

Roane County Fire Protection Assessment 2012

Study completed by:
Mark A. Foulks EFO, CFO, Fire Management Consultant
The University of Tennessee
County Technical Assistance Service

Summary and Self Evaluation provided by Roane County Staff

Executive
Summary # 26

Roane County Fire Protection Evaluation 2012

- ▶ Review of:
 - 2005 CTAS study and recommendations
 - 2012 CTAS study and recommendations
 - Insurance Service Office (ISO) Fire Service Rating Schedule
 - County Recommendations
 - VFD Recommendations



Roane County Fire Protection Evaluation 2005

- ▶ In 2005 the Roane County Fire Board requested the first comprehensive evaluation of the rural fire suppression program.
- ▶ Evaluation performed by CTAS
- ▶ Purpose of the evaluation included:
 - Conduct a complete independent evaluation of the fire protection system within the county
 - Identify areas that could improve the Insurance Services Office, Inc. (ISO) ratings
 - Look at the water supply issues and identify alternatives
 - Establish a short/long term plan for improved fire protection including the effects that the continued growth will have on the community and the fire departments
- ▶ Full study available at www.roaneoes.com

Roane County Fire Protection Evaluation 2005

- ▶ Identified Challenges:
 - Need for updated apparatus, equipment, etc. **NOT ISO COMPLIANT**
 - Lack of firefighters (especially daytime response) **DOES NOT MEET NFPA 1720**
 - More funding needed
 - Water supply problems
 - Need more sources for water
 - Hydrants needed to be installed consistently as structure count grows
- ▶ Training
 - Lack of facility to train at
 - Full-time work schedules of volunteers make it difficult to accommodate
 - Need for the county to assist with the recruitment of volunteers
 - Growth issues in general
 - Increased hazards, call volume, etc.

Roane County Fire Protection Evaluation 2005

- ▶ Recommendations:
 - Improving the level of equipment that the fire departments operate with.
 - Providing a means that volunteer firefighters can be recruited, trained, and retained.
 - Planning for a small contingency of paid personnel to handle the work load when volunteer firefighters are not available.
 - Providing a higher level of building codes and fire prevention programs.
 - Adopting sprinkler system requirements that ensure that new structures are built to the highest level of safety.
 - Fire Department Consolidation



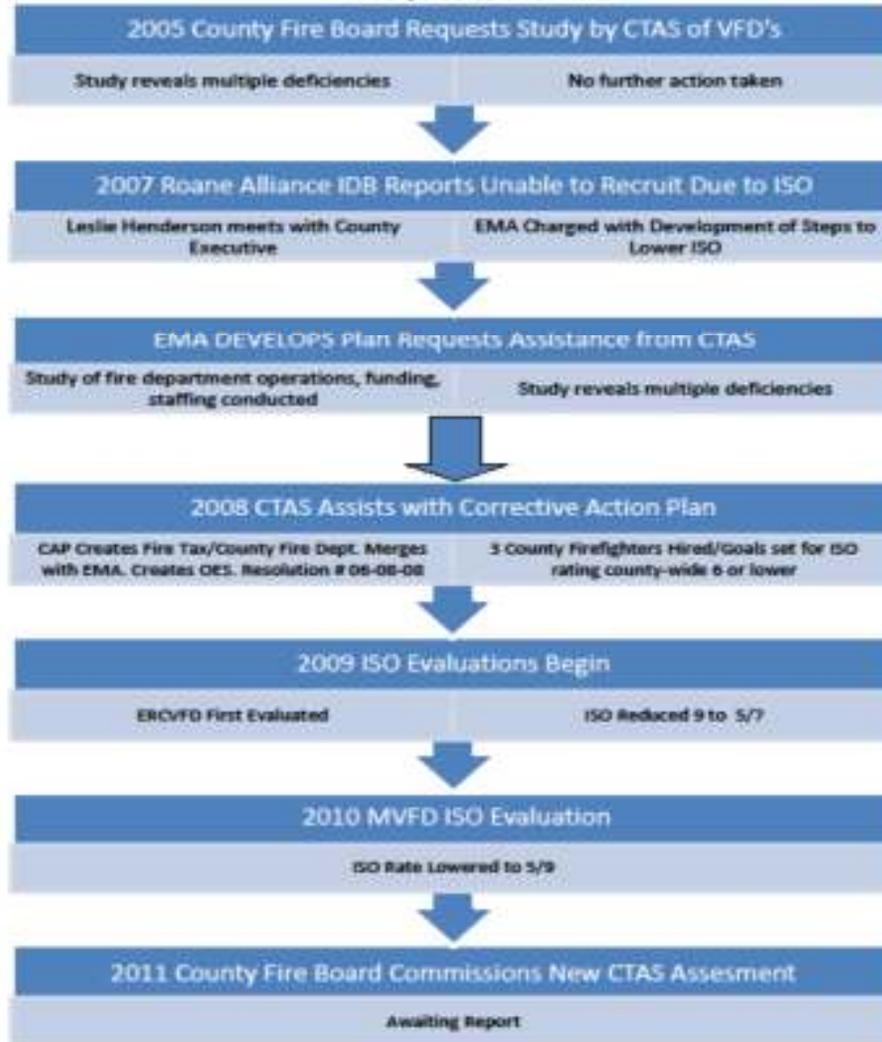
Implementation of Recommendations from the 2005 Fire Evaluation

- ▶ Due To:
 - Long response times, low volunteer firefighter turn out, and high ISO ratings persisted
 - These issues led to increased difficulty in recruiting business/industry
- ▶ Action Taken:
 - 2008 Roane County Fire Department was created and merged with the Emergency Management Agency creating Office of Emergency Services. Resolution #06-08-08
 - Fire Tax levied on rural area. Resolution #06-08-08
 - 3 Paid Firefighters hired
 - Annual Fire Tax has been levied and Budget established

Evaluation of the 2005 Implementation

| Recommendations | YES | No | Partial |
|---|-----|----|---------|
| Improved Equipment | | | X |
| Recruitment Incentive | | X | |
| Paid Firefighters | | | X |
| Increased Building Fire Codes | | | X |
| Sprinkler System Required | | | X |
| Increased Funding to Volunteer Fire Dept. | X | | |
| Fire Dept. Consolidation | | X | |

Roane County OES Fire Division Inception/Evolution



Roane County Fire Protection Evaluation 2012

- ▶ Resolution # 03-11-16 Requested a new evaluation
- ▶ Goals of the 2012 Fire Evaluation:
 - Identify improvements in county fire protection in relation to the 2005 CTAS evaluation
 - Evaluate changes brought about through the county fire tax
 - Identify areas that could improve the Insurance Service Office (ISO) ratings
 - Establish recommendations specifically related to improving the fire department portion of ISO grading schedule
 - Establish recommendations related to volunteer fire department compliance with state and national statutes and standards
 - Evaluate the impact of paid firefighters hired by the county



Roane County Fire Protection Evaluation 2012

Limitations of the assessment: Replace with Matrix

Training documentation:

- ▶ Zero training records provided for the Blair Volunteer Fire Department from 10/1/2010 to 12/31/2010
- ▶ Zero training records provided for the Midtown Volunteer Fire Department from 9/1/2010 to 12/31/2010
- ▶ All county volunteer departments training rosters incomplete, difficult to disseminate, and some were nearly illegible

Response documentation:

- ▶ Zero records provided for East Roane County Volunteer Fire Department from 7/1/2010 to 12/31/2010
- ▶ Zero records provided for Midtown Volunteer Fire Department from 1/1/2010 to 8/30/2010
- ▶ Zero records provided for West Roane County Volunteer Fire Department for all of 2010.
- ▶ All county volunteer departments response reports contained inconsistent times, were incomplete, and response personnel were difficult to disseminate

Limitations of 2012 Fire Evaluation

| Limitation | MVF D | BVFD | ERCVFD | SRCVFD | WRCVFD | RCOES |
|-----------------------------------|----------|------|--------|--------|--------|-------|
| Missing Training Documents | X | X | | | | |
| Training Rosters Incomplete | X | X | X | X | X | |
| Missing Response Documentation | X | | X | | X | |
| Incomplete Response Documentation | X | X | X | X | X | |

2010 Data

Roane County Fire Protection Evaluation 2012

▶ Changes Since 2005 Fire Evaluation

- In 2008 the Commission passed a county fire tax which provides for both full-time fire personnel and increased county funding for the five county volunteer fire departments.
- In July of 2009 Roane County hired a full-time fire coordinator.
- The Roane County Office of Emergency Services now employs two full-time fire firefighters.
- The County has increased the amount of funding provided to each volunteer fire department to \$40,000.00

ISO Rating Changes 2005 to 2012

| Year | MVFD | BVFD | ERCVFD | SRCVFD | WRCVFD |
|------|------|------|--------|--------|--------|
| 2005 | 9/9 | 9/9 | 9/9 | 7/7 | 6/9 |
| 2012 | 5/8b | 9/9 | 5/7 | 7/7 | 6/9 |



Roane County Fire Protection Evaluation 2012

- ▶ ISO Rating Improvements (Turn into Matrix)
 - The East Roane County Volunteer Fire Department improved from Class 9 to Class 5/7.
 - The Midtown Volunteer Fire Department improved from Class 9 to Class 5/8b.
 - South Roane County Volunteer Fire Department remained at a 7/7.
 - Blair Volunteer Fire Department remained at 9/10
 - West Roane County Volunteer Fire Department remained 6/10



Evaluation 2012

ISO Review

- ▶ ISO Review
 - Fire Department 50%
 - Emergency Dispatch 10%
 - Water Supply 40%
- ▶ Fire Equipment
- ▶ Training
- ▶ Personnel and Response
- ▶ Incident Command

Evaluation 2012

Fire Equipment

▶ Findings:

- NFPA and ISO provide minimum equipment requirements
- NFPA recommends replacing firefighter personal protective gear every five years
- All departments do not meet the minimum required equipment



Evaluation 2012

Fire Equipment

- ▶ Recommendations:
 - Standardize equipment for operational efficiencies.
 - A central repository for all equipment inventory records should be maintained.
 - Test fire hose and fire pumps annually as recommended by NFPA.
 - Complete the ISO minimum inventory at least once a month.
 - Implement a plan to replace firefighter turn-out gear every five years.
 - Create a Capital Purchasing Plan reflecting equipment replacement.

Evaluation 2012 Training

▶ Findings

- Training accounts for 9% of the total ISO credit
- Only two of the five departments meet minimum ISO training requirements
- The following three (3) slides are the score cards for the Training component



Evaluation 2012 Training

| Training Facilities/Aids (County Wide) | Points | Points Received by Roane County |
|--|--------|---------------------------------|
| Drill Tower | 8 | 0 |
| Fire Building (including smoke room) | 8 | 0 |
| Combustible Liquid Pit | 5 | 0 |
| Library and Training Manuals | 2 | 2 |
| Slide Projectors Pump Cutaway | 2 | 2 |
| Training area | 10 | 0 |

2008 The Central Training Center in Harriman was closed

Evaluation 2012

Training

| Individual Department Training | Points |
|--|---------|
| Half-day (3 hours) drills, 8 per year | .4 each |
| Half-day (3 hours), multiple-company drills, 4 per year | .4 |
| Night drills (3 hours), 2 per year | .2 |
| Company training at fire stations, 20 hours per member per month | 25 |
| Classes for Officers 2 days per year for all officers | 15 |
| Driver and Operator Training 4 half-day sessions per year | 2 |

Evaluation 2012

Training

| Individual Department Training | Points |
|--|-----------|
| New Driver and Operator Training Classes for new drivers and operators, 40 hours | 2 |
| Training on Radioactivity 1/2 day per member per year | 1 |
| Recruit Training 240 hours per recruit | 5 |
| Pre-Fire Planning Inspections | 5 |
| Incomplete Records | -5 |
| Total Points Available | 96 |

Evaluation 2012 Training

▶ Recommendations

- Roane County should coordinate a fire and emergency service training council and would work to ensure the following training recommendations are met.
- Standardize training rosters for all departments.
- Each individual signs the roster.
- Ensure all members meet ISO, NFPA, State and Local minimum training requirements.



Evaluation 2012

Training

▶ Recommendations:

- Training facilities, materials, props, etc. should be shared
- Create a common training calendar
- Obtain certificate based training from the Tennessee Fire and Codes Academy
- Multi-company drills should include multiple departments that respond together for structure fire responses.
- Maintain training rosters and records for a minimum of five years



Evaluation 2012

Personnel and Response

▶ Findings:

- Each volunteer firefighter counts as 1/3 of a paid firefighter related to staffing requirements
- NFPA 1720 recommends Roane County's volunteer fire departments be on scene within 14 minutes and respond with a minimum of 6 firefighters.
- Response data was recovered on 54 of the 60 structure fires that occurred in Roane County during 2010
- A review of this data reveals that the average response time to structure fires is 15 minutes and the average number of firefighters responding is 4.6

Evaluation 2012

Personnel and Response

► Findings:

- The average number of responders does not meet the assembly recommendations of NFPA 1720
- Due to two issues it is impossible to evaluate the impact of the addition of full-time fire staff in Roane County
 - The first issue is the fact that the Roane County Office of Emergency Services was often not dispatched to structure fires for several minutes after the initial dispatch if they were dispatched at all.
 - The second issue is inconsistent documentation from the various volunteer departments

Evaluation 2012

Personnel and Response

▶ Recommendations

- Recruit and retain quality members.
- Utilize incentives or award programs to retain members
- Apply for AFG SAFER grants
- Utilize automatic aid with neighboring departments to meet NFPA 1720 assembly recommendations
- Roane County should develop protocols related to response areas and simultaneous dispatch of all automatic aid departments.



Evaluation 2012

Personnel and Response

▶ Recommendations:

- Develop alternative response protocols to automatic fire alarms.
- Documentation of incidents should be thorough and consistent.
- Roane County should define and track performance benchmarks
- Staffing alternatives should be researched



Evaluation 2012

Incident Command

▶ Recommendations:

- Ensure that all members who have command responsibility or who could be the initial incident commander receive appropriate levels of incident command training.
- Utilize the incident command system on all responses.
- Inter-local agreements and automatic or mutual aid should include language for the continuity of incident command, passing command, and terminating command.
- Table-top and functional incident command exercises should be conducted.

Evaluation 2012

Roane County Administration

Recommendations:

- Ensure that all volunteer departments have and maintain appropriate levels of liability insurance
- Create an electronic records management system for all departments.
- Ensure that all volunteer departments meet state statutory requirements,
- Provide data to the appropriate volunteer departments
- Develop and ensure compliance standards for county fire departments.
- Issue Bids or Request for Proposals (RFP) for fire equipment that can be utilized by all county departments.

Evaluation 2012

Roane County Administration

▶ Recommendations:

- Coordinate the application for regional AFG grants
- Hire additional full-time personnel. The county should work to develop a plan to staff four full-time personnel on duty 24 hours a day in a centrally located facility.
- Utilize Office of Emergency Service firefighters and staff to develop pre-incident plans and train the county departments on the plans.
- Develop automatic aid agreements between all departments
- Work with water utility districts to enhance hydrant placement throughout the county.

Evaluation 2012

Volunteer Fire Department Administration

- ▶ Recommendations
 - Develop minimum qualifications and standards for members.
 - Develop member identification numbers that are independent of radio numbers
 - Utilize common training and incident documentation and ensure Roane County receives a copies.
 - Maintain all departmental documentation for a minimum of five years.
 - Ensure proper documentation of all structure fire incidents including fire loss and save data.
 - Meet all Roane County compliance standards.
 - Apply for any available grants including AFG, SAFER, and Fire Prevention grants.
 - Develop and train on pre-incident plans.

Evaluation 2012

Benchmarking

▶ Findings:

- Without the proper data available to analyze and compare to national standards and best practices of delivering fire and emergency services, it is impossible to improve any system.
- Roane County currently does not track performance based benchmarks for the fire service.



Evaluation 2012

Benchmarking

▶ Recommendations:

- Numerous data points were identified in the assessment that should be tracked. **(Page 18-19 of the Evaluation)**
- Roane County should develop a central repository for all administrative reporting of the volunteer fire departments



Evaluation 2012

Fire Department Consolidation

- ▶ Findings:
 - 2005 Study recommended consideration of consolidation of the volunteer fire departments and the county fire department.
 - This would provide for more flexibility in funding for fire protection as well as streamline administrative tasks, provide for a higher level of purchasing power, and greater coordination of resources for emergency and non-emergency events
 - Consolidation would drastically reduce the administrative burden volunteer fire departments struggle with.
 - Ensure consistent training\response practices and eliminate physical, social, and cultural boundaries that have impeded departments from working together in the past.

Evaluation 2012

Fire Department Consolidation

- ▶ Recommendations:
 - If the citizens of Roane County are going to receive a dramatically improved and consistent level of fire and emergency response, then the elected officials and the fire department personnel/ administration must begin a methodical process to join the agencies into a cohesive unit .



Evaluation 2012

Summary

▶ CTAS Opinion Summary:

- This report contains a lot of information regarding the current state of fire protection in Roane County and recommendations for improvement
- With current response **times exceeding 15 minutes** and the number of responding personnel averaging **less than 5** per structure fire, it is evident that the current system is broken.
- The county is currently investing \$200,000 a year into the volunteer fire service. Without the proper leadership and a coordinated approach to fire protection, no amount of money will fix the system

Evaluation 2012 Summary

▶ CTAS Opinion Summary:

- Improvements should be prioritized by:
 - **Hiring additional full-time personnel**
 - **Begin the process of consolidating the volunteer fire departments into the Office of Emergency Services** and setting up performance based contracts with the remaining volunteer departments
 - **Establishing a Centralized Records Management System** and reporting requirements
 - **Assess training gaps and develop/ implement a comprehensive countywide training program**

Additional Comments

- ▶ The following slides contain the comments of the Volunteer Fire Departments concerning the 2012 Study.



Midtown Volunteer Fire Department

- ▶ Support for a Central Training Facility
- ▶ No support from Roane County to build additional fire station
- ▶ Wanted to know if the 2005 CTAS study recommendations still apply
- ▶ Operating Costs have increased each year but the Roane County contribution has not.
- ▶ Supports the need for a training officer to provide training to the VFD's on nights and weekends
- ▶ Request's Roane County provide records management software.
- ▶ Request's that Roane County provide semi-annual hose, pump, and SCBA testing
- ▶ Request's Roane County provide physical's, mask fit test, hepatitis shots, and pulmonary function test for the volunteer firefighters.

Blair Volunteer Fire Department

- ▶ Request's a common paging tone be placed in all VFD and OES pagers to facilitate rapid dispatch.
- ▶ Supports a capital purchasing plan for acquisition and replacement of apparatus and equipment.
- ▶ Roane County should apply for county wide SAFER/AFG Grants
- ▶ Supports a standardized records management system to increase reporting accuracy
- ▶ Request E-911 standardize their procedure for disseminating response data to the VFD's

East Roane County Volunteer Fire Department

- ▶ Recommends a central station and training facility
- ▶ Requests a detailed explanation of the revenue streams for Fund 111
- ▶ Recommends updating reporting standards
- ▶ Requests software for records management and reporting
- ▶ Requests a resource inventory of all firefighting equipment countywide
- ▶ Requests a standardized unit identification system for firefighting apparatus and personnel

South Roane County Volunteer Fire Department

- ▶ The current system of Volunteers supplemented by a few Career personnel is not only broken, it is on life support.
- ▶ A County Fire *Administrator* needs to be named so the task of managing and consolidating the volunteer fire departments and the OES into one cohesive County Fire Department can begin.



South Roane County Volunteer Fire Department

- ✓ The biggest problem with staggered responses and 15 minutes average response times is not in writing off a structure at 100% loss and protecting the exposures.
- ✓ It is with the near impossibility of assembling an entry team and affecting a rescue.
- ✓ Prohibits performing necessary fire ground tasks in a timely and coordinated manner.
 - ✓ RIT, Backup Lines, PPV or PPA, Search, Vent, Water Supply, etc.

South Roane County Volunteer Fire Department

- Deployment of *some* Career personnel out into the County rather than all from a central fire station should be reconsidered.
- Stricter building codes and code enforcement should be a priority.
 - Require monitored fire detection systems and / or residential sprinklers for new construction.
 - Roane County needs a Fire Marshall.



South Roane County Volunteer Fire Department

- ▶ Countywide system for apparatus maintenance and repair is needed
- ▶ Countywide fire ground SOPs need to be developed, implemented and trained upon.
 - Example: What is the procedure for a fire ground MAYDAY call?
- ▶ Addresses with cross streets should be included in the initial dispatch
- ▶ What can be done to minimize the liability risk to a volunteer chief?

West Roane County Volunteer Fire Department

- ▶ Requests Roane County create an incentive program to recruit and retain volunteer fire fighters.
- ▶ Request's a common paging tone be placed in all VFD and OES pagers to facilitate rapid dispatch.
- ▶ Supports a capital purchasing plan for acquisition and replacement of apparatus and equipment.
- ▶ Roane County should apply for county wide SAFER/AFG Grants
- ▶ Supports a standardized records management system to increase reporting accuracy
- ▶ Request E-911 standardize their procedure for disseminating response data to the VFD's