Berkeley County Fire Service Board, Inc.

Five -Year Strategic Plan

November 10, 2011

DELTA DEVELOPMENT GROUP
INC.

ACKNOWLEDGEMENTS

BERKELEY COUNTY FIRE SERVICE BOARD OF DIRECTORS

Gregory Rhoe, Chairman
Rodney Crowell, Vice President
Gregory Noll, Member
Tom Newcomb, Member
Hunter Wilson, Member
William Stubblefield, Council Representative
Fred G. Butler, Jr., Director

STRATEGIC PLANNING COMMITTEE

Gregory Rhoe, Berkeley County Fire Service Board, Inc.
Robbie Robertson, Berkeley County Fire Association
Eddie Gochenour, Captain, Engine 90
Richard Petry, Chief, South Berkeley Volunteer Fire Department
Michael Nichols, Chief, Hedgesville Volunteer Fire Department
Tommy Newcomb, Chief, Bedington Volunteer Fire Department
Daniel Petry, Chief, Back Creek Valley Volunteer Fire Department
Martin Roberts, Chief, Baker Heights Volunteer Fire Department

BERKELEY COUNTY VOLUNTEER FIRE DEPARTMENTS

South Berkeley Volunteer Fire Department (Company 20)
Hedgesville Volunteer Fire Department (Company 30)
Bedington Volunteer Fire Department (Company 40)
Back Creek Valley Volunteer Fire Department (Company 50)
Baker Heights Volunteer Fire Department (Company 60)

THE BERKELEY COUNTY FIRE BOARD WOULD LIKE TO EXTEND A SPECIAL THANK YOU TO:

Mary Kackley, Director, Berkeley County Central Dispatch
Gary A. Wine, Director, Berkeley County Information Technology

CONSULTANT

Delta Development Group, Inc.
Mechanicsburg, Pennsylvania

in association with:

Weber Enterprises LLC
Port Orange, Florida

November 10, 2011

TABLE OF CONTENTS

Executive Summary **1**

Berkeley County Fire Service Board, Inc. **6**

Strategic Plan Overview 6

VIsion, Mission, and ObJectives 7

Plan Development Methodology 7

SWOT Analysis 7

Plan Implementation and Maintenance 9

Fire Service Area Profile **9**

Berkeley County Profile 9

Capabilities of Volunteer Fire Suppression Services **10**

Firefighting Services 10

Existing Staffing Capabilities 13

Average Firefighter and Apparatus Response vs. NFPA Recommendations 16

Current Level of Response and Incident History 17

Fire Department Staffing Considerations 19

Technical Response Capabilities 20

Response Times Standards 21

Fire Incident Call-Scratch Events 21

Station Location Drive Time Analysis 24

Facilities and Equipment **29**

Current Fleet Inventory and Conditions Status 30

Facilities 33

Wildfire/Urban Interface Equipment Capabilities 34

Operations and AdminIstration Considerations **35**

Mutual and Cooperative Aid 35

Organizational Development and Communications 35

Relationships with External Agencies 36

Fire Incident Reporting and Data Management 37

Public Safety Answering Point (PSAP) 37

Training Requirements and Needs 38

Standard Operating Procedures 40

National Incident Management System (NIMS) Compliance 41

Life Safety Measures 41

ISO Rating 42

Capital and Operational Costs 44

Fire Service Board Five-Year Operating Budget 44

Fire Board Administrator 45

Training, Recruitment/Retention Officer 47

IMS/NFIRS Complaint Software 47

Apparatus, Hose Equipment and SCBA 47

Loan Amortization for Buildings and improvements 47

Summary 47

Fire Services Fee Ordinance 48

Federal Funding Opportunities 51

Attachment A – Berkeley County Fire Service Board ByLaws 53

Attachment B – Sample Funding Agreement 54

Attachment C – Berkeley County Fire Services Fee Ordinance 55

Attachment D – Fire Service Board Projected Five-Year Operating Budget 56

Attachment E – Acronyms 57

EXECUTIVE SUMMARY

The Berkeley County Council created the Berkeley County Fire Service Board, Inc. (Fire Service Board) on March 15, 1986, pursuant to the West Virginia Code Chapter 7-17-1, and subsequent to the Berkeley County Fire Association's (Fire Association) request to create the Fire Service Board under the authority of West Virginia Code Chapter 7-17-6. The objectives of the Council and the Fire Association for creating the Fire Service Board were to provide for the improvement, advancement, and development of fire services within Berkeley County, and to establish the necessary funding priorities and mechanisms to support these services.

Berkeley County's volunteer fire services have a long-enduring tradition and proud history of delivering high-quality fire suppression services to the County's residents and visitors. However, the County's volunteer fire departments continue to face ever-increasing challenges in their service delivery capabilities. Such challenges are centered on the recruitment and retention of qualified volunteers and the extreme financial burdens associated with maintaining and operating capital-intensive fire service operations.

The Fire Service Board prepared this Strategic Plan to clearly define the County's short-term (five years) and long-term (10 to 20 years) fire service delivery requirements and to provide a blueprint to ensure the necessary staffing and financial capacity needs are achieved. In addition, the Strategic Plan serves as a critical information communications tool among and between the Fire Service Board, the five volunteer fire departments, the Fire Association, the Berkeley County Council, and the citizens of Berkeley County. Above all, the Strategic Plan is a fundamental and necessary tool for the Fire Service Board to establish objective priorities and decisions for the appropriate and efficient expenditure of the County's fire service fee revenues and other decisions related to the improvement of fire services within Berkeley County.

A summary matrix of this plan's critical recommendations are summarized in Table 1 and are further elaborated within the Strategic Plan. Other policy considerations are included in the Strategic Plan for further evaluation and action.

TABLE 1 – FIVE-YEAR STRATEGIC PLAN SUMMARY

Vision: To ensure that the citizens of Berkeley County receive the most efficient and effective fire suppression services within the State of West Virginia.			
Mission: To provide for the improvement, advancement, and development of fire services within Berkeley County and to do any and all necessary business for the fire service and citizenry of the County.			
Objective #1: Work collaboratively with the Berkeley County Fire and Rescue Association to establish the funding priorities and mechanisms of the County's volunteer fire services.			
Recommendations	**Implementation Time Frame**	**Probable Cost and Funding Source(s)**	**Lead Entity(ies)**
R1.1 – Develop and maintain a five-year Capital Improvement Program (CIP) that utilizes the information contained in this Strategic Plan to comprehensively analyze and understand upcoming necessary and significant investments in apparatus, facilities, equipment, hoses, personal protective clothing, etc. The CIP must then become integral to the annual budgeting processes of the Fire Service Board and each individual fire company, and to their projected financial needs beyond the annual operating budget cycle (page 29).	2011 and maintained annually thereafter	$5,000 Fire Service Board Annual Budget	Fire Service Board and Fire Association
R1.2 – Ensure all fire equipment inventories and replacement schedules are maintained at least annually and that all capital equipment purchases are standardized. Further consideration of a joint purchasing policy or agreement between the Fire Service Board and Fire Association and its member fire departments to maximize the purchasing power of the County's fire services and strengthen the standardization of purchases (page 29).	Annually	Annual Administrative Costs	Fire Service Board Fire Association and Fire Departments
R1.3 – Establish and maintain a financial management agreement (Attachment B) between the Fire Service Board and Fire Association's member fire departments to establish uniform accounting practices and the criteria and standards through which fire service fee revenues are to be allocated. In addition, the agreement should establish uniform record keeping and information management practices. Adherence to these practices, coupled with the Fire Association's thorough and deliberate evaluation of the service delivery needs of each of the member fire departments, provides the basis for the Fire Service Board to make appropriate and fair allocation of fire service fees and other relevant funds (page 44).	2011 and annually	Annual Administrative Costs	Fire Service Board Fire Association and Fire Departments

R1.4 – Amend the Fire Service Fee Ordinance's rate schedule to ensure a more fair and equitable assessment is applied to the County's residential and non-residential structures and to correct other potential ordinance deficiencies (pages 48 - 51).	2011 - 2012	TBD	Fire Service Board Berkeley County Council
R1.5 – Continue to decrease the fire service fee receivables and consider appropriate policy measures accordingly (pages 49 - 50).	2011 and annually	Fire Service Board Annual Budget	Fire Service Board
Objective #2: Strengthen and supplement the staffing capacity of the volunteer fire departments to ensure the continued delivery of efficient and effective fire suppression services within Berkeley County.			
Recommendations	**Implementation Time Frame**	**Probable Cost and Funding Source(s)**	**Lead Entity(ies)**
R2.1 – Develop a career staffing model to implement the following career and volunteer staffing considerations (pages 19 -20): • Proceed with disbanding and decentralizing Engine 90 upon the relocation of the crews there be a strong concerted effort to schedule volunteer staff to ride as part of these companies. It is recommended that volunteer firefighters from all five companies be allowed to schedule to ride shifts on the career companies. The Fire Board and Fire Association should examine this issue and establish a practice that would allow this county-wide staffing opportunity for volunteers. • Add two additional career personnel to each career company 29 and 49. As this is accomplished the practice of using volunteer staff to supplement for leave time should be employed. • Expand the hours of coverage as needed to seven (7) days per week 12 hour shifts. • Expand the hours of coverage as needed to 24 hours per day	2013 - 2016	Costs TBD Berkeley County Annual Budget	Berkeley County Council Fire Association Fire Service Board
R2.2 - Consider purchasing a Mobile Training Simulator to meet the County's short-term live burn training and Firefighter I certification requirements. Note that a long-term focus should be on the planning and financing of a fixed firefighter training facility. To maximize cost efficiencies and utilization, such a facility should be designed and financed in partnership with other local, state, and federal firefighting services and interests (page 39).	2011 – 2012	$400,000 FEMA Assistance to Firefighters Grants (AFG)	Fire Association

Objective #3: Strengthen and supplement the Fire Service Board's administrative capacity to support the funding priorities and mechanisms of the County's fire departments.			
Recommendations	**Implementation Time Frame**	**Probable Cost and Funding Source(s)**	**Lead Entity(ies)**
R3.1 – Employ a full-time Fire Service Board Administrator to fulfill the roles and responsibilities as outlined in the Strategic Plan (page 36).	2012 and annually	$45,000 - $60,000 Fire Service Board Annual Budget	Fire Service Board
R3.2 – Employ a part-time/full-time Training/Recruitment Officer to spearhead the volunteer recruitment and retention needs of the volunteer fire companies. The responsibilities of the position would be the recruitment and retention of firefighting personnel and management of training records, as well as acting as the countywide training coordinator for intercompany drills (page 39).	2014 and annually	$25,000 - 40,000 Fire Service Board Annual Budget	Fire Service Board and Fire Association
R3.3 – Consideration should be given to establishing an incentive-based volunteer recruitment and retention program modeled after the Washington County, Maryland, "Volunteer Length of Service Award Program." The program is intended to comply with the Length of Service Award plan requirements under Section 457(e) of the Internal Revenue Code of 1986, as amended, and applicable West Virginia state laws (page 19).	2012 and ongoing	TBD	Berkeley County Council Fire Service Board Fire Association and Member Fire Departments
Objective #4: Standardize the information management systems among and between the County's five volunteer fire departments.			
Recommendations	**Implementation Time Frame**	**Probable Cost and Funding Source(s)**	**Lead Entity(ies)**
R4.1 – Purchase and implement a standardized NFIRS-compliant incident reporting system to ensure the uniform and standardized entry of incident data, as well as the standardized entry and maintenance of fire department equipment inventories, staffing, and training records, hydrants, pre-plans, and other pertinent information. The system should be Web-based and accessible by the Fire Service Board's administrative staff (page 37).	2012 – 2013	$51,240[1] Fire Service Board Annual Budget	Fire Service Board and Fire Association

[1] Based on a county-wide, web-based system software specification and price quotation received from FIREHOUSE, August, 2011.

R4.2 – Achieve enhanced management reporting from the Fire Board's Fire Service Fee Billing software program and explore the WV State Tax Department database for useable information to enhance the Board's residential and non-residential billings (pages 48 - 49).	2011 and annually	TBD Fire Service Board	Fire Service Board Berkeley County Assessor
Objective #5: Provide strategic direction and support necessary to cohesively unify the County's volunteer fire services.			
Recommendations	**Implementation Time Frame**	**Probable Cost and Funding Source(s)**	**Lead Entity(ies)**
R5.1 – Standardize the existing Standard Operating Procedures (SOPs) of each fire department, and, as appropriate, develop new SOPs to ensure uniform operational and tactical procedures are employed during all fire incident responses (page 40).	2011 and annually	TBD	Fire Association and Fire Departments
R5.2 – Ensure all fire companies maintain their NIMS compliance and utilize the Incident Command System (ICS) for all incidents. It is strongly recommended that a SOP be developed for the County's NIMS and ICS procedures (page 41).	2011 and annually	TBD	Fire Service Board Fire Association and Fire Departments
R5.3 - Ensure the routine use of informal and formal post-incident analyses to strengthen and increase training opportunities that are critical to successful and safe fire incident operations (page 40).	Ongoing	TBD	Fire Association and Fire Departments
R5.4 – Ensure each career and volunteer member firefighter within the County is attaining 20 hours of training per month to attain basic skill development and strengthen competencies in suppression-related subjects such as hoses, ladders, self-contained breathing apparatus (SCBA), forcible entry, salvage, and tactics, as well as other job-related duties and functions (page 39).	Ongoing	TBD	Fire Association and Fire Departments

BERKELEY COUNTY FIRE SERVICE BOARD, INC.

The Berkeley County Council (Council) created the Berkeley County Fire Service Board, Inc. (Fire Service Board) on March 15, 1986, pursuant to the West Virginia Code Chapter 7-17-1, and subsequent to the Berkeley County Fire and Rescue Association's (Fire Association) request to create the Fire Service Board under the authority of West Virginia Code Chapter 7-17-6. The objectives of the Council and the Fire Association for creating the Fire Service Board were to provide for the improvement, advancement, and development of fire services within Berkeley County, and to establish the necessary funding priorities and mechanisms to support these services.

West Virginia Code Chapter 7-17-1

"The Legislature finds that fire protection and saving lives and property are important to the health and welfare of the citizens of the state and that it is desirable for county governments to provide fire protection services to county residents."

As specified under its bylaws (see "Attachment A"), the Fire Service Board is comprised and governed by a seven-member Board of Directors appointed by the County Council. The Fire Service Board of Directors consists of three fire service personnel selected from one of the five fire districts, three citizens from different voting districts, and one Berkeley County Council member. Each member is appointed for a three-year term not to exceed two terms, and is approved by the Berkeley County Council and sworn in by the Berkeley County Clerk. The Fire Service Board meets monthly to conduct regular business.

STRATEGIC PLAN OVERVIEW

Strategic planning is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy, including its capital and people. Strategic planning is the formal consideration of an organization's future course. All strategic planning deals with at least one of three key questions:

- "What do we do?"
- "For whom do we do it?"
- "How do we excel?"

Strategic planning is the process for determining where an organization wants to be in the future (e.g., 3 to 5 years) and how it is going to get there. To determine where it is going, the organization needs to know exactly where it stands, then determine where it wants to go and how it will get there. The resulting document is called the "Strategic Plan."

The Berkeley County Fire Service Board prepared this Strategic Plan to clearly define the County's short-term (five years) and long-term (10 to 20 years) fire service delivery requirements and to provide a blueprint to ensure the necessary staffing, equipment, and financial capacity needs are achieved. In addition, the Strategic Plan serves as a critical information communications tool among and between the Fire Service Board, the five volunteer fire departments, the Fire Association, the Berkeley County Council, and the citizens of Berkeley County. Above all, the Strategic Plan is a fundamental and necessary tool for the Fire Service Board to establish objective priorities and decisions for the appropriate and efficient expenditure of the County's fire service fee revenues and other decisions related to the improvement of fire services within Berkeley County.

VISION, MISSION, AND OBJECTIVES

The Berkeley County Fire Service Board's vision, mission, and objectives serve as the fundamental foundation for this Strategic Plan, which provides the information and blueprint for the Fire Service Board to plot its course and successfully navigate the future. The Fire Service Board's vision, mission, and objectives are outlined as follows:

Vision: To ensure that the citizens of Berkeley County receive the most efficient and effective fire suppression services within the State of West Virginia.

Mission: To provide for the improvement, advancement, and development of fire services within Berkeley County and to do any and all necessary business for the fire service and citizenry of the County.

Objective #1: Work collaboratively with the Berkeley County Fire and Rescue Association to establish the funding priorities and mechanisms of the County's volunteer fire services.

Objective #2: Strengthen and supplement the staffing capacity of the volunteer fire departments to ensure the continued delivery of efficient and effective fire suppression services within Berkeley County.

Objective #3: Strengthen and supplement the administrative capacity of the Berkeley County Fire Service Board to support the funding priorities and mechanisms of the County's fire departments.

Objective #4: Standardize the information management systems among and between the County's five volunteer fire departments.

Objective #5: Provide strategic direction and support necessary to cohesively unify the County's volunteer fire services.

PLAN DEVELOPMENT METHODOLOGY

The Berkeley County Fire Service Board retained the services of Delta Development Group, Inc. (Delta) to provide the technical assistance and objective viewpoint necessary to prepare this plan. The strategic planning process was conducted over a seven-month period from April 2011 to September 2011. The strategic planning process entailed quantitative and spatial data collection and analyses, document reviews, and stakeholder interviews with representatives from the Fire Service Board, County Council, the five volunteer fire departments, Engine 90, the City of Martinsburg Fire Department, and select County departments, including Berkeley County Central Dispatch, the Office of Emergency Management, and the Planning Department. Monthly meetings with the Strategic Planning Committee (see "Acknowledgements") were facilitated by Delta to keep the project stakeholders informed of the planning process and to discuss various issues, concerns, and opportunities for improving fire services within the County. A draft plan was initially presented to the Strategic Planning Committee in July 2011, and ultimately to the Berkeley County Fire Service Board for its review, approval, and adoption.

SWOT ANALYSIS

Contributions obtained throughout the course of the strategic planning process provided insight to Strengths, Weaknesses, Opportunities, and Threats (SWOT) related to effective and efficient delivery of firefighting services within Berkeley County. These qualitative inputs support the quantitative data analysis and recommendations. The SWOT analysis results are summarized in Table 2.

TABLE 2 – BERKELEY COUNTY FIRE SERVICE BOARD
STRATEGIC PLANNING SWOT ANALYSIS RESULTS

STRENGTHS (Internal)	**WEAKNESSES (Internal)**
Volunteers Apparatus and equipment Mutual aid agreements Positive progression of the County Fire Association County/state funding in place Community support Fundraising County's continued financial support of apparatus and equipment maintenance (albeit weakening financially)	Strength of volunteer staffing levels Inconsistent staffing Limited administrative resources at both the Fire Service Board and fire company levels Limited funding for capital outlay, building, gear, and maintenance County financial support for apparatus and equipment maintenance is decreasing Little to no operational reporting Community financial support is impacted by the weak economy Lack of data and information, which inhibits the Fire Service Board's ability to accurately communicate financial needs and issues to the County Council Lack of community education regarding the state of the County's fire and rescue services
OPPORTUNITIES (External)	**THREATS (External)**
Public funding opportunities including discretionary grants Public education and information regarding the County's fire and rescue services (include a newsletter in the fire service fee bill) Personnel training Recruitment Collaboration and coordination (strengthening partnerships among fire departments) Standardized and centralized data collection, reporting, and analysis (FireHouse, VisionFIRE, etc.) Population growth • The 2010 Census reported that Berkeley County grew by 37 percent since 2000. The County is now the second most populous County in the state behind Kanawha County. • The increase in population creates opportunities for increased fire service fee collections. Bi-county training facility (Berkeley and Berkeley counties)	Population growth Increased demand for fire and rescue services Increased population is largely a result of new residents from larger urban areas that had career fire departments. Therefore, there is much-needed support for and dependence upon volunteer fire services. These services are not well understood or appreciated (education and information is key). Minimum National Fire Protection Association (NFPA) training requirements keep increasing (e.g., FF1 now requires 120 hours, plus live burn training) Keep up with the increase in first responder training requirements Volunteers do not match population growth Business growth with inadequate funding

PLAN IMPLEMENTATION AND MAINTENANCE

The Fire Service Board, in collaboration with the Fire Association and the volunteer fire departments, is responsible for the ongoing implementation and maintenance of this plan. As such, the Strategic Plan shall be a living document (not static) that is reviewed and updated annually by the Fire Service Board and communicated annually to the Berkeley County Council to keep its members (and the general public) well-informed of the accomplishments of the County's volunteer firefighting services, issues, concerns, and resource needs.

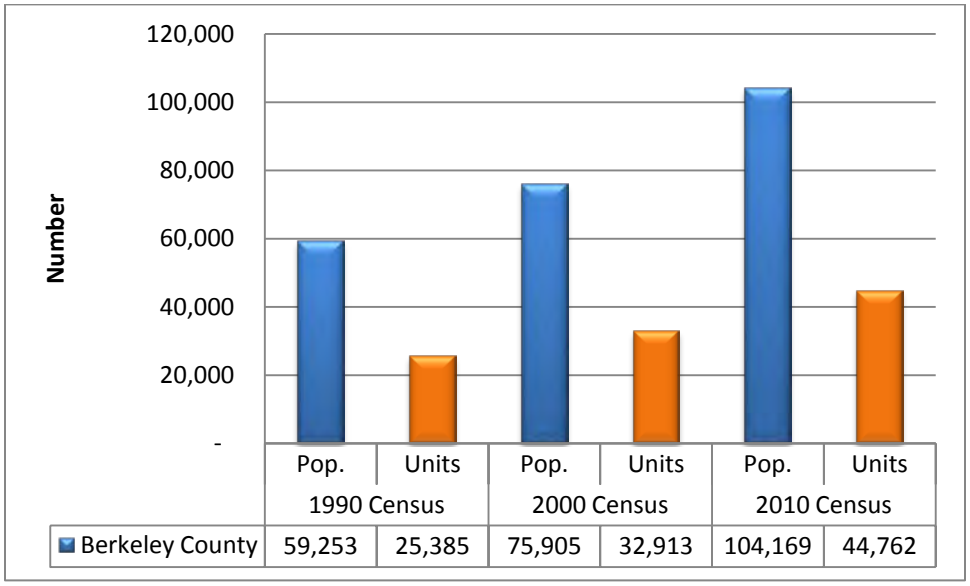
FIRE SERVICE AREA PROFILE

BERKELEY COUNTY PROFILE

Situated in the picturesque northeastern panhandle region of West Virginia, Berkeley County is home to a diverse, affluent, and rapidly growing population. Strategically located one hour and twenty minutes from the Baltimore-Washington Metropolitan Areas, Berkeley County is one of the nation's fastest growing counties and the fastest growing county in West Virginia. According to the U.S. Census, Berkeley County has attained a total population of 104,169, which represents a 37.2 percent increase from the County's 2000 population total of 75,905. Since 1990, Berkeley County's population has increased by 43.1 percent (Figure 1). Covering a total land area of 321.7 square miles, Berkeley County has a population density of 324.5 persons per square mile, which represents an increase from its 2000 population density of 236.4 persons per square mile.

Berkeley County affords residents, visitors, and businesses access to multiple modes and routes of transportation across the County. Major interstate highway systems include Interstate 81, running north/south, and Interstate 70, with easy access just across the County line into Maryland. Interstate 81 bisects the County from north to south and, given its increasingly high traffic volumes, greatly contributes to the volume of fire incident calls relating to vehicular and hazardous materials incidents. Other state and local transportation networks also transverse the County, including West Virginia Routes 9, 45, 51, and 901, as well as a large number of state-owned local service roads.

FIGURE 1 – BERKELEY COUNTY POPULATION AND HOUSING UNIT GROWTH TRENDS, 1990 - 2010



Source: U.S. Census

The Eastern Panhandle Transit Authority provides bus services to residents throughout the region. Amtrak and MARC provide commuter rail service to downtown Washington, D.C., from Berkeley County, with stops in nearby Berkeley County. Finally, international air travelers may choose to depart from the Washington Dulles International Airport only an hour away. While enjoying the rural atmosphere that many residents leave the cities for, Berkeley still affords its citizens swift access to major metropolitan markets and transportation systems.

Many large businesses make their home within the County's borders. Major employers include the Berkeley County Board of Education, Veterans Administration Center, West Virginia University Hospital East (City Hospital, Inc.), U.S. Department of Treasury, Quad/Graphics, Inc., Wal-Mart Associates, Inc., Department of Defense, Orgill, Inc., Eastern Panhandle Mental Health Center, and Berkeley County Government.[2] A sizable federal presence also can be found in Berkeley County, including the Internal Revenue Service (IRS), U.S. Coast Guard Operations Systems Center, U.S. Coast Guard National Maritime Center, Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), and the Veteran Administration Center. In addition, the United States Air Force's 167th Airlift Wing is located at Shepherd Field in Martinsburg, West Virginia. According to the West Virginia Development Office (WorkForce West Virginia), Berkeley County's total civilian workforce is 44,740, which represents an 11.5 percent increase over the County's 2000 civilian workforce of 39,610. Berkeley County's unemployment rate has remained consistently low averaging 4.1 percent between 2000 and 2008. Such low unemployment rates often contribute to the shortage of volunteers available to respond to fire incident calls.

In light of the County's major employers, a significant percentage of the County's workforce is employed outside of the County. According to the data compiled by WorkForce West Virginia:

- Over 38 percent, or 15,628 workers, of Berkeley County's 2000 labor force worked outside of Berkeley County. The majority of these workers (i.e., 12,204) worked outside the State of West Virginia.
- The number of workers commuting out of Berkeley County (i.e., 15,628) was nearly three times greater than the number of workers commuting into the County (i.e., 5,280) in 2000. This means that the County's net commutation (i.e., In minus Out) was -10,348.
- Berkeley County's net commutation of -10,348 comprised nearly half (48 percent) of the entire state's net commutation of -21,555.

Such workforce commutation trends directly impact the County's volunteer firefighters by reducing the number of active and qualified firefighters needed to adequately respond to fire incidents.

CAPABILITIES OF VOLUNTEER FIRE SUPPRESSION SERVICES

FIREFIGHTING SERVICES

As shown in Table 3, firefighting services within Berkeley County (except for the City of Martinsburg) are provided by five volunteer fire departments that operate as independent, nonprofit fire departments organized under the authority of the West Virginia Code and certified by the West Virginia Fire Marshal's Office. In addition to these fire departments, the Berkeley County Council owns and operates Engine 90, which augments the County's volunteer fire and rescue services based on established and mutually agreed-upon dispatch protocols.

[2] WorkForce West Virginia. Labor Market Profiles. Berkeley County Top 10 Employers, March 2010.. Accessed online at http://www.workforcewv.org/lmi/cntyprof/berkeley.pdf.

Berkeley County's five volunteer fire departments provide fire response and suppression services to their respective fire service districts, or Emergency Service Zones (ESZs), which are delineated in Figure 2.

TABLE 3 – BERKELEY COUNTY VOLUNTEER FIRE DEPARTMENTS AND BERKELEY COUNTY ENGINE 90

Company Number (Fire Department ID No.)	Company Name (Station/Substation Locations)	Fire and Rescue	EMS[3]	ESZ Area (Sq. Miles and Percent of County Total Land Area)
Company 20 (02104)	South Berkeley Volunteer Fire Department (Inwood/Winchester Avenue)	Yes	No	72.7 sq. mi. (22.6 percent)
Company 30 (02102)	Hedgesville Volunteer Fire Department (Hedgesville/Mountain Lake Road)	Yes	ALS	82.8 sq. mi. (25.7 percent)
Company 40 (02101)	Bedington Volunteer Fire Department (Martinsburg/Mid Atlantic Parkway)	Yes	No	58.3 sq. mi. (18.1 percent)
Company 50 (02106)	Back Creek Valley Volunteer Fire Department (Hedgesville)	Yes	No	69.6 sq. mi. (21.6 percent)
Company 60 (02105)	Baker Heights Volunteer Fire Department (Martinsburg)	Yes	ALS	31.9 sq. mi. (9.9 percent)
Engine 90	Berkeley County Council (Martinsburg)	Swift Water and HAZMAT	No	321.7 sq. mi. (100 percent)

Sources: West Virginia State Fire Marshal's Office, Berkeley County Fire Departments, ESRI, Inc., and Delta Development Group, Inc.

[3] Where noted, Emergency Medical Services are provided by and under the auspices of the Berkeley County Emergency Ambulance Authority.

FIGURE 2 – EMERGENCY SERVICE ZONES

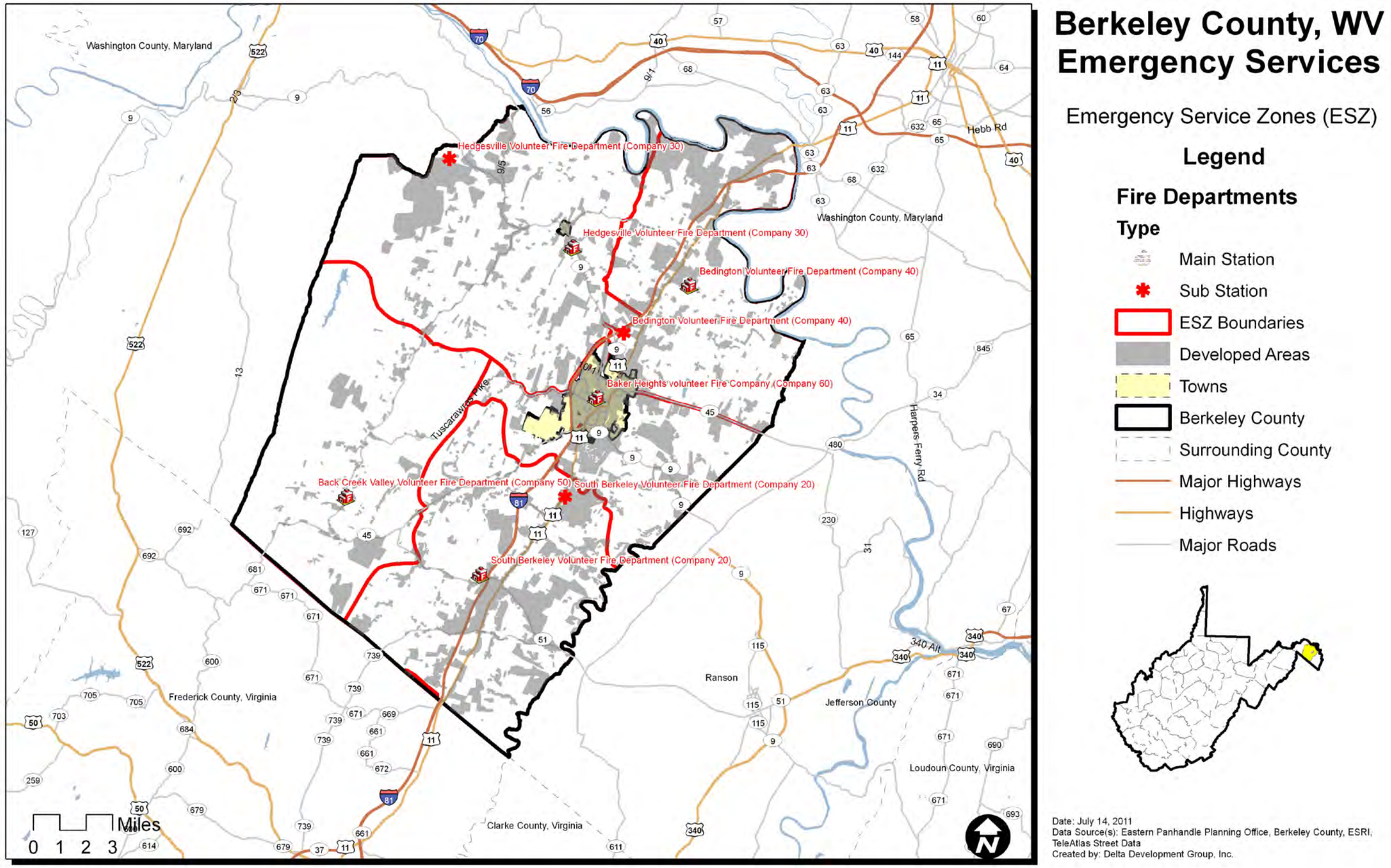
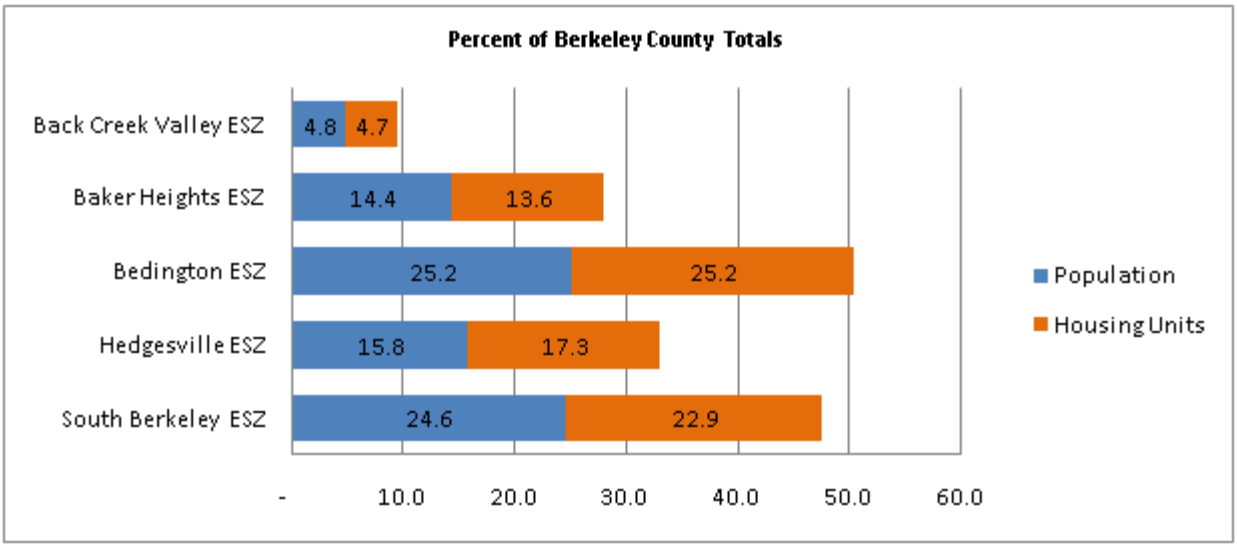


TABLE 4 – BERKELEY COUNTY POPULATION AND HOUSING TRENDS BY EMERGENCY SERVICE ZONE

Emergency Service Zone (ESZ)	Total Population (Pop.) and Housing Units (Units)								Percent Change (1990-2010)	
	1990 Census		2000 Census		2010 ESRI Estimate		2015 ESRI Estimate		Pop.	Units
	Pop.	Units	Pop.	Units	Pop.	Units	Pop.	Units		
Back Creek Valley ESZ	2,404	1,095	3,453	1,428	4,981	2,085	5,653	2,384	51.7	47.5
Baker Heights ESZ	7,832	3,805	9,845	3,804	15,006	6,079	17,307	7,188	47.8	37.4
Bedington ESZ	12,312	5,114	18,359	7,684	26,210	11,273	29,775	13,054	53.0	54.6
Hedgesville ESZ	8,028	4,150	10,795	5,390	16,452	7,722	18,852	9,023	51.2	46.3
South Berkeley ESZ	13,767	5,206	18,110	7,071	25,643	10,245	29,087	11,780	46.3	49.2
Totals	44,343	19,370	60,562	25,377	88,292	37,404	100,674	43,429	49.8	48.2

Source: ESRI Business Analyst, Delta Development Group, Inc.

FIGURE 3 – PERCENT OF BERKELEY COUNTY TOTAL POPULATION AND HOUSING UNITS



Source: 2010 ESRI Estimates

EXISTING STAFFING CAPABILITIES

Currently, staffing for Berkeley County's volunteer fire departments consists entirely of volunteers that are activated for service using a callout system based on a 9-1-1 emergency communications call received and dispatched by the Berkeley County Central Dispatch. No personnel are assigned coverage times for fire emergency fire incident calls, but coverage assignments do occur for known events and or weather events. The fire departments are comprised of volunteer firefighters who are all trained to state required levels to operate in situations that are Immediately Dangerous to Life and Health (IDLH). Personnel are trained to required National Incident Management System (NIMS) qualifications and for Incident Command (IC) positions. The volunteer fire departments obtain countywide support from Berkeley County's Engine 90, which is staffed Monday through Friday from 0600 to 1800 hours.

The primary responsibility of the volunteer fire departments is to respond to all emergency service-related activity, which includes all types of fire, hazardous conditions, motor vehicle crashes, good intent, and community service/fire safety calls for assistance. Emergency medical calls for assistance are not a primary responsibility of the fire departments, with two exceptions. Baker Heights and Hedgesville Volunteer Fire departments have transport ambulances and provide emergency medical services—including both advanced and basic life support—within their primary response areas. They also support the Berkeley County Emergency Ambulance Authority (BCEAA), which is the primary countywide emergency medical service.

While the combination of volunteer firefighting services and career emergency medical services is common, it does lead to a disjointed service delivery system and limits the ability to employ dual role personnel in the provision of a combined service (i.e., Firefighter/Emergency Medical Technician, Firefighter/Paramedic). To this end, there may be financial and staffing advantages for Berkeley County to consider in development of a combined Fire/EMS model system in the future. Typically, a combined model leads to additional career fire and medical staffing at reduced costs and increases system productivity. This strategy, however, is beyond the scope of this Strategic Plan, but is perhaps worthy of future evaluation by the Fire Board, Fire Association, BCEAA, and the County Council.

Fire incident call dispatching by Central Dispatch consists of the first-due company and the next closest fire departments being alerted to the call. Engine 90 will also be dispatched when it is in service. Sufficient apparatus and personnel must be dispatched to successfully achieve the NFPA 1720 standards for staffing based on the community population per square mile (i.e., minimum of 10 personnel for a typical single-family residence within 10 minutes). Based on this standard, the fire departments are not always successful in meeting these requirements, which is largely attributed to the lack of available volunteer staffing. When these standards are not met there is increased physical stress placed on the personnel at the incident, as documented in the "Fireground Field Experiences" produced by the U.S. Department of Commerce and National Institute of Standards and Technology, April 2010.

Volunteer Fire Companies are Confronting a Critical Shortage of Members

"Demands from family and work - coupled with ever-widening training requirements, fire calls, and the constant need for fund-raising for skyrocketing equipment costs - can tax the most dedicated volunteer. Just to complete a basic firefighter certification requires 160 hours of training offered by the state."

Mari A. Schaefer, "Proud Pa. Tradition Under Fire: Volunteer Companies are Losing Members," *Philadelphia Inquirer*, February 9, 2011, page B1.

Current staffing for emergency response is a combination of volunteer personnel from the fire departments and County Engine 90 staff who are available Monday through Friday, 12 hours per day. Staffing requirements are not currently being met and needs are reported to be inadequate for the current demand. Many times, especially during the normal working hours, significant personnel are not available for emergency responses. Multiple fire departments have reported that while at times there are enough firefighters available to respond, there is a significant shortage of apparatus driver/operators available. There have been reports of firefighters waiting in the stations with no qualified personnel available to drive an apparatus to the emergency. On occasion, firefighters have responded using their Personally Owned Vehicles (POVs), thereby leaving needed equipment at the station. This, in turn, leads to insurance and liability issues.

When multiple calls for assistance occur simultaneously, staffing is not always available. As responses increase, the demands on current personnel create risks for their continued membership. These personnel become torn

between duty to the community as a volunteer firefighter and their families, employers, and their health.

As previously documented, data compiled by the West Virginia Development Office (WorkForce West Virginia) reveals that a significant percentage (i.e., 38 percent) of Berkeley County's 2000 workforce is employed outside of Berkeley County and this majority was employed outside of the State of West Virginia. Many of Berkeley County's newer residents are likely commuter workers to the Washington, D.C., metropolitan area and hold government or government-related jobs. Their work days are long, especially adding commuting time, and their workweek just as long. They do not have significant free time and what free time they do have is dedicated to their families and their children's activities. This is drastically reducing the available pool of candidates for volunteer firefighters. Many volunteer organizations are being affected by these conditions. All of the fire departments are reporting significant difficulty in staffing during the working hours and are additionally having staffing issues around-the-clock.

The NFPA provides "Fire Department Profiles" through their Fire Analysis and Research Division. These profiles can be used to complete a comparative analysis of personnel and equipment. Table 5 provides a comparative analysis of each volunteer fire department on a combined and countywide basis. Data provided by each fire department regarding the number of active, interior qualified firefighters, number of engines/pumpers, number of aerial trucks, and number of stations show that that County's volunteer fire suppression capabilities are within the regional average for adequate coverage. However, the analysis does not reflect the real problem, which is not having adequate firefighters available to respond at the time an incident is occurring.

TABLE 5 – NFPA COMPARATIVE ANALYSIS OF BERKELEY COUNTY FIREFIGHTING PERSONNEL AND EQUIPMENT

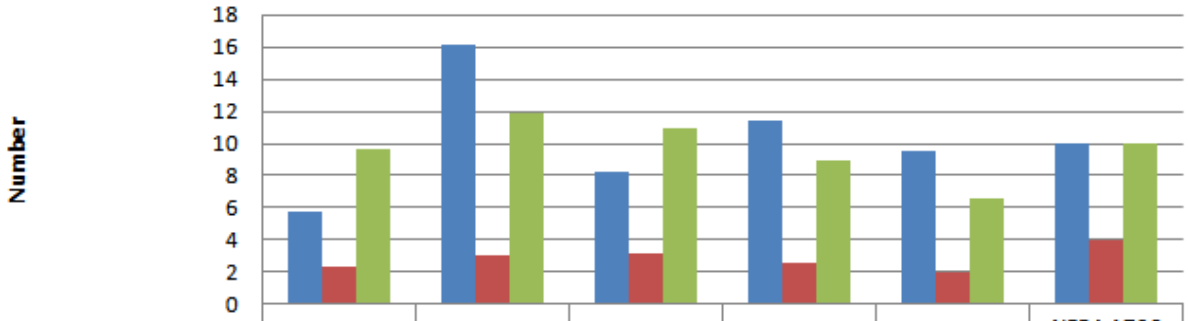
Company	ESZ Population	Actual No.	Active Interior Qualified FF per 1,000 Population	ISO Credit	NFPA 1720 Std. No. of Firefighters	Number of Engines	NFPA 1720 Std. No. of Engines	Number of Aerials	NFPA 1720 Std. No. of Aerials	Number of Stations	NFPA 1720 Std. No. of Stations
Co. 20 South Berkeley	25,643	39	1.52	0.51	0.79	0.12	0.11	0.00	0.02	0.08	0.10
Co. 30 Hedgesville	16,452	40	2.43	1.52	0.79	0.30	0.18	0.00	0.03	0.12	0.19
Co. 40 Bedington	26,210	17	0.65	0.22	0.79	0.11	0.11	0.04	0.02	0.08	0.10
Co. 50 Back Creek Valley	4,981	21	4.22	1.41	6.46	0.60	0.54	0.00	0.03	0.20	0.33
Co. 60 Baker Heights	15,006	16	1.07	0.36	0.79	0.20	0.18	0.00	0.03	0.07	0.19
Berkeley County VFD ESZ	88,292	133	1.51	0.50	0.79	0.14	0.08	0.03	0.04	0.09	0.08

Sources: NFPA Fire Service Survey 2007-2009 , U.S. Fire Department Survey Oct. 2010, Delta Development Group, 2011

AVERAGE FIREFIGHTER AND APPARATUS RESPONSE VS. NFPA RECOMMENDATIONS

Figure 4 provides an analysis of staffing and apparatus response by company for building fires during the period from 2006 through 2010. This analysis was used to determine if staffing for building fires has been adequate and if staffing and response is trending in a downward direction.

FIGURE 4 – DISPATCH TO ARRIVAL STRUCTURE FIRE RESPONSE TRENDS, 2006 - 2010



	Co 20 South Berkeley	Co 30 Hedgesville	Co 40 Bedington	Co 50 Back Creek Valley	Co 60 Baker Heights	NFPA 1720 Std. (Suburban)
Avg. Firefighters	5.8	16.1	8.2	11.4	9.5	10
Avg. Apparatus	2.3	3.1	3.2	2.6	2	4
Avg. Response Time	9.7	11.9	10.9	8.9	6.6	10

Source: West Virginia State Fire Marshal's Office, 2011

Sufficient apparatus and personnel need to be dispatched to provide NFPA 1720 standards for staffing based on the community population per square mile (minimum of 10 personnel within 10 minutes for a typical single-family residence). Based on a review of each fire company's reported National Fire Incident Reporting System (NFIRS) data obtained through the West Virginia State Fire Marshal's office, it is apparent that some fire departments are not always successful in meeting these requirements. When these standards are not met, there is increased physical stress placed on the personnel at the incident, as documented in the "Fireground Field Experiences" produced by the U.S. Department of Commerce and National Institute of Standards and Technology, April 2010.

Figure 4 demonstrates that on average Hedgesville and Back Creek Valley assemble above the NFPA average response time, while Baker Heights and Bedington are just below, and South Berkeley is significantly below NFPA recommendations for personnel to a single-family residential fire. It must be noted that the requirement is for 10 personnel in less than 10 minutes, but the data above does not provide that level of analysis. Therefore, while the averages are an indicator that there is some compliance to the standard, from actual discussion with the Fire Chiefs, it is clear that the standards are not being met a majority of the time. This especially occurs during the workweek hours. Most Fire Chiefs report that they are able to meet the standard during the night, but weekends are becoming a challenge.

The times when requests for service occur in Berkeley County are typical of and consistent with state and national trends. The hours of highest demand are between 11:00 a.m. and 9:00 p.m., which places great demands on the county's five fire departments to muster sufficient, qualified volunteer firefighters to meet the response standards specified by the NFPA.

The demand in call volume and the inability of the volunteer service membership to fully meet that demand have created an environment by which a transition to additional full-time staff is recommended, which is discussed further below under the "Fire Department Staffing Considerations" section (see page 20).

CURRENT LEVEL OF RESPONSE AND INCIDENT HISTORY

According to the West Virginia State Fire Marshal's Office, Berkeley County's five volunteer fire departments responded to 14,137 incidents during the period from 2006 through 2010 (Table 6). Overall, the call volume for the fire departments over the five-year reporting period has been steady with minor increases or decreases annually. The number of calls is, however, quite significant for an all-volunteer firefighting system, and Berkeley County's increasing population and developed land area will continue to challenge the response capabilities of each fire department. Moreover, fire events are labor intensive and without sufficient staffing. Early in the incident the damage and property losses tend to be larger as demonstrated in the five-year reported fire loss of almost $22,000,000 (Figure 5 and Figure 6). During the period from 2006 through 2010, Berkeley County's volunteer fire departments suffered property loss due to fire in the amount of $20,556,373. Figures 5 and 6 respectively show the annual total fire losses and distribution of these losses by fire company. As shown, the combined annual loss of the fire departments consistently exceeds $3,000,000 and has experienced an overall increase of approximately 10 percent between 2006 and 2010.

Although the county has experienced minimal fire service demand growth over the last five years, this trend is not expected to hold given that this period coincided with the national economic recession. On the contrary, the county is becoming a popular community for people to relocate to and over the last ten years the county has recorded 37.2 percent growth according to the 2010 Census. Unfortunately, this growth is not providing additional candidates for the volunteer fire companies. All indicators are that there will be call volume growth, reduced volunteer candidate pool and continued increases in call scratches and delayed responses.

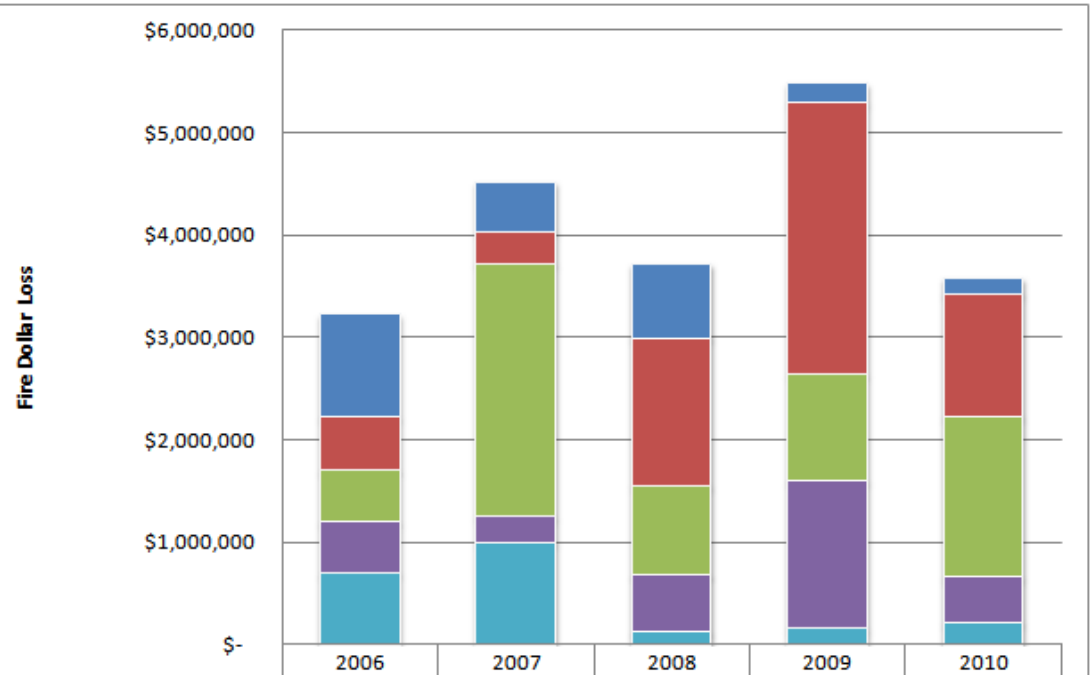
TABLE 6 – TOTAL ANNUAL INCIDENT CALLS BY COMPANY, 2006 - 2010

Company	2006	2007	2008	2009	2010	Total	Percentage of Total
Co. 20 South Berkeley	660	668	611	591	666	3,196	23%
Co. 30 Hedgesville	622	559	617	624	616	3,038	21%
Co. 40 Bedington	477	802	875	798	786	3,738	26%
Co. 50 Back Creek Valley	243	320	233	190	212	1,198	8%
Co. 60 Baker Heights*	623	614	608	516	606	2,967	21%
Totals	2,625	2,963	2,944	2,719	2,886	14,137	100%

Source: West Virginia State Fire Marshal's Office, 2011

**Baker Heights supplied data for 2007 - 2010*

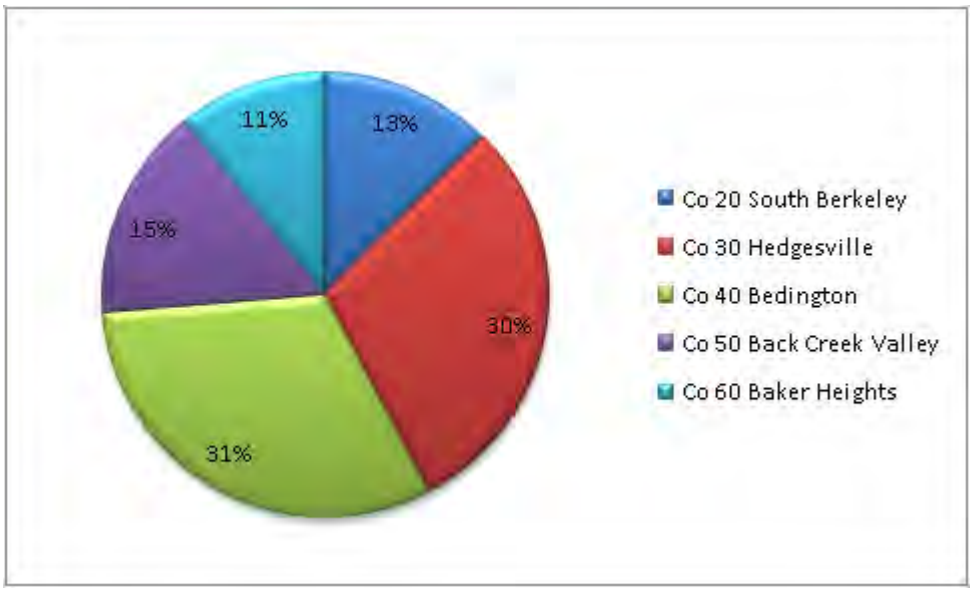
FIGURE 5 – TOTAL ANNUAL FIRE LOSS BY COMPANY, 2006 – 2010



	2006	2007	2008	2009	2010
Co 20 South Berkeley	$1,001,850	$487,200	$725,600	$195,600	$157,750
Co 30 Hedgesville	$523,600	$311,850	$1,440,750	$2,648,800	$1,194,700
Co 40 Bedington	$502,213	$2,470,800	$876,940	$1,042,870	$1,572,850
Co 50 Back Creek Valley	$497,925	$254,500	$549,000	$1,439,000	$440,500
Co 60 Baker Heights	$702,975	$1,001,850	$133,300	$162,700	$221,250

Source: West Virginia State Fire Marshal's Office, 2011

FIGURE 6 – PERCENT SHARE OF TOTAL FIRE LOSSES BY COMPANY, 2006 - 2010



Source: West Virginia State Fire Marshal's Office, 2011

FIRE DEPARTMENT STAFFING CONSIDERATIONS

Consideration is given to the history and desire of all involved to preserve the volunteerism that has been a significant part of Berkeley County. There are options to be examined that may work to assist with company membership.

The first recommendation that should be given consideration is a position should be created for a membership director/recruiter for all of the fire departments. This person should also double as the training coordinator. The responsibilities for this position would be recruitment and retention of personnel and manager of training records, as well as the countywide training coordinator for intercompany drills. There are many programs that could be considered to assist in maintaining and expanding membership. A person familiar with the local climate would be best to examine and determine what options to try.

Even though the desire to maintain volunteer fire departments is endorsed by all involved in the Berkeley Fire Service Board, the reality is that the available pool of potential volunteers is shrinking and that trend does not appear to be one that will improve. An examination of neighboring fire departments in West Virginia, Maryland, and Virginia demonstrates that the same diminishing volunteer pool has and continues to shrink in these areas as well. To curb this trend, Washington County, Maryland, for example, has implemented a specific volunteer recruitment and retention incentive policy called the Volunteer Length of Service Award Program." Additionally, many of the new residents to Berkeley County have migrated from populated areas that have had career fire department services and their expectations are for that level of service. Berkeley County has a very strong tradition of excellent volunteer fire services that can be continued, but it will need to be supplemented by around-the-clock career staffing to ensure adequate response is available for emergencies.

Staffing is the greatest current concern stressed by all involved. There are options on how to provide additional career staffing. Regionally, fire department career staffing consists of 24-hour, 10- to 14–hour, and 12-hour scheduling systems. A successful model that has been employed is the daytime staffing of a career company to supplement volunteer staffing during the daytime work hours. This is currently accomplished with Engine 90 responding from the County's Emergency Management Center. This is not an optimal location for this company given its location within the City of Martinsburg, where it has no response coverage area. This leads to excessively long response times to the areas where Engine 90 provides assistance.

Fire personnel have already considered splitting Engine 90's crew into two quick response companies with two personnel each and decentralizing these units to the South Berkeley Station 29 and Bedington Station 49, which are the current substations. While this concept has merit there is disagreement among Company Fire Chiefs as to the usefulness of a two person company responding verses a four person company. Decentralizing the companies is a viable concept but it should also include a plan for supplemental volunteer staff and additional career staffing.

The current and projected future needs for emergency services in Berkeley County indicate that a combination career and volunteer fire service is viable cost efficient option. It is recommended that the Fire Association establish a committee minimally consisting of a Fire Board member, a County Council member and a representative from each fire company to develop a career staffing model. It is important that the members of said committee understand that career staffing is required and that the committee members are there to develop and implement a model not to decide if it is required.

This committee should consider the following career staffing model.

- Proceed with disbanding and decentralizing Engine 90.
  - Because there are concerns with two personnel forming a company, it is recommended that immediately upon the relocation of the crews there be a strong concerted effort to schedule volunteer staff to ride as part of these companies. It is recommended that volunteer firefighters from all five companies be allowed to schedule to ride shifts on the career companies. The Fire Board and Fire Association should examine this issue and establish a practice that would allow this county-wide staffing opportunity for volunteers.
- Add two additional career personnel to each career company 29 and 49.
  - As this is accomplished the practice of using volunteer staff to supplement for leave time should be employed.
- Expand the hours of coverage as needed to seven (7) days per week 12 hour shifts.
- Expand the hours of coverage as needed to 24 hours per day.

During this process, constant monitoring should be maintained to assure that coverage requirements are being meet. Analysis of call volume indicates that a progressive time expansion to two full time career companies may solve the supplemental staffing needs of the volunteer companies.

TECHNICAL RESPONSE CAPABILITIES

Technical response for the County is provided by Engine 90 and the City of Martinsburg Special Operations Team with support from the fire departments. Engine 90 is the hazardous material technician team for Berkeley County and this team is called to respond to neighboring counties. The team consists of career and some paid, on-call members. The members are trained to the 40-hour minimal technician level in accordance with the Occupational Safety and Health Administration's (OSHA) mandates 29 CFR 1910.119(n) and 1910.120(q)(6)(iii). Additionally, members have some specific specialization training. The County should strive to upgrade the minimal training by adding hazard-specific training and maintain the required refresher programs.

Engine 90 is also responsible for swift water rescue. There has been no initial or refresher training for members in quite some time. The County needs to retrain all personnel to the operations level with selected personnel trained to the technician level. This requires a 32-hour course that meets NFPA 1670, Chapter 9: Water Search and Rescue, standards at the technician level, and also meets NFPA 1006, Chapter 7: Surface Water Rescue, standards for Rescue Technician Professional Qualifications. To be certified as a rescue technician in water search and rescue, NFPA 1670, Section 9.4.9.1 also requires technician-level training for rope rescue.

Trench, rope, confined space, and structural collapse rescue services are provided by the Special Operations team of the City of Martinsburg. Each fire company has some members trained to different levels of special operations skill, while Martinsburg has their team members skilled at the technician level. All fire departments need to ensure that their members are trained to the awareness level and receive annual refresher training. Each fire company should have some members trained to the operations level for special rescues that their area of coverage has a need for. These personnel can then support the technician teams.

RESPONSE TIMES STANDARDS

Berkeley County's volunteer fire companies provide service to demand zones that are characterized by the NFPA as suburban to remote (Table 7). In addition, NFPA standards 1710 and 1720 define response time goals for career and volunteer agencies, with the career standard serving as the basis for urban and suburban demand zones. As shown in Table 7, the recommendations for fire and EMS responses are that a four person first due company arrive at less than four (4) minutes and an entire first alarm at less than eight (8) minutes. The first alarm minimum staffing is 14 personnel. Berkeley County's volunteer fire companies should continue to strive to meet the minimum recommendations of NFPA 1720.

TABLE 7 – NFPA 1720 STAFFING AND RESPONSE TIME STANDARDS

Demand Zone	Demographics	Minimum Staff to Respond	Response Time (Minutes)
Urban area	>1,000 persons/sq. mi.	15	9
Suburban area	500 - 1,000 persons/sq. mi.	10	10
Rural area	<500 persons/sq. mi.	6	14
Remote area	Travel distance ≥ 8 mi.	4	Directly dependent on travel distance
Special risks	Determined by Authority Having Jurisdiction (AHJ)	Determined by AHJ based on risk	Determined by AHJ

Source: NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments, 2010 Edition

FIRE INCIDENT CALL-SCRATCH EVENTS

The dispatching protocol for each of the five volunteer companies is to assemble a crew of three (3) qualified personnel to staff the responding apparatus before leaving the fire station. In the event of no response (i.e., due to the lack of sufficient personnel), the first due fire company is re-alerted three (3) minutes after the initial dispatch. After the three (3) minute mark, some fire company's apparatus will respond with less than the minimum crew with the anticipation that additional personnel will arrive at the emergency scene. On these occurrences, the responding company will typically report over the radio that they are responding with a short crew. If no additional first due personnel have responded at the five (5) minute mark from the initial dispatch, the second due fire company will then be dispatched.

A fire company is considered to have a "call scratch" when at the five (5) minute mark of the initial dispatch no apparatus from the first due company has responded and the second due company is dispatched. Unfortunately, call-scratch trends for Berkeley County's five volunteer fire departments could not be accurately determined from

the 911 call data obtained from the Berkeley County Central Dispatch.[4] What we have been able to determine is that there were 133 times over the last five years where the initial dispatched company response to reported structure fires were greater than five (5) minutes from dispatch (Table 8). Analysis shows that delayed responses are a problem for Berkeley County Fire Companies. Table 8 demonstrates the total number of times each company responded five (5) minutes after the initial dispatch during the period of 2006-2010.

TABLE 8 – TOTAL NUMBER OF STRUCTURE FIRE RESPONSES OCCURING FIVE MINUTES POST DISPATCH, 2006 - 2010

Company	Structure Fire Responses	Responses greater then 5 minutes from dispatch	Percentage of Company Total Responses
Co 20 South Berkeley	600	46	8%
Co 30 Hedgesville	552	27	5%
Co 40 Bedington	491	6	1%
Co 50 Back Creek Valley	363	37	10%
Co 60 Baker Heights	359	17	5%
Total 2006-2010	**2,365**	**133**	**6%**

Source: Berkeley County Central Dispatch, 2011

Delayed response to a structure fire is a significant problem. A review of the delayed responses indicates that the majority are during the hard to staff period of daytime work and commuting hours. Figure 7 demonstrates the effects of scratches or delayed responses with regard to fire growth which equates to increased property damage. This response data analysis supports the need to continue and expand career staffing support.

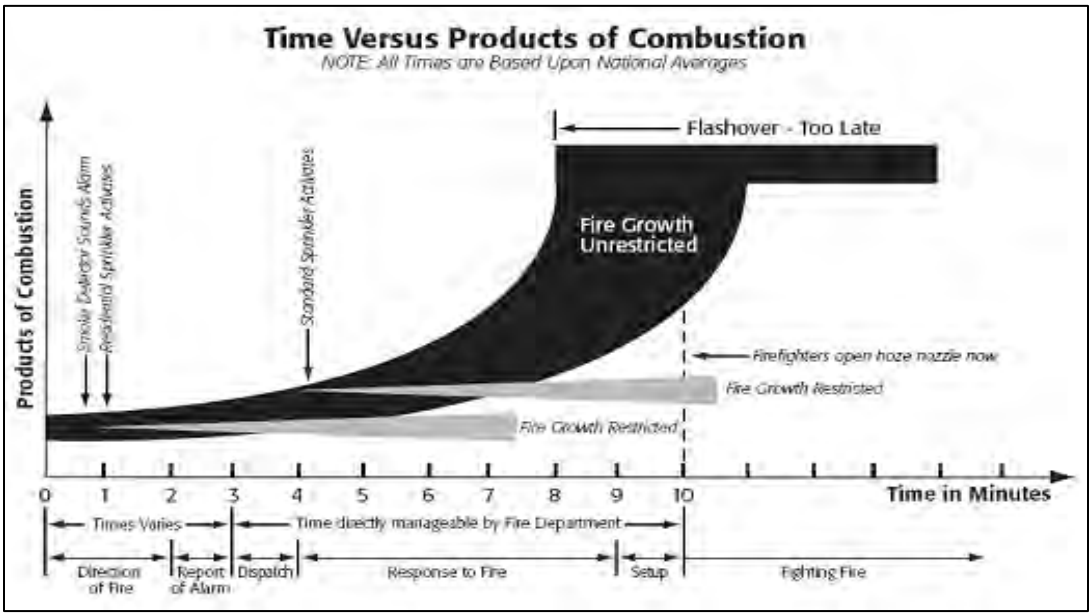
Table 9 demonstrates the delayed response situation during the five year period, 2006 - 2010. It shows the number of responses to reported structure fires, the number of times that the Company took greater than 10 minutes to arrive at the fire after initial dispatch and what percentage of fire responses took longer than 10 minutes.

Delayed responses have occurred 28 percent of the time to reported structure fires. While it is clearly understood that the fire companies are fully volunteer organization, Berkeley County cannot continue to allow growth in delayed responses. The data does not provide opportunities to fully compare actual response against NFPA standards. To fully understand the impact of actual responses, each fire company would need to employ a records management system that allows for complete data analysis. The County's Computer Aided Dispatch software provides basic dispatch and response data, and does not provide full call-by-call analysis.

One of the most important factors having a large effect on operational success is the number of firefighting personnel on scene and functioning within accepted timeframes. In-person interviews with the fire chiefs have determined that the companies are not able to establish NFPA-based minimal staffing requirements during the hard to staff time periods, which leads to more difficult suppression efforts and increased fire loss.

[4] Berkeley County Central Dispatch does not utilize a fire box alarm dispatching protocol whereby each fire apparatus is assigned to a specific alarm code. Instead, fire alarm dispatches are made to the respective fire company and its officers then determine the appropriate apparatus dispatch requirements.

FIGURE 7 – INCIDENT RESPONSE TIMES AND RELATIONSHIP TO FIRE GROWTH



Source: International Association of Fire Chiefs

TABLE 9 – DELAYED RESPONSE TRENDS BY COMPANY, 2006 - 2010

Company	Structure Fire Responses	Response Time Above 10 Minutes	Percentage of responses longer than 10 Minutes
Co 20 South Berkeley	600	112	19%
Co 30 Hedgesville	552	153	28%
Co 40 Bedington	491	165	34%
Co 50 Back Creek Valley	363	99	27%
Co 60 Baker Heights	359	131	36%
Total 2009-2010	**2,365**	**660**	**28%**

Source: Berkeley County Central Dispatch, 2011

STATION LOCATION DRIVE TIME ANALYSIS

Berkeley County's 2010 Census population density is 324.4 persons per square mile, which classifies it as a Rural Area (i.e., <500 persons per square mile) pursuant to NFPA 1720 and the U.S. Census Bureau. For this study, the NFPA 1720 minimum response time standards for both Rural and Suburban areas (i.e., 14- and 10-minute drive times, respectively) were used to perform drive time analyses on each of Berkeley County's five volunteer fire departments' respective stations and substation locations, and the City of Martinsburg's fire department. This analysis helped determine what portion of the County's addressable building structures (i.e., based on Central Dispatch addressing data) are included within the 10- or 14-minute drive time areas and the extent to which acceptable fire protection coverage is afforded to the County.

The drive time analysis was performed using ESRI's ArcGIS Business Analyst and Network Analyst software extensions, which determined both the approximate response coverage that each company provides and the total fire response coverage afforded to the entire County. This analysis provides insight into fire response coverage gaps and helps identify where fire service delivery improvements may be needed, based on NFPA 1720 minimum staffing and response time standards.

The individual 10-minute and 14-minute drive time analyses, plus the combined drive time analysis, for Berkeley County's five volunteer fire departments are illustrated in Figure 8, Figure 9, and Figure 10 respectively. The statistical results shown in Table 10 demonstrate the percent of total addressable structures located within each company's respective drive times. The following conclusions were drawn from this analysis:

- Nearly 70 percent of the County's total addressable structures (i.e., 37,117) are located within a 10-minute drive time of a Berkeley County volunteer fire department.
- Over 87 percent of the County's total addressable structures (i.e., 37,117) are located within a 14-minute drive time of a Berkeley County volunteer fire department.

This information is beneficial for the Fire Association's future use in conducting a station location feasibility analysis, which was beyond the scope of the Fire Service Board's strategic planning process. Should such a study be conducted by the Fire Association, its conclusions would be critical in determining and substantiating any resulting capital improvement funding requests to the Fire Service Board.

TABLE 10 – NFPA 1720 MINIMUM RESPONSE TIME STANDARDS: 10- AND 14-MINUTE DRIVE TIME ANALYSES

Emergency Service Zone (ESZ)	Percent of Structures Located within a 10-Minute Drive Time of Fire Station	Percent of Structures Located within a 14-Minute Drive Time of Fire Station
Back Creek Valley ESZ	51.8% coverage	66.7% coverage
Baker Heights ESZ	75.5% coverage	91.6% coverage
Bedington (Main Station) ESZ	62.9% coverage	88.8% coverage
Hedgesville (Main Station) ESZ	47.6% coverage	66.7% coverage
South Berkeley (Main Station) ESZ	76.0% coverage	94.9% coverage
Berkeley County VFD ESZ Total	67.1% coverage	87.7% coverage

Sources: ESRI, Inc., Berkeley County Central Dispatch, and Delta Development Group, Inc., 2011

FIGURE 8 – 10-MINUTE DRIVE TIME ANLAYSIS MAP

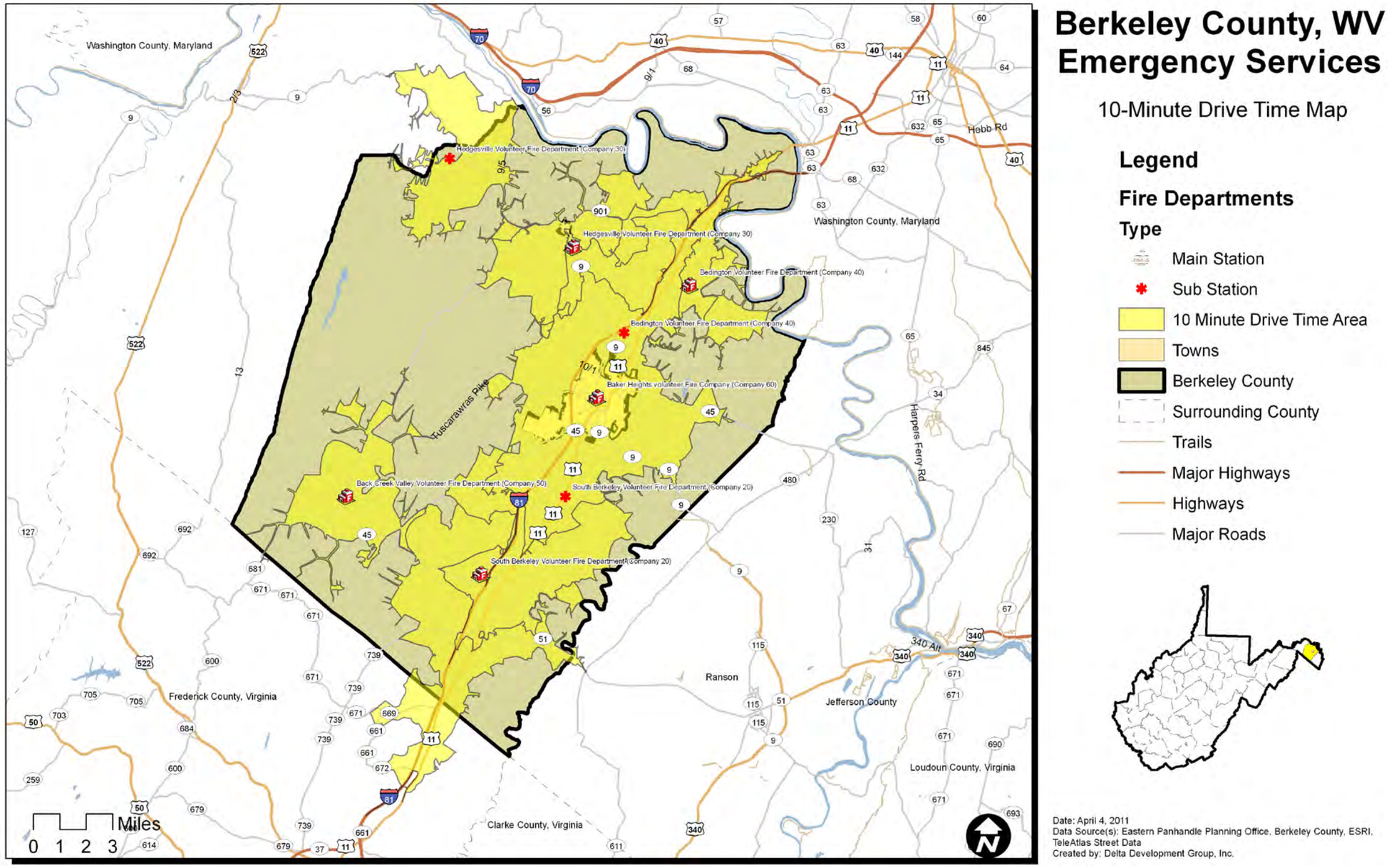


FIGURE 9 – 14-MINUTE DRIVE TIME ANALYSIS MAP

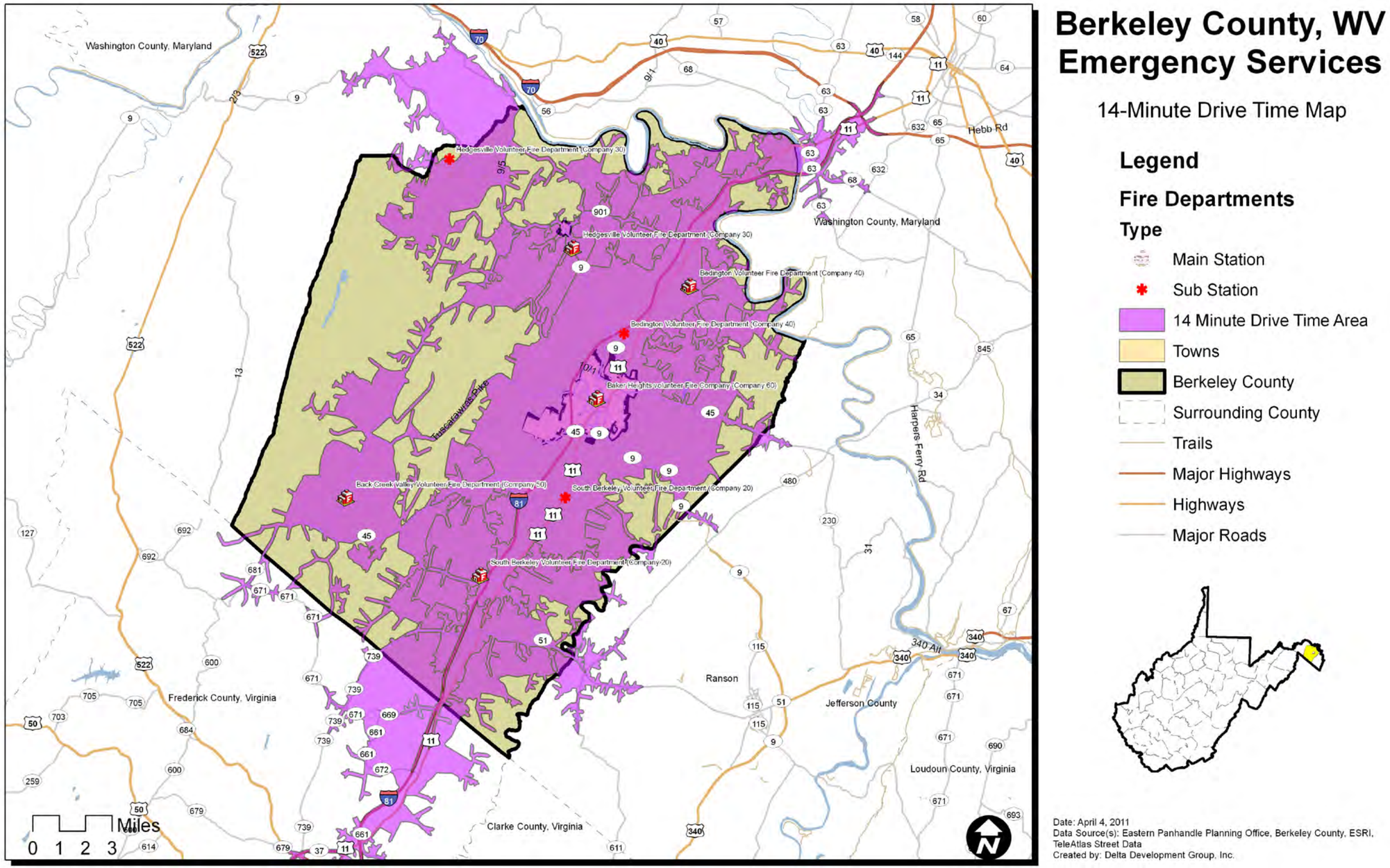
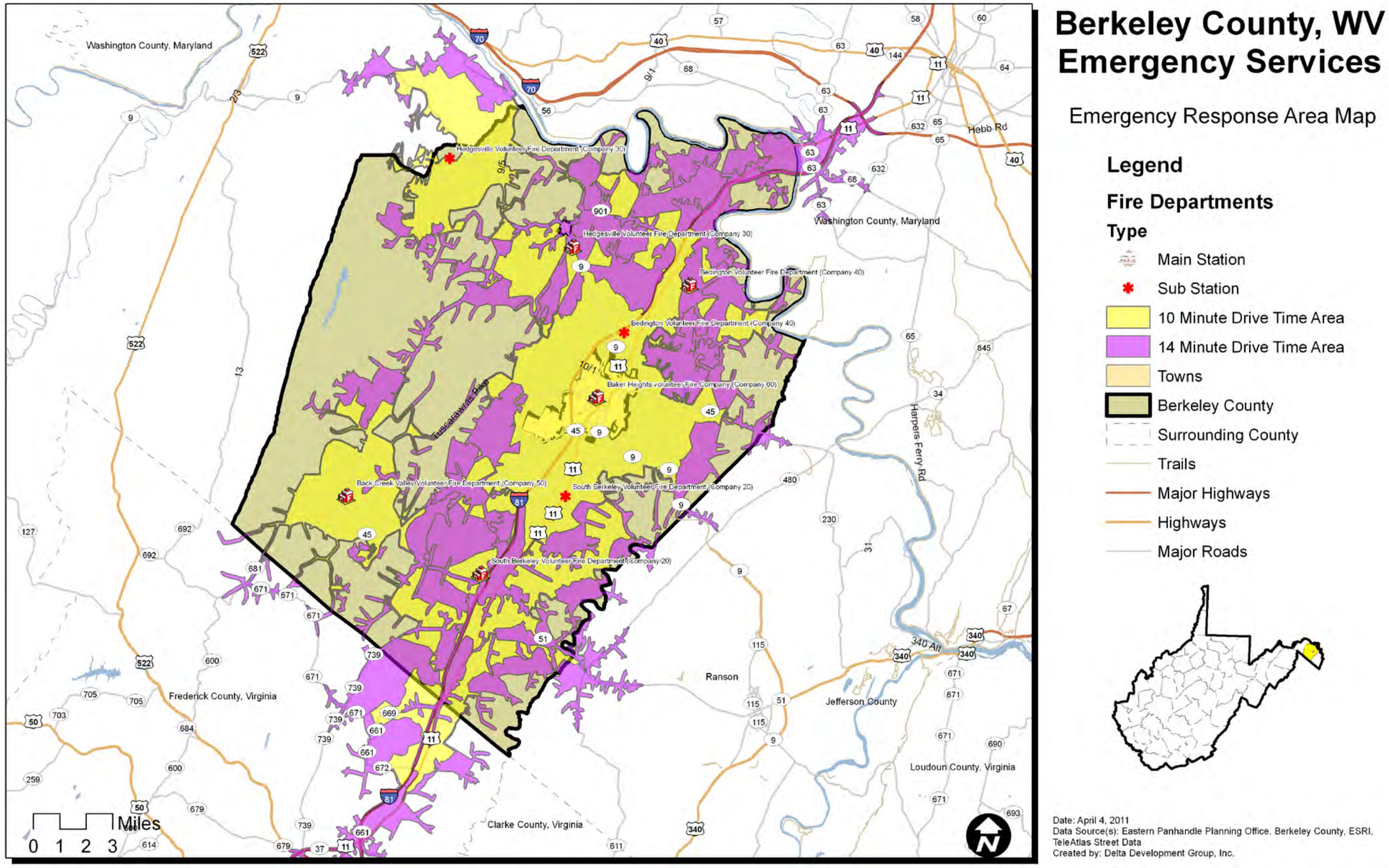


FIGURE 10 – COMBINED DRIVE TIME ANALYSIS MAP



FACILITIES AND EQUIPMENT

Berkeley County's volunteer fire departments have been responsible for obtaining and maintaining most of their own equipment, such as self-contained breathing apparatus (SCBA), hose, protective clothing, and extrication equipment. They have done an admirable job. Funding is obtained through a variety of means, including a fire service fee from the Fire Service Board, annual state funding, fundraisers, grants, and donations. This creates an environment where maintaining and updating this equipment is increasingly challenging. All five fire departments report that most of their equipment is in relatively good condition, but there are areas of concern.

All of the fire departments are in need of a replacement program for protective clothing. No fire departments have gear extractor/washing machines. Therefore, all of the gear is coated with dangerous by-products of combustion. All gear is in need of cleaning and should be placed on a routine inspection and cleaning program. This gear needs to be kept clean and well-maintained, and should be routinely inspected every six months and additionally after significant events. All bunker gear must be inspected to the NFPA 1851 standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Firefighting and Proximity Firefighting. No gear should be used if it fails this inspection for interior firefighting.

The optimum protective clothing program would meet NFPA standards with each company possessing an extractor/washer. Each member would be issued two complete sets of protective clothing. After each incident when the gear is used, the owner would switch to their backup set and have the unclean gear cleaned. This would protect the firefighters from constant exposure to the harmful by-products of combustion. This system also has proven to expand the life expectancy of the protective clothing.

All fire departments use Scott brand SCBA and there appears to be significant compatibility between the units. For health and safety reasons, all fire departments should issue personal masks to their firefighters. Currently, only Bedington and Baker Heights volunteer fire departments issue personal masks to their members. Additionally, all SCBA should be equipped with a personal rescue system (EZ-Scape[5]). Currently, none of the fire departments have this system available.

Extrication equipment is generally reported to be in good condition. A replacement schedule should be created to assist with anticipated funding for replacement. Firefighting hoses need to be replaced for most of the fire departments. A good rule of thumb is to replace all hoses, nozzle extinguishers, loose equipment, and appliances with the purchase of each new apparatus.

Table 11 provides a brief overview of the major equipment needs of Berkeley County's five volunteer fire departments and Engine 90. The Fire Service Board should assist the Fire Association and its member volunteer fire departments with preparing and maintaining a five-year comprehensive capital improvement plan and budget. Such a plan will document annual equipment needs and provide justification for capital funding requests through the Fire Association and subsequently to the Fire Service Board for its consideration and approval. Additionally, the Fire Service Board should consider a joint purchasing policy to afford economies of scale for purchasing and to establish a standardization of equipment countywide. As fire departments purchase new equipment and replace the old, every effort needs to be made to standardize their purchases on a countywide basis.

[5] EZ-Scape is a Scott brand line of integrated self-rescue belts that give firefighters a secure, reliable means of escape from the dangers of a high-rise building.

TABLE 11 – MAJOR EQUIPMENT SERVICEABILITY AND REPLACEMENT NEEDS BY COMPANY

Company	SCBA	Extrication Tools	Hose	Protective Clothing
Co. 20 South Berkeley	Serviceable, PIP	Serviceable, NRP	Serviceable, NRP	MNR, NRP
Co. 30 Hedgesville	Serviceable, NRP	Serviceable, NRP	NRP	MNR, NRP
Co. 40 Bedington	Serviceable, NRP	Serviceable, NRP	SNR, NRP	SNR, NRP
Co. 50 Back Creek Valley	Serviceable, NRP	Serviceable, NRP	MNR, NRP	MNR, NRP
Co. 60 Baker Heights	Serviceable, NRP	Serviceable, NRP	MNR, NRP	MNP, NRP
Engine 90	SNR,NRP	Serviceable, NRP	MNR, NRP	SNR, NRP

Key:
NRP = Needs replacement plan
PIP = Plan in place
MNR = Most need replacement
SNR = Some needs to be replaced

Sources: Berkeley County Volunteer Fire Departments, Delta Development Group, Inc., 2011

CURRENT FLEET INVENTORY AND CONDITIONS STATUS

The Apparatus Inventory by Company shown in Table 12 was obtained from each of the County's five volunteer fire departments. Interviews conducted with each fire department indicate that there is sufficient serviceable apparatus to meet the County's near-term fire suppression needs. The fire departments are diligent in performing routine Preventive Maintenance Checks and Services (PMCS) on their respective apparatus fleet, and each fire department abides by the West Virginia State Fire Commission's Administrative Policy, Requirements for Local Fire Departments[6], which among other policy matters establishes the maintenance and housing requirements for fire apparatus and equipment. However, the increased PMCS and repair costs are causing some departments to lengthen the time between scheduled equipment services.

Table 12 - Apparatus Inventory by Company

Apparatus Type	Co. 20 South Berkeley	Co. 30 Hedgesville	Co. 40 Bedington	Co. 50 Back Creek Valley	Co. 60 Baker Heights	Totals
Engines	2	3	1	1	1	**8**
Res/Engine	0	1	1	1	1	**4**
Eng/Tanker	1	1	1	1	1	**5**
Aerial	0	0	1	0	0	**1**
Squad	1	0	1	0	0	**2**
Tanker	0	0	0	1	0	**1**
Brush	2	3	1	2	1	**9**
Attack	1	0	1	0	1	**3**
Ambulance	0	1	0	0	1	**2**
Other	1	2	2	1	3	**9**
Total Apparatus	**8**	**11**	**9**	**7**	**9**	**44**

Source: Berkeley County Volunteer Fire Departments, 2011

[6] West Virginia Fire Commission's Administrative Policy, Requirements for Local Fire Departments, May 1, 2007. Accessed online July 13, 2011, at http://www.firemarshal.wv.gov/Documents/Fire%20Department%20Requirements%20-%20Policy.pdf.

This Strategic Plan provides the basis for an apparatus replacement schedule. Table 13 demonstrates a 14-year replacement program based on the age of the apparatus compared against recommended NFPA standards (note that the cost per unit shown in Table 13 defines the cost of a custom apparatus with standard equipment). Fire incident call volumes obtained from Central Dispatch were also considered, as were the assumption that all apparatuses are frontline (i.e., not in reserve) units. As such, the in-service life span of frontline apparatuses should be a maximum of 20 years. This life span is also based on technology and safety advancements made over the course of the 20-year period. Consideration is also given to PMCS and repair costs of apparatuses.

To this end, the replacement schedule shown in Table 14 is front-end loaded because of the age of the apparatus inventoried therein. Based on the scheduled replacement costs, it is clearly evident that the Fire Service Board and fire departments will be greatly challenged with meeting the first five years' (i.e., 2011 - 2015) capital financial obligations. To mitigate these costs, it is highly recommended that the Fire Association and member fire departments survey the current fleet to determine what apparatus must be replaced and develop a capital improvement plan and budget accordingly.

One alternative apparatus replacement financing option would be a lease purchasing program. Table 14 was developed based on the lease financing schedule shown therein. As shown, the replacement funding schedule would require an annual lease payment of $720,000.

.

TABLE 13 – VEHICLE UNIT COSTS AND YEAR PROJECTIONS ($000)

Vehicle Unit Costs and Year Projections ($000)														
Company/Unit	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Eng/Tnk 20														
Engine 21		$300												
Engine 22								$491						
Squad 25			$318											
Attack 20		$412												
Brush 20					$35									
Brush 21														
Mobile 20					$45									
Company 30 Hedgesville														
Engine 30														$587
Res/E31											$537			
Eng/Tnk 32				$475										
Engine 35		$400												
Engine 70								$246						
Brush 76			$25											
Brush 37					$35									
Brush 36							$30							
Utility 30								$43						
Spu 30											$47			
Amb 33											$148			
Company 40 Bedington														
Tower 40														
Res/E41	$400													
Engine 43														$587
Eng/Tnk 44				$475										
Squad 40														$441
Attack 40													$294	
Brush 45	$10													
Utility 41										$46				
Utility 40	$40													
Company 50 Back Creek Valley														
Eng/Tnk 50											$664			
Rescue/E51														
Engine 52			$424											
Tanker 54														$220
Brush 56										$25				
Brush 53				$25										
Utility 50											$47			
Company 60 Baker Heights														
Engine 62														$587
Eng/Tnk 63				$475										
Res/E64														$587
Attack 60													$294	
Brush 65	$25													
ATV 60														
Amb 50											$148			
Utility 61											$47			
Utility 60	$40													
TOTALS	**$515**	**$1,112**	**$767**	**$1,450**	**$115**	**$0**	**$30**	**$780**	**$0**	**$71**	**$1,638**	**$0**	**$588**	**$3,009**

Source: Delta Development Group, Inc., 2011

TABLE 14 – FLEET REPLACEMENT FUNDING PLAN ($000)

Replacement Year	2011	2012	2013	2014	2015	2016	2017
Required Funding	$ 515	$ 1,112	$ 767	$ 1,450	$ 115	$ -	$ 30
Replacement Fund	$ 720	$ 720	$ 720	$ 720	$ 720	$ 720	$ 720
Difference	$ 205	$ (188)	$ (235)	$ (965)	$ (361)	$ 359	$ 1,049
Unfunded amount	$ 205	$ (188)	$ (235)	$ (965)	$ (361)	$ 359	$ 1,049
Available Funds	$ 205	$ (188)	$ (235)	$ (965)	$ (361)	$ 359	$ 1,049
Replacement Year	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**
Required Funding	$ 780	$ -	$ 71	$ 1,638	$ -	$ 588	$ 3,009
Replacement Fund	$ 720	$ 720	$ 720	$ 720	$ 720	$ 720	$ 720
Difference	$ 988	$ 1,708	$ 2,356	$ 1,438	$ 2,158	$ 2,289	$ (0)
Unfunded amount	$ 988	$ 1,708	$ 2,356	$ 1,438	$ 2,158	$ 2,289	$ (0)
Available Funds	$ 988	$ 1,708	$ 2,356	$ 1,438	$ 2,158	$ 2,289	$ (0)

Source: Delta Development Group, Inc., 2011

FACILITIES

Although facilities were not given an in-depth analysis under the Fire Service Board's strategic planning process, a walk-through of each facility was conducted with each fire department chief. Table 15 provides the facility improvement needs of each volunteer fire company. This information was obtained through in-person interviews with each fire company chief. As full-time staff members are added, accommodations will need to be met regarding living conditions at the stations. Below is an outline of issues that need to be considered. All fire departments, with the exception of Hedgesville's main station, report that they are in need of auxiliary power sources. A comprehensive capital improvements plan should be developed to include generators and associated transfer equipment for uninterrupted power supply.

TABLE 15 – CAPITAL FACILITY IMPROVEMENT NEEDS BY COMPANY

Company	Station Conditions
Company 20, South Berkeley	• Main station needs replaced • Substation needs major work to accommodate career personnel
Company 30, Hedgesville	• Main station is new (constructed in 2007/2008) • Substation in need of upgrade; not a priority
Company 40, Bedington	• Main station in need of upgrade • Substation needs major work to accommodate career personnel
Company 50, Back Creek Valley	• Major expansion funded and ongoing in 2011-2012.
Company 60, Baker Heights	• In need of replacement

Source: Delta Development Group, Inc., 2011

WILDFIRE/URBAN INTERFACE EQUIPMENT CAPABILITIES

The resulting mix of development and wildland is called the Wildland/Urban Interface. This creates unique fire protection problems for both wildland and structural firefighting. The increased values at risk and the increased potential of wildland fires started by nature, other fires, and human activities are a serious problem.

As inventoried in Table 13 above and as shown in Table 16 below, the age of the brush unit inventory of many of the fire departments is of concern, and its replacement is considered under the replacement funding schedules (Tables 13 and 14).

TABLE 16 - BRUSH UNIT INVENTORY

Brush Unit No.	NWCG Type	Make	Model	Year	Water Capacity	Pump Capacity
B-20	Type 6	Chevy	3500	1986	250	250
B-21	Type 6	Ford	350	2011	250	250
B-36	Type 6	Chevy	3500	1986	200	250
B-37	Type 6	Chevy	3500	1987	200	250
B-76	Type 6	Chevy	3500	1989	200	250
B-45	Type 6	Chevy	3500	1985	240	250
B-53	Type 6	Chevy	2500	1986	300	250
B-56	Type 6	Ford	350	2007	250	250
B-65	Type 6	Chevy	3500	1985	225	250

Source: Berkeley County Volunteer Fire Departments, 2011

A Wildland/Urban Interface fire can easily overwhelm a fire department's initial attack force. A large number of resources containing both personnel and equipment, appropriately organized, trained, and designated to perform specific duties, is required. Success involving Wildland and Urban Interface fire is usually measured by the ability of firefighting personnel to contain the fire to the wildland. Rapid, efficient, and safe fire attack in the early stages of a wildland incident improves the chances for a successful outcome.

Because of the duration and complexity of these incidents, it is not uncommon to have personnel and resources committed for many hours or even days, which can severely impact a jurisdiction's ability to handle other emergencies. There are times when the wildland/urban fire problem does not always receive the attention or concern it requires, due to other community issues. Without awareness and understanding by elected officials, developers, community leaders, the media, and citizens, action to provide appropriate resources to prevent, mitigate, or fight these fires and reduce potential losses cannot be made.

The fire risk in a Wildland/Urban Interface area is made up of two distinctly different factors; the natural environment and those who live there or use the area. As more and more people move to these settings from an urban setting, the potential for a large-scale conflagration becomes more possible. The remoteness of these residences makes successful firefighting less likely. There are three groups of people who live in a natural environment:

- Those who do not know they live in a high-risk area.
- Those who recognize the risk, but are willing to accept the risk.
- Those who understand the risk and how to protect themselves and have taken steps to reduce the exposure to their property.

All three groups can and do have a significant impact on the outcome of a wildland situation. Education of the first two groups is essential and continued support of the third group is mandatory for fire departments to maintain a reasonable chance of success in the Wildland/Urban Interface. Construction in the interface, while a growing trend, also creates greater risks, hazards, and a safety liability for firefighters.

The County must work with communities and developers and insist that they adhere to accepted development practices in the interface. Proper setbacks must be created and maintained, water supply provided, and the installation of residential fire sprinkler systems required. The County should also continue to introduce and support mitigation concepts, such as, "Firewise"[7] to the residents in the interface.

OPERATIONS AND ADMINISTRATION CONSIDERATIONS

MUTUAL AND COOPERATIVE AID

Pursuant to Section 8 of the West Virginia State Fire Commission's Administrative Policy Requirements for Local Fire Departments, Berkeley County's volunteer fire departments have executed and maintain mutual aid agreements with neighboring fire departments located within and outside of Berkeley County. In addition, mutual aid agreements have also been established with state and federal agencies, including the 167th Airlift Wing of the West Virginia National Guard and the Veterans Administration Fire Department.

A cooperative aid agreement with the Berkeley County Central Dispatch is also in place to provide a centrally located and single Public Safety Answering Point (PSAP) for the County's Enhanced 9-1-1 Communications. All fire, EMS, and police first responders are dispatched by the Berkeley County Central Dispatch's 9-1-1 Communications Center PSAP, and each of the five volunteer fire departments have established run cards that automatically dispatch enough units between the departments, using in- and out-of-county resources as well as out-of-state resources to provide appropriate amounts of personnel and equipment. Cooperative and mutual aid appear to be functioning very efficiently.

It is reported that there is no ongoing countywide or mutual aid company training. This will be addressed in the "Training" section of this report.

ORGANIZATIONAL DEVELOPMENT AND COMMUNICATIONS

Organizational development can occur in many ways; however, it usually begins with an analysis of where an organization is and, more importantly, where it should be in the future. This process was started years ago with the creation of the Fire Service Board and Fire Association. The creation and implementation of a countywide dispatch center and the use of a 400 megahertz (MHz) trunked radio system by all agencies demonstrated the willingness of all participants to cooperate in delivery of emergency services to the people of Berkeley County. Additionally, there was an understanding by the County that supplemental staffing was needed and the creation of a part-time career engine company (Engine 90) occurred. This cooperation is paramount in effective service delivery today, and is not as well practiced elsewhere as it is in Berkeley County.

[7] The NFPA Firewise Communities program encourages local solutions for wildfire safety by involving homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from wildfire risks. The NFPA Firewise website is http://www.firewise.org/.

Growing pains in any organization can almost always be attributed to some type of lack of communication, whether it originates from the top down or the bottom up. The solution is for the development of a strong bidirectional flow of information and participation. The Fire Service Board, Fire Association, and its member volunteer fire departments, and the County Council need to develop a method by which each can communicate in an efficient and effective manner. As new people fulfill the membership roles of these organizations, there must be a method by which new officials can acquire an understanding of the County's fire and rescue services system. Just a little knowledge will go a long way in development of solutions to service delivery problems.

This Strategic Plan provides the impetus for creating a strong communications nexus among Berkeley County's fire service stakeholders and provides the foundation for the Fire Service Board and Fire Association to collaboratively establish the funding priorities and mechanisms of the County's volunteer fire services. Further development of advanced partnerships for service provision is essential and will be greatly enhanced by a single point of contact (e.g., Fire Service Board Administrator) that would coordinate the information collection and management needs of the Fire Service Board, Fire Association, and its member volunteer fire departments, maintaining and overseeing this plan's implementation. This would include, but would not be limited to, the following duties:

- Perform specific administrative tasks at the direction of the Chairperson of the Fire Service Board
- Develop a countywide training, recruitment, and retention program for the County's volunteer firefighters (future Countywide Training Coordinator position)
- Attend designated meetings, serve on committees, and perform other functions necessary to fulfill the tasks set forth by the Chairperson of the Fire Service Board
- Perform grant research and formulate application(s) for such grants that the County's volunteer fire departments may be eligible for
- Maintain a long-range budget planning strategy for the Fire Service Board
- Assist in developing and recommending specifications of capital assets purchased by the Fire Service Board in compliance with application National Fire Protection Association (NFPA) standards and the West Virginia State Fire Marshal's Office; work under close supervision of the Fire Service Board and attend all Fire Service Board and Fire Association meetings
- Work with the Fire Association and work with each volunteer fire department to help address their fire suppression needs, including volunteer staff recruiting, retention, and training needs
- Assist the County's volunteer fire departments with their specific annual budget and capital improvement needs
- Obtain and analyze each volunteer fire department's fire incident response data and assist the departments with strengthening their utilization of their National Fire Incident Reporting System (NFIRS), a computer-based reporting system
- Work with other county, state, and federal agencies as requested and approved by the Fire Service Board

RELATIONSHIPS WITH EXTERNAL AGENCIES

Relationships with external organizations are reported to be working well. Cooperative responses, communication, leadership, and development of operational guidelines for all agencies to employ are examples of good team efforts between fire departments. There are good programs in place for receiving technical and specialty rescue and mitigation services.

FIRE INCIDENT REPORTING AND DATA MANAGEMENT

West Virginia Code Chapter 8-15-3a and the West Virginia State Fire Code require every department to report fire losses to the West Virginia State Fire Marshal's Office. Fire departments are required to report monthly to the State Fire Marshal all fire and non-fire incidents. Such reports are made through the West Virginia Fire Incident Reporting System.

Each of Berkeley County's five volunteer fire departments are in compliance with West Virginia's incident reporting requirements and each department utilizes a NFIRS-compatible, computer-based reporting system (i.e., both purchased software and the free Federal Client Tool), which is supported and promoted by the West Virginia State Fire Marshal's Office. The NFIRS reporting process enables both the State Fire Marshal's Office and the fire departments to access and effectively use statistics that better reflect specific fire and life-safety trends and needs in Berkeley County and throughout West Virginia. Moreover, the State Fire Marshal's Office also enforces the above-referenced codes requiring mandatory incident reporting by all fire departments. Such reporting compliance, in part, makes each department eligible to receive quarterly fire premium tax disbursements that total between $40,000 – $45,000 annually per company.

The NFIRS data reported by Berkeley County's five volunteer fire departments is, however, not accessible and readily available to the Fire Service Board, which needs this data to frequently analyze and formulate a common operating picture of the County's fire incident trends. Such data and analysis is included in this plan, which must be maintained on an annual basis to ensure current information is being used to make well-informed decisions by the Fire Service Board with respect to funding requisitions made by the Berkeley County Fire Association on behalf of the County's five volunteer fire departments.

To this end, it is recommended that the Fire Service Board consider purchasing and implementing a standardized, web-based NFIRS reporting system for use by the County's five volunteer fire departments. Such a system would establish a standardized incident report methodology across all five departments and would also enable the Fire Service Board to have immediate and timely access to the data. Furthermore, the use of a standardized system would also enable all departments to utilize uniform data modules for the entry and maintenance of their respective equipment inventories, staffing and training records, hydrants, fire response plans, and other pertinent information. Finally, such a standardized and uniform information management system would further augment the Fire Service Board's decision-making capabilities with respect to establishing funding priorities and resource allocation decisions.

PUBLIC SAFETY ANSWERING POINT (PSAP)

Berkeley County Central Dispatch is the PSAP for Enhanced 9-1-1 calls requesting emergency assistance from citizens of Berkeley County, including the City of Martinsburg and the Town of Hedgesville. Berkeley County is only one of four West Virginia counties that are defined as "mission critical" 9-1-1 communication counties.

Central Dispatch is staffed by two emergency dispatchers per shift, 24 hours per day, seven days per week. Each certified dispatcher is trained in the following areas:

- CPR (Cardio-Pulmonary Resuscitation)
- APCO (Associated Police Communicators Officer) Dispatch certification
- Medical Priority EMD (Emergency Medical Dispatch) certification
- WEAPONS (West Virginia Police Automated Police Network System) FBI/NCIC certification

Berkeley County Central Dispatch provides primary dispatch and related services to the following agencies:

- Fire & Rescue
- Martinsburg Fire Department
- South Berkeley Volunteer Fire Department
- Hedgesville Volunteer Fire & Rescue Department
- Bedington Volunteer Fire & Rescue Department
- Back Creek Valley Volunteer Fire & Rescue Department
- Baker Heights Volunteer Fire & Rescue Department
- Veterans Medical Center Fire Department
- Office of Emergency Services
- Emergency Medical Services
- Berkeley County Emergency Ambulance Authority
- Law Enforcement (emergency calls only)
- Berkeley County Sheriff's Department
- Martinsburg Police Department
- West Virginia State Police – Martinsburg

Central Dispatch utilizes VisionAir's VisionCAD computer-aided 9-1-1 dispatch software module. The County's 9-1-1 communications system is a Motorola P25 trunked system, and is based on the West Virginia statewide 400 MHz (UHF) system. The County's system has triple redundancy. Each of Berkeley County's first responders and public safety agencies utilize the digital 400 MHz trunked radio system. The use of a single radio system by all public safety agencies in the County allows and even promotes radio communication interoperability. A single dispatch center provides the best opportunity for the most efficient dispatching of fire and EMS resources. Having all departments in a single center allows for the box alarm system to function seamlessly.

Central Dispatch's fire incident dispatch protocols are summarized as follows:

- Central Dispatch does not dispatch under a fire box card system. Instead, the protocol is to dispatch by company/unit and leave the apparatus dispatching up to each respective company's fire chief based on the call type.
- Engine 90 provides automatic aid and is dispatched for all calls except for vehicle fires.
- Due to security protocols, Central Dispatch does not allow any of its data and dispatch network open to the World Wide Web. Therefore, Central Dispatch does not "push" data to the first responders for their reporting and information purposes.
- Central Dispatch does post static fire company response times to its Web site for fire chiefs to obtain for their respective State Fire Marshal's NFIRS reporting requirements.

TRAINING REQUIREMENTS AND NEEDS

In order to analyze a fire department's ability to respond to structural firefighting, the project team would have to evaluate actual fire operations. In the absence of that, fire operations can be evaluated based on the training activities of a fire department. NFPA 1401 Standard 5-3.3.12 defines training as "the process of achieving proficiency through instruction and hands-on practice in the operation of equipment and systems that are expected to be used in the performance of assigned duties."

Training is one of the single most important nonemergency functions that fire departments engage in. A firefighter's survival depends on his/her commitment to learning and on the department's desire and ability to provide valid opportunities for that learning to occur. Rapid technological changes are occurring in incident scene management, emergency medical service, hazardous materials response, and personnel management. Because of this, fire service personnel require a personal and organizational commitment to both initial and continuing training.

Based on interviews conducted with each of the five volunteer fire departments, it has been reported that some required refresher programs are being delivered, and new training opportunities are being provided. Every month there should be a drill established with follow up field training. It is important to have physical facilities for training. For maximum credit and competency of the fire department personnel, these facilities must be used. Minimum facility use by all company personnel while training should include the following:

- Eight half-day (three hours each) drills per year, 24 hours total
- Four half-day (three hours each) multi-company drills per year, 12 hours total
- Two night drills (three hours each) per year, six hours total

Based on the ISO recommended minimum training standard, there should be company training at fire stations totaling 20 hours per month per member. Training in basic skill development and retention of competencies in suppression-related subjects such as hoses, ladders, SCBA, forcible entry, salvage, tactics, and other job-related training are the basics of this program. These training components and officer development are the basis for ISO analysis.

The basic skills program should include the minimum number of hours in each subject area that the fire company administration determines is needed. Training goals should be established by the company training officer in coordination with a Countywide Training Coordinator for members on an annual basis. All training activities should be maintained at the company and by the Countywide Training Coordinator.

It is recommended that the above-referenced Fire Administrator position initially fulfill the role of a Countywide Training Coordinator. This role should eventually be assigned to a separate person working a 40-hour, flexible workweek. The countywide Training and Recruitment Coordinator should have functional control regarding training records and multi-company, intercompany drills. It is important to note that the coordinator would not have the responsibility of training Berkeley County's firefighters.

Training is an ongoing process that is the responsibility of each company to assure that the human resources are being used in an effective, efficient, and reliable manner. This is achieved through the best utilization of the fiscal and human resources. Training is an attitude and fiscal commitment that is required of the legislative body and company management teams working with the entire workforce. The addition of a countywide coordinator will assist the fire departments in training records management and conducting intercompany drills.

Adequate training facilities are important; it is equally important that they be effectively used. The repetition of firefighting skills is essential to competent fire suppression operations. Berkeley County lacks a fixed firefighter training facility to provide live fire training towers, buildings, and rooms. In addition to meeting routine training requirements, such a facility is needed to provide live burn instruction so that Firefighter I (NFPA 1001) candidates can successfully complete their certification. A less expensive, but effective, solution is for the Fire Service Board and Fire Association to consider purchasing a Mobile Live Fire Training Unit. This unit may be used to meet the County's short-term live burn training needs, but a long-term focus should center on the planning and financing of a fixed firefighter training facility. To maximize cost efficiencies and utilization, such a facility should be

designed and financed in partnership with other local, state, and federal firefighting services and interests.

Examining emergency operations after the fact is one of the best learning and training tools available. It is essential that we learn from what went right and what went wrong. The uses of informal and formal post-incident analyses are a key component to successful safe emergency operations. The Training Officer is responsible for personnel being prepared to function. The Operation's Chief oversees functionality and together they can make a difference in the performance of the department by using actual experiences to further improve employee skills.

Informal post-incident analysis (documentation not required) should be conducted at the company or shift level. This includes on-scene or immediate return to the station reviews of the last call. A good informal tool is a "lessons learned" procedure (suggested information sharing documentation recommended), which has a company provide information about a call that they experienced in a written (memo) format to the Training Officer who then distributes it to the entire company. A good example of this is experience gained by performing extrication on a certain type of new model vehicle.

Formal post-incident analysis (required documentation) should follow a defined format and should be conducted for significant incidents. In addition, a formal report should be released. This report should be used to change procedures, training, or anything else that was discovered not to work during that incident. Not all post-incident analyses have to have negative outcomes; the procedure has to make sure to promote the positive outcomes too.

Training is a cost factor that is a necessary function of the fire service. Constantly changing federal mandates from the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) require political subdivisions meet certain mandates. OSHA mandates such as 29 CFR, 1910.146, which are required by EPA in non-OSHA states, have a very specific impact on the fire service. The law adopted in 1993 requires municipalities to provide a specified level of training and equipment for confined space entry and rescue. This law affects water departments, sewer/waste management departments, and fire departments with regard to entry and rescue operations. The fire departments must maintain annual training for their personnel with refresher and/or actual operations documented at the operations level for these skills.

STANDARD OPERATING PROCEDURES

Consistent with NFPA standards, Berkeley County's volunteer fire departments maintain individual Standard Operating Procedures (SOPs), which prescribe specific administrative and technical methods that are routinely followed for the performance of designated operations or actions. Where appropriate, such procedures should be standardized among all fire departments within Berkeley County. It is recommended that such procedures be collaboratively developed by each department and presented to the Fire Association for approval.

It is also recommended that the fire departments collectively establish a written policy that adheres to the following principle: ***Risk a lot to save a savable life, risk a little to save savable property, and risk nothing to save nothing***. No firefighter should make entry into a building with a working fire where there is no threat to life of the occupants until a minimum crew of four is assembled. Furthermore, on-scene personnel shall work in teams and be accountable for themselves and for personnel assigned to them by fully implementing an accountability system.

In short, creating countywide standard operating procedures for emergency operations should be a priority for this plan's implementation.

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) COMPLIANCE

Firefighting personnel qualifying for Incident Command (IC) positions are trained to receive National Incident Management System (NIMS) Incident Command System (ICS) certification to qualifications. A review of each fire department's training records and in conversation with company officers it appears that compliance with the NIMS requirements is being achieved. However, it has been reported that ICS is not routinely used on all incidents, including fire, police, and EMS, and this, of course, is not in compliance with NIMS.

The NIMS requires that when units are functioning at the scene of an emergency, there is to be a single Incident Commander who is responsible for that entire operation. The Incident Commander may choose to employ Unified Command, but ultimately there is one sole person responsible for the safe, successful remediation of that emergency. That Incident Commander must have full cooperation of all responders so that he/she can assure their safety and accountability. It is recommended that a countywide policy be implemented that requires NIMS and ICS compliance during all emergency incidents by all responders.

LIFE SAFETY MEASURES

Life safety aspects of emergency services include the review and approval of building plans, code enforcement, public education, public information, and fire cause investigation. Berkeley County, the City of Martinsburg, and the Town of Hedgesville are responsible for their respective plan reviews, approvals, and overall building code enforcement, which does not include provisions of the West Virginia State Fire Code. The State Fire Marshal's Office, Fire Investigation Division is responsible for the enforcement of the State Fire Code and division staff perform plan reviews and safety inspections on public and private schools, day care and limited care facilities, hospitals, nursing homes, mercantile, and residential facilities excluding single family dwellings. To this end, fire safety requirements and the enforcement thereof on single family residential dwellings is absent in Berkeley County and consideration should be given to address this void.

One strategy that the Fire Association may consider championing to relieve and diminish the impact of the community's growth on fire services is the requirement for full-fire protection sprinkler systems in all new occupancies. Future demand for fire protection could be significantly reduced by fire sprinkler systems.

Sprinklers do more than save lives; they also protect property from destruction by fire. In many situations, this means a family or business that survived a fire will also have a place to live or work and enough resources to continue their lives as they did before. "Saving lives" means more than just preventing deaths. Just as there is no other fire safety technology or programs that produce as great a reduction in risk of death as sprinklers, there also is no other fire safety technology or program that produces as great a reduction in property loss per fire as sprinklers. Sprinklers reduce the average property loss by 71 percent per fire.

Buildings in communities protected by full-fire sprinkler systems reduce the demand on fire services, reduce injuries to firefighters and the public, lessen the damage from fire, and basically create an environment where there is instant response to controlling a fire, 24 hours a day, seven days a week. This plan encourages the Fire Association to further research and educate the Fire Board and Berkeley County Council on both the advantages and disadvantages of proactively extinguishing fires through the addition of cost-effective, efficient fire sprinkler systems while buildings are being constructed.

ISO RATING

To help establish appropriate fire insurance premiums for residential and commercial properties, insurance fire departments need reliable, up-to-date information about a community's fire protection services. The ISO (formerly known as the Insurance Services Office), provides that information through its Public Protection Classification (PPC™) program, which utilizes the *Fire Suppression Rating Schedule* (FSRS), is used to evaluate the fire suppression capabilities of individual communities.

The FSRS measures the major elements of a community's fire suppression system and develops a numerical PPC™ rating (a.k.a., ISO Rating) from 1 to 10. A Class 1 rating generally represents superior property fire protection, and a Class 10 rating indicates that the area's fire suppression program doesn't meet the ISO's minimum criteria. The PPC™ is based on the evaluation of the following fire protection elements:

Fire alarms - Ten percent of the overall grading is based on how well the fire department receives fire alarms and dispatches its firefighting resources.

Engine fire departments – Fifty percent of the overall grading is based on the number of engine fire departments and the amount of water a community needs to fight a fire. The ISO reviews the distribution of fire departments throughout the area and checks that the fire department tests its pumps regularly and inventories each engine company's nozzles, hoses, breathing apparatus, and other equipment. The ISO also reviews the fire company's records to determine the following:

- Type and extent of training provided to fire company personnel
- Number of people who participate in training
- Firefighter response to emergencies
- Maintenance and testing of the fire department's equipment

Water supply – Forty percent of the grading is based on the community's water supply. This part of the survey focuses on whether the community has sufficient water supply for fire suppression beyond daily maximum consumption, including the distribution of fire hydrants.

Table 17 shows the ISO PPC™ "split" rating for each of Berkeley County's five volunteer fire departments. According to the ISO, "…the first class [number] applies to properties within five road miles of a fire station and within 1,000 feet of a fire hydrant. The second class applies to properties within five road miles of a fire station but beyond 1,000 feet of a hydrant. ISO generally assigns Class 10 to properties beyond five road miles."[8] As illustrated in Figure 11, Berkeley County's ISO ratings are consistent with the ISO ratings given to the majority of communities located within West Virginia. However, the increasingly suburban and urban nature of Berkeley County coupled with the increasing in-migration of new residents from the metropolitan Washington, D.C., area will place greater demands on communities and the volunteer fire departments to achieve improved ratings. .

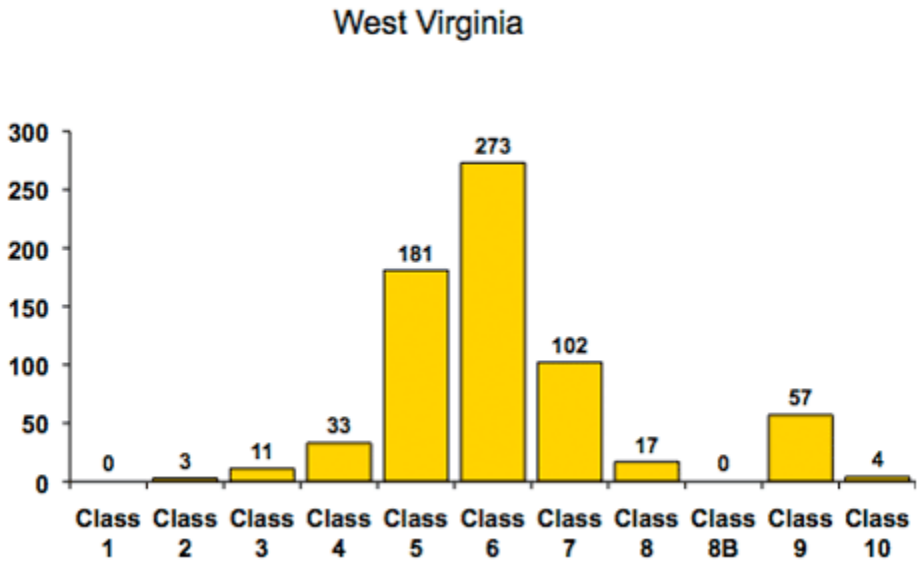
[8] ISO *Fire Suppression Rating Schedule*. Accessed online July 11, 2011, at http://www.iso.com/Products/Public-Protection-Classification-Service/Fire-Suppression-Rating-Schedule-FSRS-manual-for-PPC-grading.html.

TABLE 17 – BERKELEY COUNTY COMMUNITY ISO PUBLIC PROTECTION CLASSIFICATION RATING, 2011

Company	ISO Public Protection Classification Rating
Company 20, South Berkeley	5/9
Company 30, Hedgesville	6/9
Company 40, Bedington	6/9
Company 50, Back Creek Valley	6/9
Company 60, Baker Heights	6/9

Sources: Berkeley County Fire Service Board and ISO, 2011

FIGURE 11 – DISTRIBUTION OF WEST VIRGINIA ISO RATED COMMUNITIES BY PPC™ CLASS



Source: ISO. Accessed online at http://www.isomitigation.com/ppc/1000/graphs/WV.html

CAPITAL AND OPERATIONAL COSTS

FIRE SERVICE BOARD FIVE-YEAR OPERATING BUDGET

The County's Fire Service Fee revenues serve as the primary means for funding the Fire Service Board's annual operating budget. In fulfillment of its primary objective and as illustrated in Figure 12, the Fire Service Board's annual budget includes payments on behalf of the five volunteer fire departments, which annually represents over 80 percent of the Fire Service Board's expenditures. As illustrated in Figure 13, the Fire Service Board's annual budget increased between fiscal years 2006 and 2011. This increase is largely attributed to loan payments made for capital expenditures supporting the County's volunteer fire services.

It is important to note that the five-year budget projection does not include funds for additional career fire fighting staff. As demonstrated by this Strategic Plan and as concurred by the County Fire Chiefs, the volunteer fire companies have a severe challenge in providing sufficient manpower during weekday daytime hours. It is anticipated that demands will increase and further strain volunteer resources. The Fire Chiefs believe that it is not unreasonable to project that two (2) paid firefighters will be needed in 2013-2014 and two (2) more in 2014-2015. It is presumed that these additional staff will be added to the County's budget requirements and are thus not considered under the Fire Service Board's projected operating budget. These career staffing needs would be in addition to the current Engine 90 contingent and would supplement weekday coverage between 0600 to 1800 hours.

Operational funding for the fire departments has been made based on individual departmental requests in conjunction with historical cost analysis. Capital asset funding has been inconsistently handled as either individual departmental requests or requests made and endorsed by the County Fire Association. As a result, decisions made by the Fire Service Board have largely been void of a comprehensive evaluation and prioritization of capital improvement needs for the fire departments. Both the Fire Board and the County Association believe that the county will be best served by having capital funding requests endorsed and prioritized by the County Fire Association as is contemplated by Chapter 7-17 of the West Virginia Code. This Strategic Plan provides such an evaluation and should therefore be used by the Fire Association to develop a countywide prioritization of fire suppression needs and to substantiate capital funding requests from the Fire Service Board. In turn, the Fire Service Board's decisions regarding such requisitions should be consistent and supportive of the strategic plan, but should also be considerate of unforeseen circumstances (e.g., damage to apparatus during a routine fire incident call) that cause the Fire Association to make requisitions that address a particular fire department's needs.

The Fire Service Board should strongly consider developing a policy for its funding decisions. For example, a financial management agreement, such as the example provided in Attachment B, should be executed between the Fire Service Board and the Fire Association's member fire departments to establish uniform accounting practices and the criteria and standards through which County funds are to be allocated to each company. In addition, the agreement should establish uniform record keeping and information management practices. Adherence to these practices, coupled with the Fire Association's thorough and deliberate evaluation of each of the member fire departments' service delivery needs, provides the basis for the Fire Service Board to make appropriate and fair allocation of fire service fees and other relevant funds.

A projected five-year operating budget for the Fire Service Board has been prepared and is included in Attachment D and the projected annual budget totals are illustrated in Figure 13. The five-year budget projection shown in Attachment D is formatted to separate current expenditures and their projections (i.e., numbered budget line items) from those items that have been identified in the plan as requiring attention (i.e., "Strategic Plan

Requirements," as highlighted). All projection figures assume a three (3) percent annual escalation factor while loan debt service and interest expenses are based on actual loan commitments and amortization. This projection approach is deemed sound with the exception of the Workers Compensation line item.

Workers Compensation for all West Virginia volunteer fire departments is currently being subsidized through a special, legislatively authorized fund administered through West Virginia State Auditor. The budgeted amounts shown in Attachment D under line item 426d are projected at the current subsidized rates. Should the State Legislature choose to discontinue the subsidy at the end of the three-year authorized period, the overall premium costs would increase by approximately 450 percent, or by $200,000 annually, over the current projected figures shown in Attachment D.

Attachment D, of course, assumes the subsidy will continue beyond the current three-year subsidy period. Therefore, developing a reasonable five-year budget projection is dependent upon the continuation of the state subsidy.

The Fire Service Board's strategic planning process identified both short- and long-term needs of the County's volunteer firefighting services. While some of these needs have been recognized for some time, they have never been prioritized and are not currently provided for under the Fire Service Board's current budget configuration. These priority needs are now included in the five-year budget projection and are discussed as follows:

FIRE BOARD ADMINISTRATOR

The need for a Fire Board Administrator was originally identified and recommended by the Fire Association in the early 1990s, and the need became even more apparent during the preparation of this Strategic Plan. Essentially, the Fire Board Chairman has acted as the Board's de-facto administrator, which has lead to inconsistent capabilities and results. As a result, the Fire Board and the volunteer fire departments have ongoing and pressing needs that simply cannot be addressed by a volunteer chairman, and the Board's existing staff resources have been focused on the present with little emphasis on the future. The Fire Board currently has two full time employees and one part time leased employee and their primary functions are fee billings, fee collections, delinquent fee collections, bill paying for the Fire Board and the volunteer fire companies and maintaining the accounting system.

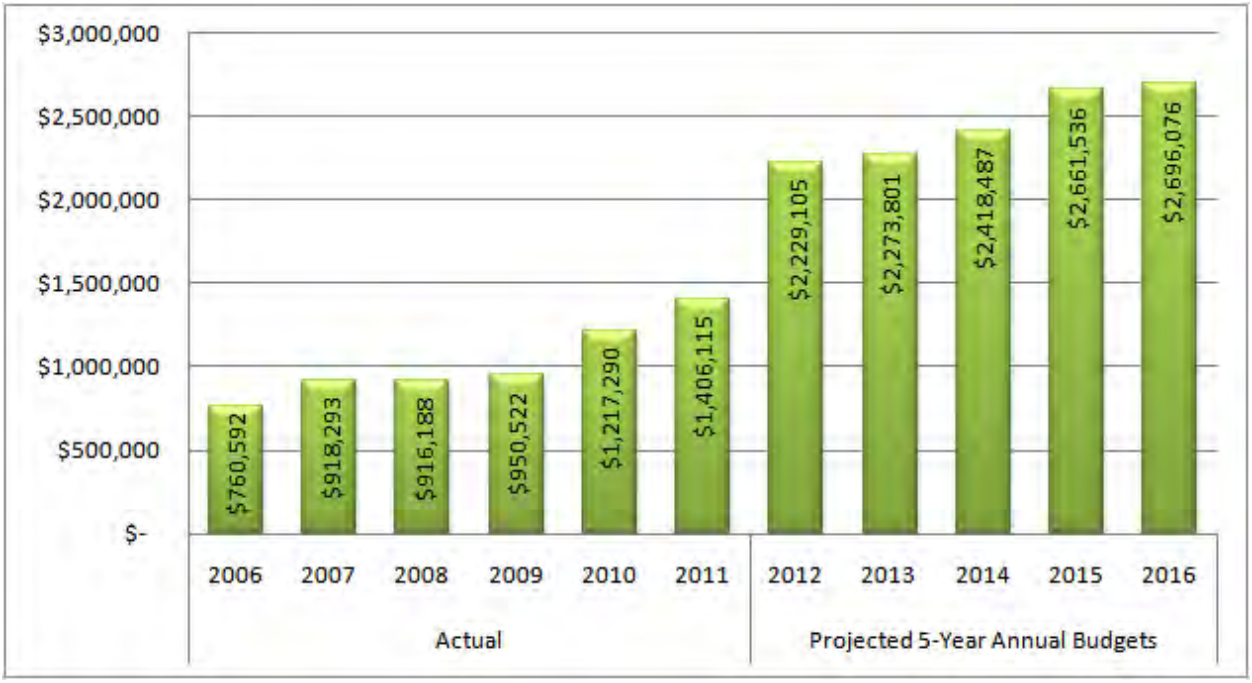
The need for a full-time Fire Board Administrator is also emphasized by the Fire Board's stringent membership criteria and term limits. While such criteria and limits may have desirable benefits in preventing management entrenchment, it has also lead to a constant turnover of board membership and therefore the loss of invaluable knowledge and experience. Moreover, turnover has a tendency to diminish continuity and synergy as new members are free to set their own direction and priorities void of any progress or accomplishments attained by the previous Board. A Fire Board Administrator will help bridge the knowledge gap between Board member transitions and ensure the continuity of long-term strategic planning and implementation efforts are a primary focus of future Boards.

FIGURE 12 – DISTRIBUTION OF FIRE SERVICE BOARD ANNUAL BUDGET EXPENDITURES

	2006	2007	2008	2009	2010
Payments to Fire Depts.	$630,819	$763,196	$767,323	$885,622	$1,030,565
Fire Board Admin & Operating Costs	$124,773	$148,097	$146,365	$167,900	$186,725
Fire Investigation	$5,000	$7,000	$2,500	$2,000	$2,000

Source: Berkeley County Fire Service Board, Inc., 2011

FIGURE 13 – FIRE SERVICE BOARD ACTUAL AND 5-YEAR PROJECTED ANNUAL BUDGET TOTALS



Source: Berkeley County Fire Service Board, Inc., 2011

TRAINING, RECRUITMENT/RETENTION OFFICER

The employment of a Fire Service Training, Recruitment and Retention Officer is also included in the Fire Board's five-year budget projection. This staff position is needed to coordinate and ensure that all of the County's volunteer firefighters are meeting their training requirement obligations and to develop and administer a countywide strategy for volunteer recruitment and retention. Volunteer recruitment and retention is of upmost importance to sustain the current level of volunteer strength over the next five (5) to 10 years, and beyond. The addition of any paid staff to the volunteer departments serves only to sustain their response capabilities, but does not serve as a replacement for the volunteer firefighters, which are the backbone to the County's firefighting service.

IMS/NFIRS COMPLAINT SOFTWARE

As previously discussed, there is no consistent means or interoperable methods among the five volunteer fire companies for reporting and managing fire incident information. Moreover, information collected and reported by the fire companies is not readily available to the Fire Board to support its planning and funding decisions. As such this Strategic Plan recommends the purchase and implementation of a countywide incident reporting system, which will provide the Fire Board with a countywide operating picture regarding each departments call volumes and types, equipment and maintenance tracking, manpower analysis, workers compensation reporting, and incident preplanning.

APPARATUS, HOSE EQUIPMENT AND SCBA

This Strategic Plan provides a long-term analysis of each of the five volunteer fire department's apparatus replacement needs, which is projected to cost approximately $731,000 annually. New apparatus purchases should also be outfitted with new equipment including hose and extrication equipment, etc., which is built into the projected annual replacement cost. Costs for replacing each department's SCBA gear is projected as a separate line item as such equipment must be maintained according to specific standards and quantities sustained according to specific volunteer staffing requirements and needs.

LOAN AMORTIZATION FOR BUILDINGS AND IMPROVEMENTS

A detailed capital improvement plan is beyond the scope of this document and may well be the next project undertaken by the Fire Board. What is known is that two of our front line stations, South Berkeley and Bedington, are aged facilities. The extent to which career staff is added to these stations will drive the need for these facilities to be significantly renovated or replaced. As such, this budget projection item is based on the recommendation for the Fire Board to amortize a $4 million loan that would be used for capital facility replacement and improvements.

SUMMARY

The purpose of this projection is an attempt to quantify the issues that face the fire service in Berkeley County and plan for their funding accordingly. The current fire fee structure has been in place since June 2005. Revenue increases have come from growth not fee increases.

Without a longer term focus, critical needs such administrative oversight, manpower, equipment replacement, and facility replacement/improvements have all been deferred. The problem with this "kick the can down the road" approach is that the funding bubble at the end keeps getting bigger and bigger.

The current Fire Fee Ordinance generates approximately $1.350 million in fee collections. Essentially, 82 percent of these revenues are generated from residential billings and 18 percent is derived from commercial sources. A detailed fee model is also beyond the scope of this Strategic Plan, but it has been generally observed that the commercial billing structure is disproportionately assessed. This is because the maximum commercial fee is assessed on any structure greater than 20,000 square feet (SF), which means that a 21,000 SF mini storage facility pays the same fee as the new 1.3 million SF industrial warehouse facility (e.g., Macy's). Conversely, if a per square foot model is adopted for commercial accounts, a one cent per square foot charge would lead to a $13,000 fire fee for the new Macy's facility, which is 1,334% more than would be generated under the existing ordinance.

There is much work to be done on the crafting of ordinance changes and there are many approaches that should be considered in the cost sharing between residential and commercial demands. However, it is important to note that the Fire Service Board's five-year budget projection shows that it needs to fund approximately $2.5 million in expenses by 2016-2017. Fee revenue must therefore increase 86 percent over 2011-2012 levels. This can be accomplished through a combination of growth and fee increases. These projected revenue shortfalls must be addressed immediately and no longer deferred to future Board members and County Councils. Doing so only compounds the funding challenges and decisions that must ultimately be made.

FIRE SERVICES FEE ORDINANCE

To achieve the Board's objectives, the Berkeley County Council enacted a Fire Service Fee Ordinance (Ordinance) on August 31, 1986, pursuant to West Virginia Code Chapter 7-17-12 (see "Attachment C"). According to Section IX therein, the fee revenues "shall be only used to defray the cost of the continuance, maintenance, or improvement of fire protection service within the county, and no part of such revenues shall be used for any other county purposes." As such, the Fire Service Board receives requests and approves the use of the fire service fees to help finance the direct operational expenses and administrative costs of the individual departments, maintenance and purchase of firefighting apparatus and equipment, and the construction of fire department facilities as appropriate. The Fire Service Board is also responsible for the collection and accounting of all fees generated by the Fire Service Fee Ordinance.

As stated in Ordinance Section VI, "The service of fire protection shall be continued, maintained, and improved by the Fire Service Board, in part, at the charge and expense of the owners of all buildings of every kind and nature within the county, which said owners are declared to be users and beneficiaries of such fire protection service." Although the Ordinance specifies that the fee shall be assessed on the "owners of all buildings of every kind and nature within the county," the County chooses to assess the fee only on residential and commercial structures. The assessed fire service fee is based on a two tiered square footage scale for residential structures and a four tiered square footage scale for commercial structures, including airport hangars. Agricultural buildings, such as barns, but not including associated farmhouses used for residential purposes, are not assessed a fee.

Research indicates that the fire service fee could also be lawfully assessed on structures owned by institutional, governmental, and nonprofit organizations. In fact, the City of Martinsburg assesses its fire service fee on structures owned by institutional, governmental, nonprofit, and religious organizations. It is strongly believed that the enabling legislation for County fire service fees is identical to that of municipalities and would allow for this expanded assessment of these properties. However, the County's Assessment Office does not maintain tax records for exempt properties such as institutional, governmental, and nonprofit organizations; therefore, the Fire Service Board was unable to project increases in the fire service fee that may be necessary to meet the funding requirements specified by this Strategic Plan (See Attachment D, Fire Service Board Projected Five-Year Operating Budget). In addition, obtaining such information from the State is also problematic given the proprietary nature

with which the State views such tax assessment information. As such, it is well understood by the Fire Service Board, Fire Chiefs and County Council that decisions to amend the ordinance's fee schedule will need to be further evaluated.

Table 18 summarizes the County's fire service fee's rate structure, annual revenues for the period 2007-2011 and the total annual number of structures upon which the respective fee is assessed.

In 2009, the Fire Service Board recognized that uncollected fire service fees were becoming an increasing problem. Steps were taken to formalize the collection process and offer alternative methods of payment. Dedicated resources were put in place to aid the collection effort. Individual contact is made on a regular basis and accounts are taken to Magistrate Court to force collections where necessary. In addition the acceptance of debit and credit cards has significantly aided this effort. As illustrated in Figure 14, collection of prior year fees has increased dramatically for the fiscal years 2010 and 2011. Outstanding fees receivables peaked at the conclusion of FY 2009, and have begun a slow but gradual decline. This has been accomplished while annual fee billings have increased. In 2010, the Fire Service Board requested a change in its ordinance for the billing of residential fees. This change was approved by the Berkeley County Council and has been implemented for the 2011 fiscal year. In short, this change provides a much greater incentive for residential accounts to pay on time and a much greater penalty should the fees be paid late. This will have a positive impact on both the percentage of fees collected on time and the total amount of fees collected. The Fire Service Board is prepared to take additional steps in fee collection should it become necessary. Outstanding fees represent slightly over nine (9) percent of the original amounts billed over the preceding four years. Fee collection remains a top priority of the Fire Service Board.

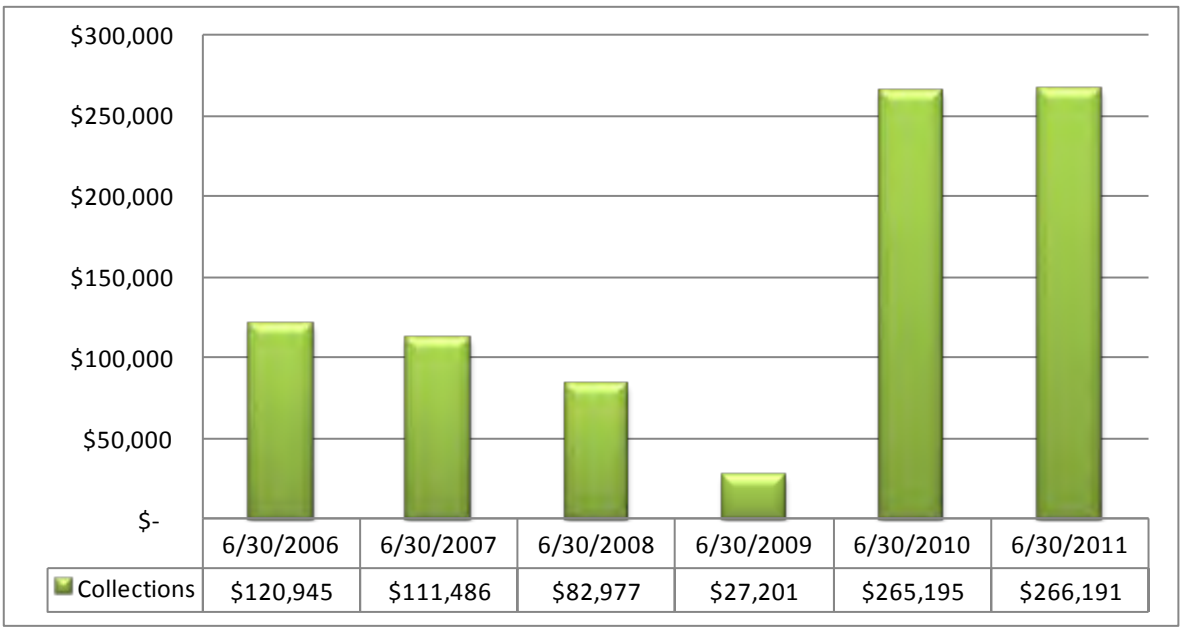
TABLE 18 – BERKELEY COUNTY FIRE ANNUAL FIRE SERVICE FEE REVENUES AND ASSESSED SQUARE FOOTAGES

Assessment Schedule	2007			2008			2009		
	Accounts	Dollars	Percent	Accounts	Dollars	Percent	Accounts	Dollars	Percent
Residential			**82.6%**			**82.2%**			**82.1%**
Less than 2500 sq. ft.	29,490	884,700	73.74%	30,122	903,660	72.89%	30,813	924,390	72.82%
Greater than 2500 sq. ft.	2,646	105,840	8.82%	2,876	115,040	9.28%	2,956	118,240	9.31%
Commercial			**17.4%**			**17.8%**			**17.9%**
Less than or equal to 2,500 sq. ft.	199	15,920	1.33%	212	16,960	1.37%	220	17,600	1.39%
2,501-7,500 sq. ft.	278	45,175	3.77%	286	46,475	3.75%	295	47,938	3.78%
7,501-20,000 sq. ft.	134	53,600	4.47%	148	59,200	4.77%	152	60,800	4.79%
Greater than 20,000 sq. ft.	97	94,575	7.88%	101	98,475	7.94%	103	100,425	7.91%
Totals	**32,844**	**1,199,810**	**100.00%**	**33,745**	**1,239,810**	**100.00%**	**34,539**	**1,269,393**	**100.00%**

Assessment Schedule	2010			2011		
	Accounts	Dollars	Percent	Accounts	Dollars	Percent
Residential			**82.5%**			**81.5%**
Less than 2500 sq. ft.	31,598	947,940	73.21%	31,924	957,720	72.32%
Greater than 2500 sq. ft.	3,018	120,720	9.32%	3,050	122,000	9.21%
Commercial			**17.5%**			**18.5%**
Less than or equal to 2,500 sq. ft.	221	17,680	1.37%	224	17,920	1.35%
2,501-7,500 sq. ft.	297	48,263	3.73%	325	52,813	3.99%
7,501-20,000 sq. ft.	152	60,800	4.70%	159	63,600	4.80%
Greater than 20,000 sq. ft.	102	99,450	7.68%	113	110,175	8.32%
Totals	**35,388**	**1,294,853**	**100.00%**	**35,795**	**1,324,228**	**100.00%**

Source: Berkeley County Fire Service Board, Inc., 2011

FIGURE 14 – BERKELEY COUNTY DELINQUENT FIRE SERVICE FEE COLLECTIONS, FY 2006 - 2011



	6/30/2006	6/30/2007	6/30/2008	6/30/2009	6/30/2010	6/30/2011
Collections	$120,945	$111,486	$82,977	$27,201	$265,195	$266,191

Source: Berkeley County Fire Service Board Audited Financial Statements, 2006 - 2010

An evaluation of comparable fire service fees enacted counties and local jurisdictions throughout West Virginia is provided in Table 19. Discussion with the Fire Service Board have determined that the County's current fire service fee rate structure for commercial buildings places a greater burden on small property owners and that the rate for larger commercial properties should be increased. For example, the Macy's 1.3 million distribution center will generate $975 for the Fire Service Board, but would generate $97,500 under the City of Martinsburg's rate structure. To this end, the Fire Service Board and County Council should further evaluate and consider amending the commercial property fee structure to make it more equitable for the County's commercial property owners. The Fire Board and the County Council should also seriously consider if fee billing for other nonresidential structures should be instituted.

TABLE 19 – FIRE SERVICE FEE COMPARISONS

Location	Fire Service Fee Rate Structure	Ordinance
Upshur County, WV	$5.00 — vacant property parcels of 5 acres or greater $25.00 — residential building $25.00 — residential rental/per unit $50.00 — commercial or institutional buildings including governmental and institutional structures.	http://www.upshurcounty.org/SheriffTax/fire.pdf
City of Martinsburg, WV	$90.00 – Single-family residence, per unit, and multiple-family dwelling or apartment, per residential unit or apartment, whether or not occupied $.075 per square foot ($90.00 minimum) for businesses governmental and non-profit. Mixed-use (residential and business) – assessment made on the highest use.	http://cityofmartinsburg.org/index.php?mode=section&article_id=1963
Putnam County, WV	Rates based solely on square footage, starting at $37.50 for 1,250 square feet and under to a maximum of $2,000 for more than 50,000 square feet. Churches, schools, and government buildings are exempt.	New ordinance being considered that implements the proposed rate structure.

Source: Delta Development Group, Inc., 2011

FEDERAL FUNDING OPPORTUNITIES

Federal grant opportunities include three programs administered by FEMA and a fourth by the Department of Homeland Security. These programs, as listed below, are also available to volunteer fire departments and nonaffiliated emergency medical service organizations.

Assistance to Firefighters Grants (AFG): Since 2001, AFG has helped firefighters and other first responders to acquire equipment, protective devices, vehicles, training, and other resources. FEMA annually awards around half a billion dollars to between 5,000 and 6,000 different fire stations throughout the United States.

AFG Staffing for Adequate Fire and Emergency Response Grants (SAFER): Also part of the FEMA AFG program, the SAFER program provides assistance to fire stations in order to bring the training into the response and operational standards established by the NFPA and OSHA (NFPA 1710 and/or NFPA 1720 and OSHA 1910.134).

AFG Fire Prevention and Safety Grants (FP&S): Also part of the AFG, the FP&S program's goal is to target high-risk populations to lessen injury and prevent fatalities.

AFG Assistance to Firefighters Fire Station Construction Grants (SCG): Funded through the Recovery Act, the goal of this AFG program is to provide funding to assist in the construction of new or renovations of existing fire stations.

Department of Homeland Security Emergency Management Performance Grants (EMPG): The EMPG program is a unique program dedicated specifically for the state and local emergency management community. The EMPG program provides cost-share funding to continue meeting state and local emergency management needs, personnel staffing in order to accomplish planning, operations, training, and exercises, and equipment acquisition.

In addition to these funding programs, consideration should also be given to the following:

- Rural Fire Assistance (RFA) Grant Program, administered by the Department of the Interior
- Volunteer Fire Assistance Program (VFA), formerly known as the Rural Community Fire Protection (RCFP) Program
- Federal Emergency Management Agency (US Fire Administration)
- Commercial Equipment Direct Assistance Program (CEDAP), helps meet the equipment needs of smaller jurisdictions
- United States Department of Agriculture Community Facilities Program, which offers both grants and low-interest guaranteed (or direct) loans to qualifying communities

ATTACHMENT A – BERKELEY COUNTY FIRE SERVICE BOARD BYLAWS

CONSTITUTION AND BY-LAWS
OF THE
BERKELEY COUNTY FIRE SERVICE BOARD, INC.
400 WEST STEPHEN STREET, SUITE 206
MARTINSBURG, WEST VIRGINIA 25401

ARTICLE I TITLE

NAME: The official name of this organization shall be "Berkeley County Fire Service Board, Inc."

ARTICLE II FINDINGS

OBJECT: The Berkeley County Commission hereby states that the object of the board is to provide for the improvement, advancement and development of fire services within.

Berkeley County, to establish funding priorities and mechanisms and to do any and all necessary business for the fire service and citizenry of Berkeley County in accordance with any and all existing State, Federal, and local laws and ordinances.

ARTICLE III CREATION OF BOARD

CREATION: The Berkeley County Fire Service Board, Inc. created by the Berkeley County Commission on March 15, 1986, is in accordance with the enrolled committee substitute for House Bill 1199, duly passed and enrolled by the legislature of the State of West Virginia on March 10, 1984 and shall be governed by the auspices of said legislation.

ARTICLE IV MANAGEMENT OF BOARD
SECTION I BOARD MEMBERSHIP

The Berkeley County Fire Service Board, Inc. hereinafter known as the "Board" shall consist of seven members.

SECTION II TERMS OF MEMBERSHIP

The initial appointment to the county fire board shall begin on the first day of March, on thousand nine hundred eighty-six. One County Commissioner, chosen by the County Commission, shall serve on the board. The County Commission shall make the initial appointments to the fire board so that one third shall be appointed for a term of two years

and one third shall be appointed for a term of three years. Each successive appointee's term shall begin with the first fire board meeting following appointment by the County Commission. The county fire association shall submit to the County Commission the names of five members of the fire association, three of whom shall be appointed by the County Commission to serve a term of three years. Such members are limited to two consecutive terms. Three citizen members shall be appointed by the County Commission to serve on the Board. The citizen members may not be associated with the fire service or the County Commission. The citizen members must be residents of the county of which the county fire board is formed and not more that one citizen member may be appointed from the same magisterial district in the county. The citizen members shall serve for a term of three years and are limited to two consecutive terms. If a member resigns, or for any other reasons his/her membership terminates during his/her term of office, the County Commission shall appoint a successor for the remainder of the member's term. Members in office at the expiration of their respective terms shall continue to serve until their successors have been appointed and have qualified.

SECTION III REQUIRED ATTENDANCE OF BOARD MEMBERS

All board members shall attend at least two-thirds of the board meetings annually. Any board member who must be absent from a board meeting shall notify a board officer. Illness, accidents, school, vacations or other emergencies shall be considered valid excuses, and shall not be considered as absences.

SECTION IV REMOVAL

The board may recommend to the County Commission the removal of any board member. The recommendation shall be made by the board upon a two-thirds majority vote of all members. Recommendations to remove any Board member shall be based upon charges of misconduct or other malfeasance.

ARTICLE V APPOINTMENT OF BOARD OFFICERS: POWER: DUTIES

SECTION I – Annually the board shall elect one of its appointed members a Chairman and another as Vice-Chairman and shall appoint a Secretary/Treasurer.

SECTION II – At the annual July meeting, officers will be elected. Nominations for the officers will be made from the floor, by any board member.

SECTION III – The officers shall be elected, voice vote or show of hands, to serve for one year or until their successors are elected. The officer's term of office shall begin at the close of the annual meeting at which they were elected.

SECTION IV – No member shall hold more than one office at any time, such member is limited to two consecutive terms in the same office.

SECTION V POWERS AND DUTIES OF THE CHAIRMAN

The Chairman shall have the general supervision of the affairs of the corporation and shall perform such duties as may be vested in him by these by-laws not inconsistent with current applicable laws. The Chairman shall preside over all regular and special meetings and shall use the "Roberts Rules of Order" as the governing authority of parliamentary procedures. The Chairman shall appoint all committees and be member ex-officio of the same.

SECTION VI

The Chairman shall consign all checks and drafts with the Secretary/Treasurer or other Board approved office staff.

SECTION VII POWERS AND DUTIES OF THE VICE-CHAIRMAN

The Vice-Chairman shall assist the Chairman in the discharge of their duties and shall perform the duties and responsibilities of the Chairman in his/her absence, illness death or other inability to perform his/her duties, or upon their resignation.

SECTION VIII POWERS AND DUTIES OF THE SECRETARY/TREASURER

The Secretary/Treasurer shall be responsible for the recording of the minutes of all meetings of the board; shall cause notice of all meetings of the board to be served and shall affix the seal of the corporation to such instruments as may require; shall also have the responsibility for the funds, securities, assets, and debts of the board and shall have the power to sign checks and drafts of the board. The Secretary/Treasurer shall cause to be kept a full and accurate account of all funds received and paid in behalf of the board. Such account shall truly reflect all financial transactions of the board; the Secretary/Treasurer shall comply with all pertinent local, State and Federal audits and laws. The Secretary/Treasurer shall perform all acts incident to the office of Secretary/Treasurer and shall have further powers and duties as shall be from time to time conferred by the board. The Secretary/Treasurer shall cosign all checks and drafts with the Chairman.

ARTICLE VI MEETINGS

SECTION I – The regular monthly meeting of the board shall be on the second Thursday of each month.

SECTION II SPECIAL MEETING

Special meetings may be called by the Chairman to conduct necessary business upon three (3) days notification of each board member.

SECTION III EMERGENCY MEETING

Emergency meetings may be called by the Chairman to conduct necessary emergency business upon twenty-four hours verbal notice. Upon verbal notice the Chairman shall state the reason for calling an emergency meeting, and only that business may be conducted.

SECTION IV EXECUTIVE MEETING

The Board may meet in a closed, executive session to conduct necessary business not inconsistent with current applicable Local, State, and Federal Statutes.

SECTION V PUBLIC NOTICE

The Board shall publish in compliance with the provision of Article 9A, Chapter 6, of the West Virginia 1931, as amended, all meetings, times and places.

ARTICLE VII QUORUM

SECTION I QUORUM

Four members of the board shall constitute a quorum and the affirmative vote by four members shall be necessary for any action to be taken by the board. No vacancy in the membership shall impair the rights of a quorum by such vote to exercise all the rights and perform all the duties of the board.

ARTICLE VIII STANDING OR SPECIAL COMMITTEES

SECTION I CREATION AND POWERS

The Board may establish such committees, as it may deem desirable. Such committees may be standing or special committees and shall exercise such authority as the board may

delegate to them provide such delegation is not inconsistent with the laws of West Virginia or the rules and regulations of the Board.

SECTION II STANDING COMMITTEE

Standing committees shall be appointed by the Chairman on the second annual meeting of the fiscal year.

SECTION III SPECIAL COMMITTEE

Special committees shall be appointed by the Chairman at a regular, special or emergency board meeting. Special committees shall serve until their assignment is completed. Special committee members need not be members of the board; however, the Chairman of the committee shall be a board member.

ARTICLE IX GENERAL PROVISIONS

SECTION I AUDIT

The Chairman shall annually cause an audit to be conducted of the books and accounts of the board by an independent firm. The auditor's report shall be made available to all members of the board.

SECTION II FISCAL YEAR

The fiscal year of the board shall be from July 1 through June 30 of the following year.

SECTION III BOOKS AND RECORDS

The Board shall keep correct and complete books and records of accounts and shall keep minutes of the proceeding of its members, meetings and committees having any of the authority of the board and shall keep at its principal office a record of the names and addresses of its members. All books and records of the board may be inspected by any member at any reasonable time. For failure to comply with the provisions of this section, the county fire board shall be fined not less than ten nor more than twenty-five dollars.

SECTION IV DEBTS

No officer or employee of the corporation shall solely or together contract or cause to be contracted any debt or liability in the name or in behalf of the corporation beyond the necessity of legitimate business and current expenses thereof, unless and except as may otherwise be specifically provided by the board.

SECTION V CORPORATE FUNDS

All monies and funds of the corporation deposited in any bank shall be deposited to the credit of the corporation in a corporate account. It shall be the responsibility of the Chairman to secure proper pledges of securities for any funds not covered by the FDIC insurance.

NOTES, BONDS, AND CHECKS

Notes and bonds of the board shall be made in the name of the corporation and shall be signed by tow officers of the board. No officer or agent of the board whether solely or together, shall have the power to make any bill note or check or other negotiable instrument in the name of the board, or to bind board thereby, except as provided in these by-laws.

ARTICLE X AMENDMENTS TO BY-LAWS

SECTION I PROCEDURE

These by-laws may be amended, altered, or repealed in whole or in part, and new by-laws or amendments may be adopted so long as they are not in conflict with the provisions of the Certificate of Incorporation of the Board or the laws of the State of West Virginia.

These by-laws may be amended, altered, or repealed by a two-thirds vote of the Board of Directors at any regular meeting of the Board of Directors.

SECTION II DISTRIBUTION OF BY-LAWS

A copy of these by-laws shall be distributed to each Board member upon assuming the duties of their office.

ARTICLE XI INDEMNIFICATION OF BOARD MEMBERS, OFFICERS, AND EMPLOYEES

The corporation shall reimburse and indemnify each present and future board member, officer and employee of the Corporation against expenses actually incurred by him or her in connection with the defense of any action, suit, or proceeding to which he is made a party of by reason of being or having been such trustee shall be adjudged in such action, suit, or proceeding, to be liable for negligence or misconduct in the performance of duty. Such indemnification shall not be deemed exclusive of any other rights to which he or she may be entitled under the laws of the State of West Virginia or otherwise.

ARTICLE XII PARLIAMENTARY AUTHORITY

Any rules of parliamentary procedure not covered by these by-laws shall be governed by Roberts Rule of Order (latest edition).

SECTION I NONDISCRIMINATION

The members, officers, committee members, employees and persons serving this corporation shall be selected on a nondiscriminatory basis with respect to age, sex, race, religion, national origin or physical handicap.

ARTICLE XIII SEVERABILITY

If any provisions of these articles or sections or application thereof to any persons or circumstances shall be held invalid, such invalidity shall not affect the validity of the remaining portions of these articles or sections, and to this end, the provisions of these articles and sections are hereby declared to be severable.

Amended July 15, 2008

ATTACHMENT B – SAMPLE FUNDING AGREEMENT

JEFFERSON COUNTY EMERGENCY SERVICES AGENCY
419 Sixteenth Avenue
Ranson, WV 25438
E-mail – jeffcoamb@citlink.net
Telephone – 304-728-3287
Fax – 304-728-6221

COPY

Funding Agreement

The Jefferson County Emergency Services Agency is designated by the Jefferson County Commission as their representative and overseer of the Fire and EMS services in Jefferson County with the County Commission retaining all rights and responsibilities as defined by State Code.

These criteria or standards for receiving such funds will be established for County fire departments to receive funds. Any department has the right not to participate in this program, but in doing so forfeits the right to receive county funding.
Following are the minimum standards or criteria to be followed:

Membership: Submit an active membership roster annually of your company's membership to include officers followed by quarterly exception reports. This list is to include the certifications of all members and their expiration dates and numbers where appropriate. Examples are Firefighter I or II, Officer levels. CPR, ACLS, PEPP, etc.

The County Medical Director will have access to the list of members who possess EMS certification. Since all EMS personnel operate under the Medical Director's license, the Director retains the right to add or remove names as he or she may see fit. Any alteration in the EMS roster of a company will require the cooperation of the respective company and its official squad representative.

Vehicles: A list of company owned vehicles will be submitted to the Agency annually. This list is to be accompanied with documentation showing that each unit meets the standards of the State Fire Marshall's Office and or the West Virginia Office of Emergency Medical Services.

Quality Assurance: All appropriate companies will participate in the EMS quality assurance program on a monthly basis.

Department Data: All county volunteer fire companies shall comply with entering call and volunteer data into a software program which will be provided by the Emergency Services Agency. With this each company will need to allow the Agency access a computer in order to update software and down load data. This information will be used to create a database of statistics to be used in justifications with the County and potential grants. This data will be defined in the Agency Data Specification Document to be agreed upon by all by all entities.

Standard Operating Guidelines: It is to be agreed that each company will subscribe to and follow all Guidelines as established by a joint committee of the Jefferson County Fire & Rescue Association and the Emergency Services Agency.

COPY

COPY

JEFFERSON COUNTY EMERGENCY SERVICES AGENCY

419 Sixteenth Avenue
Ranson, WV 25438
E-mail – jeffcoamb@citlink.net
Telephone – 304-728-3287
Fax – 304-728-6221

All documents are to be submitted to the Director of the Emergency Services Agency or his or her designee.

Friendship Fire Company CHRIS HILDON Print	Signature	Date 10/18/10
Citizens Fire Company RONALD L. FLETCHER Print	Signature	Date 10/14/10
Shepherdstown Fire Department ROBERT BURNER Print	Signature	Date 10/4/10
Independent Fire Company JAMES E. WATSON III Print	Signature	Date 10/26/2010
Blue Ridge Mountain Fire Company DAVID B. WITHERS Print	Signature	Date 10/12/10
Middleway Fire Company Michael T. Mc Print	Signature	Date 10/13/10
Bakerton Fire Company Kenneth Nisbaum Print	Signature	Date 10-8-10
Emergency Services Agency Rolf M Kelley - Pres Print	Signature	Date 10-19-10

COPY

COPY

JEFFERSON COUNTY EMERGENCY SERVICES AGENCY
419 Sixteenth Avenue
Ranson, WV 25438
E-mail – jeffcoamb@citlink.net
Telephone – 304-728-3287
Fax – 304-728-6221

Fiscal Management Agreement

The funding of the EMS and fire programs in Jefferson County is through each of the volunteer fire departments. These companies are private nonprofit corporations licensed by the State of West Virginia by the appropriate agencies. One exception to this is the Jefferson County Emergency Services Agency which is funded with public money appropriated by the County Commission.

The volunteer departments of Jefferson County are funded through a combination of sources. These funds are generated through fund raising activities and direct donations from the public as well as funding from government entities such as the Jefferson County Commission. Regardless of the origin of these funds it is incumbent for upon the companies and the Emergency Services Agency to keep the public trust by following accepted accounting practices and policies of fiscal management.

Following are some accounting practices to be followed:

Financial Accounts: All accounts must require a minimum of two (2) signatures in order to conduct business. These signatures' must never be two persons from the same immediate family. Immediate family is defined in State Code §6B-1-3(f) as with respect to an individual, means a spouse with whom the individual is living as husband and wife and any dependent child or children, dependent grandchild or grandchildren and dependent parent or parents.

Tax Returns: Copies of a company's current Federal return (Form 990) will be required by the County Commission to be maintained on file by the Emergency Services Agency.

Budgets: Any company which conducts a yearly budget process and produces a budget may submit a copy to the Emergency Services Agency.

Audits: Audits will be conducted annually by each company. These audits at a minimum will consist of an in-house committee appointed by the company leadership. No person with check signature privileges shall be a member of the in-house audit committee. These audits or summaries will be submitted to the Emergency Services Agency to be maintained on file.

COPY

The Emergency Services Agency acting as an agent of the County Commission may also request an accounting equal to the amount of funding provided by the County Commission. This practice is in line with the requirements of the State of West Virginia as it pertains to funding received from them.

All documents are to be submitted to the Director of the Emergency Services Agency or his or her designee.

COPY

JEFFERSON COUNTY EMERGENCY SERVICES AGENCY

419 Sixteenth Avenue
Ranson, WV 25438
E-mail – jeffcoamb@citlink.net
Telephone – 304-728-3287
Fax – 304-728-6221

Friendship Fire Company CHRIS HIGDON Print	Signature	Date 10/18/10
Citizens Fire Company RONALD L. FLETCHER Print	Signature	Date 10/14/10
Shepherdstown Fire Department ROBERT BURNER Print	Signature	Date 10/4/10
Independent Fire Company JAMES E. WATSON III Print	Signature	Date 10/06/2010
Blue Ridge Mountain Fire Company DAVID B. WITHERS Print	Signature	Date 10/12/10
Middleway Fire Company Michael T. Mason Print	Signature	Date 10/13/10
Bakerton Fire Company Kenneth Nestrick Print	Signature	Date 10-8-10
Emergency Services Agency Rolfe M Kelley - Pres Print	Signature	Date 10-19-10

COPY

ATTACHMENT C – BERKELEY COUNTY FIRE SERVICES FEE ORDINANCE

BERKELEY COUNTY FIRE SERVICE FEE ORDINANCE

Most Recent Amendments Dated 08-26-10

SECTION 1

An amended ordinance creating the Berkeley County Fire Service User Fee: Providing for an annual charge based on square footage; providing that the Assessor shall fix the square footage of property; and providing for publication of the user fee as a Class II legal advertisement in compliance with the provision of Article 3, Chapter 59, of the Code of West Virginia.

SECTION II

There is hereby created a Berkeley County Fire Service User Fee to be imposed by the County Commission upon the users of the fire service.

SECTION III

Rates

Square Footage	Residential	Amount
0-2500		$30.00
2500 and Up		$40.00

Square Footage	Commercial	Amount
0-2500		$80.00
2501-7500		$162.50
7501-20,000		$400.00
20,001 and Up		$975.00

Airport hangers shall be assessed at a rate of $500.00, notwithstanding the size of such hanger.

Agricultural buildings, such as barns, not to include farmhouses used for residential purposes, shall not be assessed a fee.

SECTION IV

The County Assessor is hereby empowered and authorized to fix the square footage of property for the purpose of establishing the user service fee charged under this ordinance.

The County Assessor is further empowered and authorized to classify properties into residential or commercial property classifications for the purpose of establishing the user fee charged under this ordinance.

SECTION V

This ordinance shall be published once a week for two successive weeks in a qualified newspaper published in this county.

SECTION VI

Continuation, Maintenance and Improvement of Fire Service

The service of fire protection shall be continued, maintained, and improved by the Fire Service Board, in part, at the charge and expense of the owners of all buildings of every kind and nature within the county which said owners are declared to be users and beneficiaries of such fire protection service. The charges and expenses with respect to each of such users and beneficiaries shall be imposed, assessed and collected as set out in this Ordinance. In the event the county fire board determines an increase in any such fee imposed by this section is necessary, it shall, by resolution, request the County Commission for such an increase. Procedures set forth in Article 17, Chapter 7; Section 12 of the Code of West Virginia for the initial levy of such a fee shall be followed by the County Commission in the event an increase is sought.

SECTION VII

Definitions: Continuation, Maintenance and Improvement of Fire Service; Legislative Intent; Fire Board to Administer Regulations; Use of Funds; Severability; and Assessment of Fees

"Residential Building" "Any building constructed with a value of at least $1000.00, whether or not occupied, for residential purposes, including mobile homes. Residential buildings classified as such by the County Assessor shall be considered residential buildings for the purposes of this ordinance."

"Commercial Building" and "Institutional Building" Any building which is used for commercial, institutional or industrial purposes but shall also include hotels, motels, or other buildings intended for transient lodging. Rental housing of any type is considered to be commercial for the purposes of this ordinance. Commercial and institutional buildings classified as such by the County Assessor, and industrial buildings classified as such by the West Virginia Department of Taxation and Revenue shall be classified as commercial for the purposes of this ordinance. When determining the proper fee for commercial properties, the total square footage of commercial buildings owned by a legal entity shall be considered and one fee applied per individual plat as recorded at the Berkeley County Court House.

"Mixed Use Building" means any building (excluding basement) that has a combination of residential and commercial and /or institutional uses. The predominant usage shall determine the classification.

"Story" means that part of a structure included between any floor and the floor or roof next above, excluding basements and attics.

"Basement" shall mean that portion of a building which is located below the level or the adjoining ground, and which is unfurnished and not utilized as a part of the living or working area of the building.

"Total square footage" means that sum as measured by the exterior dimensions of the structure multiplied by the number of stories, but shall not include any part of a structure encompassed by the following: porches, (unless entirely enclosed for all weather purposes); basement (not utilized as the living or working area of the building); attics, garages and other buildings.

SECTION VIII

Effective Date: Schedule of Payments; Penalty

This Ordinance shall become effective August 31, 1986. The fire protection fee assessed and levied by this ordinance shall be for services rendered from July 1, 1986 to June 30, 1987, and each year thereafter.

The Fire Protection Users Fees imposed under this ordinance shall be due and payable by September 30th of each year. Residential fee is due on September 30th. Commercial fee may be paid in halves; the last date to pay the first half being September 30th and the last date to pay the second half being March 31st of each year.

The Fire Protection Users Fee assessed and levied under the provisions of the ordinance shall be a debt due the Berkeley County Commission and shall be a personal obligation of the user of the special and essential service of the fire protection within the county. In case of service to a property on which the fire fee has not been paid at the time of such service, the service call will result in a bill for fees for such call in the amount of $500.00, in addition to all delinquent fees. Delinquent fees not paid by March 31st may, at the discretion of the Fire Board, be recovered through civil action filed in the courts of this State and County or other means chosen by the Fire Board. In such case, the Fire Board is authorized to recover its court costs and fees, if any, including attorney's fees.

Payment Schedule	If Paid On or Before September 30th	If Paid After 9/30 and On or Before Dec. 31st	If Paid After 12/31 and On or Before March 31st
	Full Year	Full Year	Full Year
0-2500 Sq Ft	$30.00	$45.00	$60.00
2500 Sq Ft and Larger	$40.00	$60.00	$80.00

It shall be unlawful for any person to refuse to pay the Fire Protection Users Fee provided for herein. It shall be the Users responsibility to pay and all reasonable court cost and fees, for delinquent accounts.

SECTION IX

Use of Funds for Fire Protection Only

The revenues received for the collection of Fire Protection User Fees shall be used only to defray the cost of the continuance, maintenance, or improvement of fire protection service within the county, and no part of such revenues shall be used for any other county purposes. Any fees imposed under this article are dedicated to the county fire board of the purpose provided in this article.

SECTION X

Legislative Intent

The imposition of Fire Service Users Fee under this Ordinance is pursuant to authorization set for in Chapter 7, Article 17, of the West Virginia Code. In accordance with said statute, it is the legislative intent of the Ordinance that the fees imposed hereunder are based, in part, upon recognition of the following legislative finding:

a) The size of a building (as reflected by the total square footage) is a factor which affects the cost of providing fire protection. Therefore, it is the intent and purpose of this Ordinance that the fees imposed hereunder be related, in part, to the size of the building.

SECTION XI

The Board is here authorized to promulgate such regulations as are necessary and reasonable to carry out the provisions of this Ordinance.

SECTION XII

Review and Appeal Procedure

a) Any affected property owner may appeal any charge imposed pursuant to this Ordinance. The property owner to whom such notice is given may, within thirty days after service thereof, either personally or by certified mail, file with the Board a petition in writing, setting forth the particular items of the charge objected to, together with the reasons for the objection. If no petition is filed, the fee imposed shall become final and not subject to administrative or judicial review. The amount of the fee imposed shall be due and payable on the day following the date upon which the assessment becomes final.

b) When a petition provided for in the preceding paragraph is filed within the time prescribed for such filing, the Board shall assign a time and a place for a hearing thereon and shall notify the petitioner of such hearing by written notice at least twenty days in advance thereof. The hearing shall be held within one hundred days of the filing of the petition.

The hearing shall be informal and shall be conducted in an impartial manner by the Board or a hearing examiner designated by the Board.

The burden of proof shall be upon the petitioner to show that the fee imposed is incorrect and contrary to law, in whole or in part. After any such hearing, the Board shall, within a reasonable time, give notice in writing of its decision. Such decision may be appealed to the Circuit Court.

c). If no appeal is taken within thirty days after service of the administrative decision the Board's decision shall become final and conclusive. The amount, if any, due the Board under the decision shall be due and payable on the day following the date upon which such decision becomes final.

SECTION XIII

Exoneration or Modification

Any property owner requesting total or partial exoneration from any charge may do so either personally or in writing to the Board. The Board within a reasonable time, shall cause to be investigated, any request for exoneration. The board shall at the next regular meeting after completion of the investigation, make and communicate to the County Commission its recommendation regarding the exoneration. If good cause for exoneration is found by the Commission, it shall exonerate or modify any or all imposed charges, and shall notify the property owner in writing of its actions. If the Commission does not exonerate or modify as requested by the property owner, an appeal may be filed in pursuance to this article, with the Circuit Court of Berkeley County.

SECTION XIV

It is hereby declared to be the intention of the County Commission that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance be severable and if any section paragraph, sentence, clause or phrase of this Ordinance or the application thereof to any person or circumstances shall be declared unconstitutional or otherwise invalid by the judgment or decree of a court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining sections,

paragraphs, sentences, causes or phrases of this Ordinance or the application thereof to any other person or circumstance.

BERKELEY COUNTY COMMISSION

_____
Ronald K Collins, President

_____
William L Stubblefield

_____
Anthony J Petrucci

Date: June 27, 2002

Amended August 24, 1995
Amended Section VIII May 29, 1997 (Effective 5/29/97)
Amended Section III June 27, 2002 (Effective 6/27/2002)
Amended Section III June 2, 2005 (Effective 6/2/2005)
Amended Section VII & VIII December 11, 2008
Amended Section VIII August 26, 2010 (Effective 10/01/10)

ATTACHMENT D – FIRE SERVICE BOARD PROJECTED FIVE-YEAR OPERATING BUDGET

Attachment D - Fire Service Board Five Year Projected Operating Budget

Line Item	Title Name	FY 2011 - 2012 Budget (Actual)	FY 2012 - 2013 (Projected)	2013 - 2014 (Projected)	2014 - 2015 (Projected)	2015 - 2016 (Projected)	2016 - 2017 (Projected)
403	Salaries & Wages	$ 64,000	$ 65,920	$ 67,898	$ 69,935	$ 72,033	$ 74,194
404	FICA Taxes	$ 6,500	$ 6,695	$ 6,896	$ 7,103	$ 7,316	$ 7,535
405	Group Medical Insurance	$ 15,100	$ 15,553	$ 16,020	$ 16,500	$ 16,995	$ 17,505
406	Retirement Expenses	$ 8,500	$ 8,755	$ 9,018	$ 9,288	$ 9,567	$ 9,854
407	Overtime	$ 9,000	$ 9,270	$ 9,548	$ 9,835	$ 10,130	$ 10,433
411a	Telephone - Main	$ 12,600	$ 12,978	$ 13,367	$ 13,768	$ 14,181	$ 14,607
411b	Telephone - Sub	$ 3,800	$ 3,914	$ 4,031	$ 4,152	$ 4,277	$ 4,405
412	Printing for bill	$ 12,000	$ 12,360	$ 12,731	$ 13,113	$ 13,506	$ 13,911
413a	Utilities - Main	$ 82,500	$ 84,975	$ 87,524	$ 90,150	$ 92,854	$ 95,640
413b	Utilities - Sub	$ 21,000	$ 21,630	$ 22,279	$ 22,947	$ 23,636	$ 24,345
414	Travel	$ 1,500	$ 1,545	$ 1,591	$ 1,639	$ 1,688	$ 1,739
415a	M & R Buildings & Grounds - Main	$ 34,500	$ 35,535	$ 36,601	$ 37,699	$ 38,830	$ 39,995
415b	M & R Buildings & Grounds - Sub	$ 19,500	$ 20,085	$ 20,688	$ 21,308	$ 21,947	$ 22,606
416	Maintenance & Repairs Equipment	$ 81,350	$ 83,791	$ 86,304	$ 88,893	$ 91,560	$ 94,307
417	Maintenance & Repairs Autos	$ 120,500	$ 124,115	$ 127,838	$ 131,674	$ 135,624	$ 139,693
418	Postage	$ 25,000	$ 25,750	$ 26,523	$ 27,318	$ 28,138	$ 28,982
420	Advertising & Legal Publications	$ 3,000	$ 3,090	$ 3,183	$ 3,278	$ 3,377	$ 3,478
421A	Training	$ 20,000	$ 20,600	$ 21,218	$ 21,855	$ 22,510	$ 23,185
421B	Education	$ 7,000	$ 7,210	$ 7,426	$ 7,649	$ 7,879	$ 8,115
422	Dues & Subscriptions	$ 1,000	$ 1,030	$ 1,061	$ 1,093	$ 1,126	$ 1,159
423	Professional Services	$ 10,500	$ 10,815	$ 20,815	$ 21,439	$ 22,083	$ 22,745
424	Audit Costs	$ 14,300	$ 14,729	$ 15,171	$ 15,626	$ 16,095	$ 16,578
426a	Insurance - Vehicle	$ 81,915	$ 84,372	$ 86,904	$ 89,511	$ 92,196	$ 94,962
426b	Insurance - Property	$ 42,000	$ 43,260	$ 44,558	$ 45,895	$ 47,271	$ 48,690
426c	Insurance - Accident & Sick	$ 25,000	$ 25,750	$ 26,523	$ 27,318	$ 28,138	$ 28,982
426d	Workers Compensation (1)	$ 45,000	$ 46,350	$ 47,741	$ 49,173	$ 50,648	$ 52,167
427a	Loan Interest-$1.5	$ 30,000	$ 22,548	$ 15,096	$ 7,644		
427b	Loan Principle-$1.5	$ 196,100	$ 196,100	$ 196,100	$ 192,692		
428a	Loan Interest-$2.0	$ 94,600	$ 89,500	$ 84,400	$ 79,300	$ 74,200	$ 69,100
428b	Loan Principle-$2.0	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000
429	Court Costs	$ 1,950	$ 2,009	$ 2,069	$ 2,131	$ 2,195	$ 2,261
430	Contracted Services	$ 14,500	$ 14,935	$ 15,383	$ 15,845	$ 16,320	$ 16,809
431A	Computer Software Systems	$ 3,000	$ 3,090	$ 3,183	$ 3,278	$ 3,377	$ 3,478
432	Bank Charges	$ 3,500	$ 3,605	$ 3,713	$ 3,825	$ 3,939	$ 4,057
433	Credit Card Charges	$ 6,000	$ 6,180	$ 6,365	$ 6,556	$ 6,753	$ 6,956
435	Remittance of Fees Collected	$ 2,000	$ 2,060	$ 2,122	$ 2,185	$ 2,251	$ 2,319
441	Supplies & Materials	$ 32,200	$ 33,166	$ 34,161	$ 35,186	$ 36,241	$ 37,329
442	Engine 90 Education Materials	$ 2,500	$ 2,575	$ 2,652	$ 2,732	$ 2,814	$ 2,898
443	Automobile Supplies (Gasoline & Fuel)	$ 59,000	$ 60,770	$ 62,593	$ 64,471	$ 66,405	$ 68,397
445	Fire Association	$ 1,700	$ 1,751	$ 1,804	$ 1,858	$ 1,913	$ 1,971
446	Uniforms			$ 5,000	$ 5,150	$ 5,305	$ 5,464
523	Delta Development Group, Inc.	$ 20,000	$ 20,000				
524	BCB Station Addition	$ 72,000					
	Current Totals	**$ 1,406,115**	**$ 1,348,365**	**$ 1,358,096**	**$ 1,371,011**	**$ 1,195,316**	**$ 1,220,849**
	Strategic Plan Requirements						
	Fire Board Administrator		$ 52,500	$ 54,075	$ 55,697	$ 57,368	$ 59,089
	Training, Recruitment/Retention Officer		$ -	$ -	$ 32,500	$ 33,475	$ 34,479
	Employee Related Taxes and Benefits		$ 21,000	$ 21,630	$ 35,279	$ 36,337	$ 37,427
	IMS (FIREHOUSE NFIRS-compliant software) (2)		$ 51,240				
	Turn-out Gear Grant Match	$ 100,000					
	Apparatus, Hose and Equipment		$ 720,000	$ 720,000	$ 720,000	$ 720,000	$ 720,000
	SCBA		$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ 25,000
	Loan Amortization For Buildings & Improvements (3)					$ 410,000	$ 410,000
	Totals Expenditures	**$ 1,506,115**	**$ 2,218,105**	**$ 2,178,801**	**$ 2,239,487**	**$ 2,477,496**	**$ 2,506,845**
	Projected Fee Collections	$ 1,350,000	$ 1,400,000	$ 1,442,000	$ 1,485,260	$ 1,529,818	$ 1,575,712
	Projected Fund Balance	$ 425,000	$ 268,885	$ -	$ -	$ -	$ -
	Total Resources	**$ 1,775,000**	**$ 1,668,885**	**$ 1,442,000**	**$ 1,485,260**	**$ 1,529,818**	**$ 1,575,712**
	Excess (Deficit) Resources (4)	**$ 268,885**	**$ (549,220)**	**$ (736,801)**	**$ (754,227)**	**$ (947,678)**	**$ (931,133)**

Notes:

(1) Workers Compensation is projected at current state subsidized levels. If this subsidy does not continue, premiums will increase by 450% in the base year.

(2) Level Principal Amortization on $4 Million in Building replacement/ Improvements over 20 Years at 5.25%

(3) Based on cost quotations obtained from Firehouse Software, August 2011.

(4) Does not reflect any amendments (i.e., fee increases) to the Fire Service Fee Ordinance.

ATTACHMENT E – ACRONYMS

The following list provides an inventory of acronyms used frequently throughout this plan. This list should be maintained in accordance with the Fire Service Board's annual review and update of the plan.

AFG – Assistance to Firefighters Grants

AHJ – Authority Having Jurisdiction

ALS – Advanced Life Support

ATF – Alcohol, Tobacco and Firearms

BCEAA – Berkeley County Emergency Ambulance Authority

BLS – Basic Life Support

CAD – Computer Aided Dispatch

CFR – Code of Federal Regulations

EMS – Emergency Medical Services

EPA – Environmental Protection Agency

ESRI – ESRI, Inc. (Formerly known Earth Systems Research Institute)

ESZ – Emergency Service Zone

FSRS – ISO Fire Suppression Rating Schedule (FSRS)

FEMA – Federal Emergency Management Agency

FP&S – Fire Prevention and Safety Grant

FY – Fiscal Year

GIS – Geographic Information Systems

IC – Incident Command

ICS – Incident Command System

IMS – Information Management System

IRS – Internal Revenue Service

ISO – Insurance Services Office, Inc.

MARC – Maryland Area Regional Commuter

MHz - Megahertz

NFIRS – National Fire Incident Reporting System

NFPA – National Fire Protection Association

NIMS –National Incident Management System

OSHA – Occupational Safety and Health Administration

PMCS – Preventive Maintenance Checks and Services

PPC – ISO Public Protection Classification [program]

PSAP – Public Safety Answering Point

RFA – Rural Fire Assistance Grant Program

SAFER – FEMA Staffing for Adequate Fire and Emergency Response Grants

SCBA – Self-Contained Breathing Apparatus

SOP – Standard Operating Procedure

SWOT – Strengths, Weaknesses, Opportunities and Threats [Analysis]

UHF – Ultra High Frequency

VFA – Volunteer Fire Assistance Program