally and equitably to all departments. Should an active member fail to meet this minimum training standard, then that member should be placed in a “provisional” (non-minimum staffing) status until the training is completed.
- 6-23 The CCVFRA should require the departments to host, deliver, and or participate in meaningful, multi-department drills at least six times a year and have those drills focus on the various emergency response activities that require multiple units to work together in order to mitigate an incident.
- 6-24 The CCVFRA should consider implementing some type of training certification award system that provides an award to the department members who pursue and attain Pro Board certification through completion of DFP training courses. At a minimum, the following certifications should be included in the certification awards program:
- Fire Fighter I, II
 - Fire Officer I, II, III, and IV

- Fire Apparatus Driver/Operator (FADO) Pump, and Aerial
- Rescue Technician – Vehicle Rescue I/II
- Rescue Technician – Machinery Rescue I/II
- Rescue Technician – Confined Space Rescue I/II
- Rescue Technician – Trench Rescue I/I
- Rescue Technician – Rope Rescue I/II
- Fire Instructor I, II, and III.
- Public Fire Educator I/II

6-25 The County should provide a training recordkeeping system for use by all of the fire departments. The system should be electronic based and should comply with NFPA 1401: Recommended Practice for Fire Service Training Reports and Records, 2012 Ed. The system should have data entry points at each fire/EMS station so that department Training Officers can enter and retrieve training data directly from the system. The training data entry and recordkeeping program must be able to manage and support the following types of training-related information:

- The entry and retrieval of individual member training course completion documentation – and perhaps even the imaging (scanning) of training certificates;
- The entry and retrieval of individual member recertification documentation;
- The entry and retrieval of company drill attendance and topic documentation;
- The retrieval of individual member training records (training transcript); and
- The retrieval of training topics and hours of attendance data (e.g., 230 hrs of driver training in 2015).

6-26 The CCVFRA and the Training Coordinator should begin work immediately to develop a budget to support the implementation of the minimum training standards. During Phase I implementation of the Officer Training Standards, the guaranteed delivery of the following courses should occur: at least one Fire Officer I course, one Fire Fighter II course, and one Vehicle Rescue – Level I course per year in addition to the normal course offerings.

OPTIONS AND RECOMMENDATIONS — EMERGENCY MEDICAL SERVICES

- 7-1 The Study Team recommends that the Director of OEMS perform a salary survey to compare Culpeper County salaries with neighboring jurisdictions and northern Virginia jurisdictions.
- 7-2 The Study Team recommends that the CCVFRA, EMS Committee and the supervisors of the OEMS EMS staff seek partners in the community to develop and deliver citizen CPR classes and public education programs focused on injury prevention for all age groups, healthy living related to cardiovascular diseases (stroke, heart attack, etc.), and knowing when to call 911 versus when to see a primary care physician.
- 7-3 The Study Team recommends that CPR training be required coursework for all high school students in the Culpeper County school system and that the CCVFRA and County school board work together to implement this recommendation.
- 7-4 The Study Team recommends that the OEMS in coordination with the CCVFRA develop and implement an aggressive public-access AED program that has a countywide focus and works with the local government and business interests to implement public access to AEDs throughout Culpeper County.
- 7-5 The Study Team recommends that all front-line fire apparatus be equipped with an AED and personnel be trained to use it. Considering that this equipment is available in public places and used by citizens and law enforcement, it only seems appropriate that fire emergency personnel have the same lifesaving capabilities.
- 7-6 The Study Team recommends that dispatch protocols be revised to make sure that AED-equipped fire units are dispatched when closest to a critical emergency, especially cardiac arrests along with the appropriate ambulance/medic unit when the fire unit is closest to the incident.
- 7-7 The Study Teams recommends that the OEMS and the Communications Center research and review programs available for notification of citizens of cardiac arrest situations since there will be more programs coming to the market and some may be better suited for a rural area than currently available systems. The

incorporation of this type of program should be included in long-range planning for service improvement.

- 7-8 The CCVFRA must develop and implement an EMS unit staffing standard that establishes the minimum staffing for a medic unit as one ALS provider and one EMT-B provider (driver) with the role of a First Responder limited to a third or fourth care provider on the unit.
- 7-9 The Study Team recommends that if personnel are not immediately available in the first-due station to respond that the second due unit be dispatched within three minutes, if the first-due unit does not respond within that timeframe.
- 7-10 The Study Team recommends that dispatch and response times should be reviewed semi-annually by the EMS Committee of the CCVFRA to determine if there are additional ways to reduce response times. This may include examining the availability of career staff when there are multiple calls and recommending additional EMS career staff.
- 7-11 The Study Team recommends that the Little Fork Volunteer Fire & Rescue Company continue with its relationship with the Medical Director from Fauquier Hospital where they perform the majority of their transports.
- 7-12 The Study Team recommends that the County support the CCVFRA in providing education to the community regarding the expansion of the ambulance billing program.

OPTIONS AND RECOMMENDATIONS — OPERATIONS AND STAFFING

- 8-1 The Study Team found that a central database for pulling countywide data, to include system performance, fire loss, etc., does not exist. The Study Team recommends that developing and implementing such a database should be a priority.
- 8-2 The Study Team recommends that centralized reporting; data collection and performance management statistics should be required of all fire and rescue providers in the county and should be codified by County Ordinance.

- 8-3 The Study Team believes that the fire and rescue system workload should be monitored and reported monthly. and this data should be used in the determination of future needs of the service providers.
- 8-4 The Study Team recommends no change in the present level of heavy-duty extrication (rescue) services.
- 8-5 The Study Team encourages the County to aggressively promote the installation of automatic sprinklers in all new, residential structures regardless of structure size regardless of structure size and non-residential structures that have over 1,500 square feet of enclosed space.
- 8-6 The Study Team recommends that there be more water supply interoperability training between the departments.
- 8-7 The Study Team recommends that standard water tanker apparatus specifications be developed to assure maximum effectiveness in rural fire flow (water) delivery.
- 8-8 The Study Team recommends that Culpeper County appoint a Water Supply Coordinator (WSC) with the following responsibilities:
- Maintain the countywide water supply map book/resource guide that identifies the location and capability of all water supply sites within the County;
 - Recommend additional water supply sites for underground storage tanks and/or dry fire hydrants and manage state grants for such;
 - Possess review sign-off authority on new fire protection water supply development; and
 - Coordinate the implementation of interoperability water supply training with the County Training for the local Fire and Rescue companies.
- 8-9 The Study Team recommends that the County fully implement the pre-fire planning SOG to strengthen its ability to be prepared for incidents.
- 8-10 The Study Team recommends that a Standard Operating Procedure (SOP) relating to post-incident analysis on defined fire, rescue, EMS, HAZMAT incidents and other special issue incidents be developed and implemented.

- 8-11 The Study Team recommends that one Incident Command System (ICS) be adopted, implemented and utilized countywide.
- 8-12 The Study Team recommends that there be regular and comprehensive training in the ICS and that the ICS must be utilized to the appropriate level on every emergency incident.
- 8-13 The Study Team recommends that all organizations be mandated to participate by joint training exercises involving the use of the ICS.
- 8-14 The volunteer officers operate on a “hand-shake” agreement, which currently allows any qualified command officer to take charge at an incident, irrespective of whose volunteer company jurisdiction the incident may be in. The Study Team recommends that an SOP codifying this practice be developed and adopted.
- 8-15 The Study Team recommends that a standard that establishes an integrated chain of command within Culpeper County should be developed and adopted.
- 8-16 The Study Team recommends establishing a standard requiring the establishment of company and countywide duty schedules.
- 8-17 The Study Team recommends that Culpeper County conduct a systematic analysis of operations and activities for the purpose of determining the overall effectiveness of SOPs on an annual basis.
- 8-18 The Study Team recommends further study regarding the CAD system to determine if the needs of the Culpeper County fire and rescue system are being met and what, if any, changes can be implemented to address concerns.
- 8-19 The Study Team would recommend that the County adopt Staffing Option C (provide fire protection with an all-volunteer fire system, combination EMS staffing and career support staff) at this time and create “one department,” with the current volunteer companies remaining in-tact and partnering with the new Department, that provides oversight, leadership and career support positions such as those outlined in this report (County Chief of Director, Fire Marshal, Training Officer and personnel, Volunteer Coordinator, Fleet and Facility Maintenance, etc.).

- 8-20 The Study Team recommends that collecting and analyzing specific apparatus and incident scene staffing data be a priority.
- 8-21 The Study Team recommends that the County implement an emergency incident response staffing-related records management systems to include the following:
- Number of personnel responding on each unit;
 - Number of officers responding on each unit;
 - Number and type of personnel responding in personal vehicles, and arrival times; and
 - Number and type of personnel responding to the station during an incident, and remaining in the station to staff other apparatus not responding to the incident.
- 8-22 The Study Team recommends that a countywide policy requiring the gathering and periodic analysis of station and apparatus staffing data be adopted.
- 8-23 The Study Team recommends that the County fund the needed renovations of the station to accommodate onsite staffing, and the County should consider implementing other programs that encourage personnel to remain in the fire stations on a scheduled basis. Some items for consideration include:
- Offering a standby food program to supplement the cost of meals for volunteers serving on standby crews;
 - Providing physical fitness equipment in the station;
 - Providing access to computer equipment for study or other productive uses;
 - Establishing library and study areas in the station; and,
 - Providing a living area to accommodate many members in a social setting.
- 8-24 The Study Team recommends the County dedicate funding to any approved special operation function above and beyond normal company funding.

OPTIONS AND RECOMMENDATIONS — HEALTH AND SAFETY

- 9-1 The Study Team recommends that the safety related policies and procedures be in a separate category in the CCVFRA SOGs.
- 9-2 The Study Team recommends that the CCVFRA establish a Health and Safety Committee. Each department, including the career department, should have representation on the committee. Some of the duties and responsibilities of the committee should include:
- Development of a comprehensive risk management plan that not only addresses operational incident safety but incident reporting (injuries, etc.) and in house safety at the stations. The NFPA 1500 has a template for a risk management plan as Appendix D and should be used to help develop the Culpeper County Risk Management Plan.
 - Identification and prioritization of policies and procedures that need to be developed in addition to review of current documents.
 - Coordination with the Training Coordinator to develop Safety Officer training program.
 - Identification and development of safety training for operational members of the fire and rescue departments in Culpeper County.
 - Develop a process for monitoring compliance with safety policies and procedures. This includes maintenance of data with quarterly review of incidents.
 - Development of a prevention program to prevent injuries.
- 9-3 The Study Team recommends that the Training Coordinator should also be the designated Health and Safety Officer for the County fire and rescue departments in accordance with NFPA 1500 and NFPA 1621 *Standard for Fire Department Safety Officer, 2015 Edition*. This individual should be responsible for supporting and working with the Health and Safety Committee as it takes on the responsibility for development of a comprehensive health and safety program.

- 9-4 The Study Team recommends that the CCVFRA consider adding an additional position to assist the Training Coordinator in support of the fire and EMS agencies in Culpeper County.
- 9-5 The Study Team recommends that the CCVFRA develop and adopt policies and procedures for privately owned vehicle (POV) response. These should include age requirements, prerequisites, safe driving record, proof of personal auto liability insurance, inspection of POV for safety requirements, completion of an emergency vehicle driving course or equivalent and understanding of applicable department (association) policies and local and state laws. All driving related policies should include mandatory wearing of seat belts.
- 9-6 The Study Team recommends that the CCVFRA, with the help of the Health and Safety Committee, put a high priority on developing and implementing a mandatory seat belt usage policy and a process for ensuring compliance.
- 9-7 The Study Team suggests a comprehensive written vehicle collision reporting policy that addresses all aspects of emergency vehicle collisions: driver training and certification; collision investigation and report writing; post-collision drug and alcohol screening; and driver remedial training.
- 9-8 It is recommended that the Health & Safety Committee provide a report annually to the CCVFRA on any collisions and follow up recommendation for prevention.
- 9-9 The Study Team recommends that the Safety and Health Committee develop a policy regarding care and maintenance of personal protection equipment to ensure standard compliance by all agencies in the Association. The policy should follow the recommendations of NFPA 1851 *Standard on Selection, Care and Maintenance of Structural Fire Fighting Protective Ensembles, 2014 Edition*.
- 9-10 The Study Team recommends that the CCVFRA, through the Health & Safety Committee, develop and implement a written respiratory protection program that includes the use, maintenance, and repair of SCBA, as well as annual training and recertification for personnel.

- 9-11 The Study Team recommends that the Health and Safety Committee look into the lack of hearing protection for response personnel and develop recommendations and a policy on the purchase and use of hearing protection.
- 9-12 The Study Team recommends that the CCVFRA immediately:
- Develop clear and consistent incident management policies and procedures;
 - Implement consistent command officer training that requires all chief officers to be certified to the Fire Officer I level (and eventually to higher levels of Fire Officer certification as identified in the training chapter of this report) (NFPA 1021), Incident Scene Safety Officer, and ICS 300 and 400 levels (NIMS).
- 9-13 The Study Team recommends that the CCVFRA develop a comprehensive structure fire response procedure that meets the requirements set forth in NFPA 1500. This procedure should address the use of an initial 2-out team, the transition to a RIT operation, and a process by which a MAYDAY situation is managed.
- 9-14 The Study Team recommends that the CCVFRA develop and implement a post-incident analysis policy and procedure that is used for all significant fire/rescue/EMS incidents in which fire and EMS units respond.
- 9-15 The Study Team recommends the fire and EMS departments immediately install carbon monoxide detectors in all fire stations.
- 9-16 The Study Team recommends that the CCVFRA in conjunction with the newly created Health & Safety Committee develop and implement a Facility Safety Inspection Program that complies with NFPA 1500 and ensures that a comprehensive safety inspection is completed at each of the CCVFRA facility on an annual basis at a minimum.
- 9-17 The Study Team recommends that the CCVFRA consider asking the County for funding for physical examinations as a benefit for those members that do not receive them with their employment.

- 9-18 The Study Team recommends that the CCVFRA and Health & Safety Committee develop and implement a medical evaluation program for all active emergency responders who are expected to wear SCBA.
- 9-19 The Study Team recommends that the Training Coordinator/Health and Safety Officer should be charged with oversight of an Infection Control program.
- 9-20 The Study Team recommends that the County ensure that these types of employee assistance services are available for the employees of the Emergency Services Department, as well as volunteer members.
- 9-21 The Study Team recommends that the CCVFRA develop a written substance abuse policy that addresses aspects of alcohol and substance abuse as related to fire department operations.

**OPTIONS AND RECOMMENDATIONS —
VOLUNTEER RECRUITMENT AND RETENTION**

- 10-1 Earlier in the Study (Chapter 2, Organization and Administration), the Study Team recommended that the County hire a full-time volunteer recruitment coordinator. This recommendation is also made as a part of this chapter.
- 10-2 The Study Team recommends that the County formally adopt the recommendations regarding volunteer recruitment and retention outlined in the Virginia VWS report.
- 10-3 Study Team recommends that the high school fire and EMT training (cadet) program be reconsidered in Culpeper County.
- 10-4 The Study Team recommends that the County seriously consider the volunteer live-in option as a bridge before career firefighter staff are hired for County stations and appoint a group to study this option, the need and cost of station upgrade, and develop a cost benefit analysis to be presented to the Board of Supervisors.

- 10-5 The Study Team recommends that a comprehensive volunteer recruitment and retention program be developed and implemented, building on the prior and current initiatives of the CCVFRA and the companies. The program should be appropriately funded and include:
- The length of service awards program enhancements;
 - Recommendations for volunteer retention programs based on input received from volunteer exit interviews or forms;
 - Implementation of a property tax incentive and utility cost assistance retention initiatives;
 - Initiate recommendations for additional volunteer recruitment programs, such as possible medical and dental care;
 - Develop a volunteer handbook which can be given to prospective members of the fire departments, explaining the benefits and requirements of becoming a volunteer; and,
 - Focus volunteer programs toward retention of members during their first four years of membership.
- 10-6 The Study Team recommends that the County make application, as often as allowed, for SAFER funding to assist with the implementation of the recommendations for recruitment and retention in the chapter.
- 10-7 The Study Team recommends that the County, working in concert with the volunteer companies, develop and roll-out a “Fire and Rescue System” awareness campaign to educate County citizens on the County’s fire and rescue services.



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