Jill Murray

Sent: Tuesday, August 8, 2017 11:21 AM
To: jimmyharris@cityofbrevard.com; Mac Morrow; Maurice.Jones@cityofbrevard.com; Craig Budzinski; Larry Chapman (Larry.Chapman@transylvaniacounty.org); Mike Hawkins (mike.hawkins@transylvaniacounty.org); jaime.laughter@transylvaniacounty.org; David McNeill (david.mcneill@transylvaniacounty.org)
Subject: Brevard Fire Department FEMA Grant

GREAT NEWS!

Congressman Mark Meadows presented a check to the Brevard Fire Department for air packs this morning in the amount of $265,715.00.

As you know, the approved budget for the Brevard Fire/Sylvan District No. 2 showed grant or loan proceeds as a source of revenue for air packs. The grant received will cover most of the costs with an amount for local match from City and County. We will be requesting bids for the equipment purchase

Jim Fatland, CPFO
City Manager
City of Brevard
95 West Main Street
Brevard, NC 28712
828.885.5602
828.885.2853 (Fax)
www.cityofbrevard.com

Jill Murray

From: Jim Fatland
Sent: Friday, July 28, 2017 4:42 PM
To: Jimmy Harris; Mac Morrow; Maurice.Jones@cityofbrevard.com; Charlie Landreth; ann.hollingsworth@cityofbrevard.com; Gary Daniel (gary.daniel@cityofbrevard.com)
Cc: Craig Budzinski
Subject: FW: Sylvan Valley 2 Survey Results
Attachments: Brevard & Sylvan Valley 2 News Release.pdf; ATT00001.htm; Sylvan Valley 2 Survey Letter.pdf; ATT00002.htm; Sylvan Valley 2 Community Report .pdf; ATT00003.htm; Sylvan Valley 2 FD Flow Data Summary.pdf; ATT00004.htm

Sharing some great news. Brevard Fire Department receives improved rating for fire suppression. Please see attached documents. Effective date: November 01, 2017

Jim Fatland, CPFO
City Manager
City of Brevard
95 West Main Street
Brevard, NC 28712
828.885.5602
828.885.2853 (Fax)
www.cityofbrevard.com

The City of Brevard North Carolina

From: Craig Budzinski
Sent: Thursday, July 27, 2017 10:03 AM
To: Jim Fatland
Subject: FW: Sylvan Valley 2 Survey Results

Craig F. Budzinski
Fire Chief
City of Brevard F.D.
Cell 828-329-1349

From: Summey, Davie <Davie.Summey@ncdoi.gov>
Sent: Monday, July 24, 2017 4:56 PM

To: Craig Budzinski
Subject: Fwd: Sylvan Valley 2 Survey Results

Davie Summey
.....Sent from my iPhone

Begin forwarded message:

> **From:** "Lofton, Shirley" <Shirley.Lofton@ncdoi.gov>
> **To:** "gerald.grose@transylvaniacounty.org" <gerald.grose@transylvaniacounty.org>, "craigbudzinski@cityofbrevard.com" <craigbudzinski@cityofbrevard.com>
> **Cc:** "Summey, Davie" <Davie.Summey@ncdoi.gov>, "Ward, Vernon" <Vernon.Ward@ncdoi.gov>, "Young, Terry" <Terry.Young@ncdoi.gov>
> **Subject: Sylvan Valley 2 Survey Results**

NORTH CAROLINA
DEPARTMENT OF INSURANCE
OSFM
OFFICE OF STATE FIRE MARSHAL

Training & Inspections

Mike Causey | Commissioner of Insurance
Brian Taylor | Assistant State Fire Marshal

July 24, 2017

Craig F. Budzinski
Fire Chief
95 W. Main St.
Brevard, NC 28712

Re: Brevard Fire Dept.

Dear Chief Budzinski:

Congratulations on your recent improvement to your fire suppression rating!

I commend you and your department for your dedication and commitment to making your community a safer place to live.

I know you are proud of your department's achievement and would like to share this news with the members of your community. I also know that the majority of citizens may not be aware that the rating of their responding fire department directly impacts their property insurance calculations. So I'd like to provide you the enclosed news release to offer to your local media. Feel free to add to it or use it as an example in creating your own. You deserve to brag a little about the expertise of your personnel, which saves homeowners money and, most importantly, makes their lives safer.

It was the pleasure of my staff to work with you and members of your staff during the recent survey of your department. Chief Budzinski, I hope that you will take a few minutes to review our rating process and offer any suggestions that you feel may help us to improve our inspections program. Working together, we can continue to make North Carolina a safer place to live and work.

With warmest personal regard, I remain,

Very truly yours,

Mike Causey
Insurance Commissioner, State Fire Marshal

MC/sl

Enclosure

NORTH CAROLINA
DEPARTMENT OF INSURANCE
OSFM
OFFICE OF STATE FIRE MARSHAL

Training & Inspections

Mike Causey | Commissioner of Insurance
Brian Taylor | Assistant State Fire Marshal

For Immediate Release

July 24, 2017

Contact: Colin Day
(919)807-6014

Fire District Receives New Rating After Inspection

State Officials Award New District Rating

RALEIGH - North Carolina Insurance Commissioner and State Fire Marshal Mike Causey announced today that the following Fire Districts completed their routine inspection and received the listed rating, on listed effective dates. The inspection, conducted by officials with the Department of Insurance Office of State Fire Marshal (OSFM), is required on a regular basis as part of the North Carolina Response Rating System (NCRRS). Among other things, the routine inspections look for proper staffing levels, sufficient equipment, proper maintenance of equipment, communications capabilities and availability of a water source.

District	Type	Rating	Effective
Brevard	Municipal	3	11/01/2017
Sylvan Valley #2	Rural	5/9E	11/01/2017

The NCRRS rating system ranges from one (highest) to 10 (not recognized as a certified fire department by the state), with most rural departments falling into the 9S category. While lower ratings do not necessarily indicate poor service, a higher rating does suggest that a department is overall better equipped to respond to fires in its district. Higher ratings can also significantly lower homeowners insurance rates in that fire district.

"I'd like to congratulate Chief Budzinski for the department's performance and for the hard work of all the department members," said Commissioner Causey. "The citizens in the Town of these districts should rest easy knowing they have a fine group of firefighters protecting them and their property in case of an emergency."

State law requires OSFM officials to inspect departments serving districts of 100,000 people or less, which makes up all but six of the state's fire districts.

-NCDOI-

North Carolina Office of State Fire Marshal

HYDRANT FLOW DATA SUMMARY

City Sylvan Valley 2 Fd

County North Carolina(Transylvania) State NORTH CAROLINA (32)

Witnessed by: North Carolina Office of State Fire Marshal

Date: May 31, 2017

TEST NO.	TYPE DIST.*	TEST LOCATION	SERVICE	FLOW - GPM $Q=(29.83(C(d^2)p^{0.5}))$ INDIVIDUAL HYDRANTS			TOTAL	PRESSURE PSI STATIC	RESID.	FLOW -AT 20 PSI NEEDED **	AVAIL.	REMARKS***	MODEL TYPE
13		680 Glen Cannon Dr	Fire Department Supply	0	0	0	500	0	0	2500	500		CTR
14		14 Gallimore Rd	Fire Department Supply	0	0	0	550	0	0	2250	550		CTR
15		2753 Island Ford Rd	Fire Department Supply	0	0	0	400	0	0	1750	400		CTR
16		Island Ford Rd	Brevard Water System, Main Pressure Zone	0	0	0	1700	0	0	500	1700		
17		111 Island Ford Rd	Brevard Water System, Main Pressure Zone	0	0	0	1700	0	0	6000	1700	(A)-(3000.0 gpm)	

THE ABOVE LISTED NEEDED FIRE FLOWS ARE FOR PROPERTY INSURANCE PREMIUM CALCULATIONS ONLY AND ARE *NOT* INTENDED TO PREDICT THE MAXIMUM AMOUNT OF WATER REQUIRED FOR A LARGE SCALE FIRE CONDITION.

THE AVAILABLE FLOWS ONLY INDICATE THE CONDITIONS THAT EXISTED AT THE TIME AND AT THE LOCATION WHERE TESTS WERE WITNESSED.

*Comm = Commercial; Res = Residential.

**Needed is the rate of flow for a specific duration for a full credit condition. Needed Fire Flows greater than 3,500 gpm are not considered in determining the classification of the city when using the Fire Suppression Rating Schedule.

*** (A)-Limited by available hydrants to gpm shown. Available facilities limit flow to gpm shown plus consumption for the needed duration of (B)-2 hours, (C)-3 hours or (D)-4 hours.

Public Protection Classification

Summary Report

Sylvan Valley 2 FD

NORTH CAROLINA

Prepared by

North Carolina Department of Insurance
Office of State Fire Marshal
1202 Mail Service Center
Raleigh, NC 27699-1202
(919) 647-0000

July 24, 2017

Background Information

Introduction

Office of State Fire Marshal (**OSFM**) collects and evaluates information from communities in North Carolina on their structure fire suppression capabilities. The data is analyzed using our Fire Suppression Rating Schedule (**FSRS**) and then a Public Protection Classification (**PPC™**) grade is assigned to the community. The surveys are conducted whenever it appears that there is a possibility of a PPC change. As such, the PPC program provides important, up-to-date information about fire protection services throughout the country.

The FSRS recognizes fire protection features only as they relate to suppression of first alarm structure fires. In many communities, fire suppression may be only a small part of the fire department's overall responsibility. OSFM recognizes the dynamic and comprehensive duties of a community's fire service, and understands the complex decisions a community must make in planning and delivering emergency services. However, in developing a community's PPC grade, only features related to reducing property losses from structural fires are evaluated. Multiple alarms, simultaneous incidents and life safety are not considered in this evaluation. The PPC program evaluates the fire protection for small to average size buildings. Specific properties with a Needed Fire Flow more than 3,500 gpm are evaluated separately and assigned an individual PPC grade.

A community's investment in fire mitigation is a proven and reliable predictor of future fire losses. Statistical data on insurance losses bears out the relationship between excellent fire protection – as measured by the PPC program – and low fire losses. So, insurance companies use PPC information for marketing, underwriting, and to help establish fair premiums for homeowners and commercial fire insurance. In general, the price of fire insurance in a community with a good PPC grade is substantially lower than in a community with a poor PPC grade, assuming all other factors are equal.

OSFM's expert staff collects information about the fire suppression efforts in communities throughout North Carolina. In each of those communities, OSFM analyzes the relevant data and assigns a PPC grade – a number from 1 to 10. Class 1 represents an exemplary fire suppression program, and Class 10 indicates that the area's fire suppression program does not meet OFSM's minimum criteria.

OSFM's PPC program evaluates communities per a uniform set of criteria, incorporating nationally recognized standards developed by the National Fire Protection Association and the American Water Works Association. A community's PPC grade depends on:

- **Needed Fire Flows**, which are representative building locations used to determine the theoretical amount of water necessary for fire suppression purposes.
- **Emergency Communications**, including emergency reporting, Telecommunicators, and dispatching systems.
- **Fire Department**, including equipment, staffing, training, geographic distribution of fire companies, operational considerations, and community risk reduction.
- **Water Supply**, including inspection and flow testing of hydrants, alternative water supply operations, and a careful evaluation of the amount of available water compared with the amount needed to suppress fires up to 3,500 gpm.
- **Community Risk Reduction**, community efforts to reduce the risk of fire, including fire prevention codes and enforcement, public fire safety education, and fire investigation programs.

Data Collection and Analysis

OSFM has evaluated and classified over 1,200 fire district across North Carolina using the FSRS. A combination of meetings between trained OSFM field representatives and the dispatch center coordinator, community fire official, and water superintendent is used in conjunction with a comprehensive questionnaire to collect the data necessary to determine the PPC grade. For a community to obtain a grade better than a Class 9, three elements of fire suppression features are reviewed. These three elements are Emergency Communications, Fire Department, and Water Supply.

A review of the **Emergency Communications** accounts for 10% of the total classification. This section is weighted at **10 points,** as follows:

- Emergency Reporting 3 points
- Telecommunicators 4 points
- Dispatch Circuits 3 points

A review of the **Fire Department** accounts for 50% of the total classification. OSFM focuses on a fire department's first alarm response and initial attack to minimize potential loss. The fire department section is weighted at **50 points,** as follows:

- Engine Companies 6 points
- Reserve Pumpers 0.5 points
- Pump Capacity 3 points
- Ladder/Service Companies 4 points
- Reserve Ladder/Service Trucks 0.5 points
- Deployment Analysis 10 points
- Company Personnel 15 points
- Training 9 points
- Operational considerations 2 points
- Community Risk Reduction 5.5 points (in addition to the 50 points above)

A review of the **Water Supply** system accounts for 40% of the total classification. OSFM reviews the water supply a community uses to determine the adequacy for fire suppression purposes. The water supply system is weighted at **40 points,** as follows:

- Credit for Supply System 30 points
- Hydrant Size, Type & Installation 3 points
- Inspection & Flow Testing of Hydrants 7 points

There is one additional factor considered in calculating the final score – **Divergence.**

Even the best fire department will be less than fully effective if it has an inadequate water supply. Similarly, even a superior water supply will be less than fully effective if the fire department lacks the equipment or personnel to use the water. The FSRS score is subject to modification by a divergence factor, which recognizes disparity between the effectiveness of the fire department and the water supply. The Divergence factor mathematically reduces the score based upon the relative difference between the fire department and water supply scores. The factor is introduced in the final equation.

PPC Grade

The PPC grade assigned to the community will depend on the community's score on a 100-point scale:

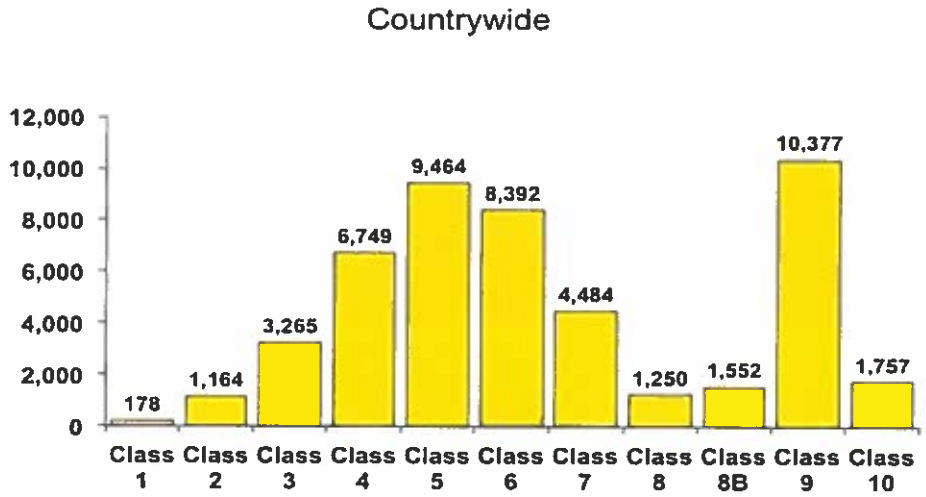
PPC	Points
1	90.00 or more
2	80.00 to 89.99
3	70.00 to 79.99
4	60.00 to 69.99
5	50.00 to 59.99
6	40.00 to 49.99
7	30.00 to 39.99
8	20.00 to 29.99
9	10.00 to 19.99
10	0.00 to 9.99

The classification numbers are interpreted as follows:

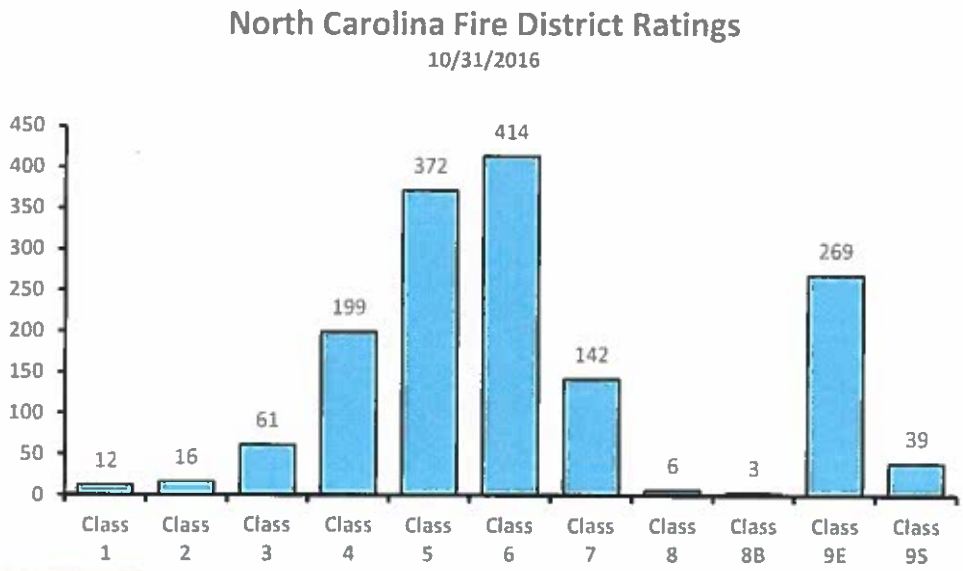
- Class 1 through (and including) Class 8 represents a fire suppression system that includes an FSRS creditable dispatch center, fire department, and water supply.
- Class 8B is a special classification that recognizes a superior level of fire protection in otherwise Class 9 areas. It is designed to represent a fire protection delivery system that is superior except for a lack of a water supply system capable of the minimum FSRS fire flow criteria of 250 gpm for 2 hours.
- Class 9 is a fire suppression system that includes a creditable dispatch center, fire department but no FSRS creditable water supply.
- Class 10 does not meet minimum OSFM criteria for recognition, including areas that are beyond five road miles of a recognized fire station.

Distribution of PPC Grades

The 2015 published countrywide distribution of communities by the PPC grade is as follows:



The rating of the 1532 Fire Districts in North Carolina is as follow:



Assistance

OSFM offers help to communities, fire departments, and other public officials as they plan for, budget, and justify improvements. OSFM is also available to assist in the understanding of the details of this evaluation.

PPC Review

OSFM concluded its review of the fire suppression features being provided for Sylvan Valley 2 FD. The resulting community classification is **Class 05/09**.

If the classification is a single class, the classification applies to properties with a Needed Fire Flow of 3,500 gpm or less in the community. If the classification is a split class (e.g., 6/9S):

- The first class (e.g., "6" in a 6/9S) applies to properties within 5 road miles of a recognized fire station and within 1,000 feet of a fire hydrant or alternate water supply.
- The second class (9S) applies to properties beyond 1,000 feet of a fire hydrant but within 5 road miles of a recognized fire station.
- Alternative Water Supply: The first class (e.g., "6" in a 6/10) applies to properties within 5 road miles of a recognized fire station with no hydrant distance requirement. There is an exception if the district has a 6-mile district then the properties between 5 and 6 miles will receive the rating of 9E
- Class 10 applies to properties over 5 or 6 road miles of a recognized fire station depending on if the district has an approved 6-mile district.
- Specific properties with a Needed Fire Flow more than 3,500 gpm are evaluated separately and assigned an individual classification.

FSRS Feature	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	3.00	3
422. Credit for Telecommunicators	3.74	4
432. Credit for Dispatch Circuits	2.40	3
440. Credit for Emergency Communications	9.14	10
Fire Department		
513. Credit for Engine Companies	5.55	6
523. Credit for Reserve Pumpers	0.50	0.50
532. Credit for Pump Capacity	3.00	3
549. Credit for Ladder Service	3.94	4
553. Credit for Reserve Ladder and Service Trucks	0.00	0.50
561. Credit for Deployment Analysis	1.94	10
571. Credit for Company Personnel	4.20	15
581. Credit for Training	6.06	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	27.19	50
Water Supply		
616. Credit for Supply System	8.36	30
621. Credit for Hydrants	2.26	3
631. Credit for Inspection and Flow Testing	7.00	7
640. Credit for Water Supply	17.62	40
Divergence	-2.07	--
1050. Community Risk Reduction	4.24	5.50
Total Credit	56.12	105.50

Emergency Communications

Ten percent of a community's overall score is based on how well the communications center receives and dispatches fire alarms. Our field representative evaluated:

- Communications facilities provided for the general public to report structure fires
- Enhanced 9-1-1 Telephone Service including wireless
- Computer-aided dispatch (CAD) facilities
- Alarm receipt and processing at the communication center
- Training and certification of Telecommunicators
- Facilities used to dispatch fire department companies to reported structure fires

	Earned Credit	Credit Available
414. Credit Emergency Reporting	**3.00**	3
422. Credit for Telecommunicators	**3.74**	4
432. Credit for Dispatch Circuits	**2.40**	3
Item 440. Credit for Emergency Communications:	**9.14**	**10**

Item 414 - Credit for Emergency Reporting (3 points)

The first item reviewed is Item 414 "Credit for Emergency Reporting (CER)". This item reviews the emergency communication center facilities provided for the public to report fires including 911 systems (Basic or Enhanced), Wireless Phase I and Phase II, Voice over Internet Protocol, Computer Aided Dispatch and Geographic Information Systems for automatic vehicle location. OSFM uses National Fire Protection Association (NFPA) 1221, *Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems* as the reference for this section.

Item 410. Emergency Reporting (CER)	Earned Credit	Credit Available
A./B. Basic 9-1-1, Enhanced 9-1-1 or No 9-1-1 For maximum credit, there should be an Enhanced 9-1-1 system, Basic 9-1-1 and No 9-1-1 will receive partial credit.	20.00	20
1. E9-1-1 Wireless Wireless Phase I using Static ALI (automatic location identification) Functionality (10 points); Wireless Phase II using Dynamic ALI Functionality (15 points); Both available will be 25 points	25.00	25
2. E9-1-1 Voice over Internet Protocol (VoIP) Static VoIP using Static ALI Functionality (10 points); Nomadic VoIP using Dynamic ALI Functionality (15 points); Both available will be 25 points	25.00	25
3. Computer Aided Dispatch Basic CAD (5 points); CAD with Management Information System (5 points); CAD with Interoperability (5 points)	15.00	15
4. Geographic Information System (GIS/AVL) The PSAP uses a fully integrated CAD/GIS management system with automatic vehicle location (AVL) integrated with a CAD system providing dispatch assignments. The individual fire departments being dispatched do not need GIS/AVL capability to obtain this credit.	15.00	15
Review of Emergency Reporting total:	100.00	100

Item 422- Credit for Telecommunicators (4 points)

The second item reviewed is Item 422 "Credit for Telecommunicators (TC)". This item reviews the number of Telecommunicators on duty at the center to handle fire calls and other emergencies. All emergency calls including those calls that do not require fire department action are reviewed to determine the proper staffing to answer emergency calls and dispatch the appropriate emergency response. NFPA 1221, *Standard for the Installation, Maintenance and Use of Emergency Services Communications Systems,* recommends that ninety-five percent of emergency calls shall be answered within 15 seconds and ninety-nine percent of emergency calls shall be answered within 40 seconds. In addition, NFPA recommends that ninety percent of emergency alarm processing shall be completed within 60 seconds and ninety-nine percent of alarm processing shall be completed within 90 seconds of answering the call.

To receive full credit for operators on duty, OSFM must review documentation to show that the communication center meets NFPA 1221 call answering and dispatch time performance measurement standards. This documentation may be in the form of performance statistics or other performance measurements compiled by the 9-1-1 software or other software programs that are currently in use such as Computer Aided Dispatch (CAD) or Management Information System (MIS).

Item 420. Telecommunicators (CTC)	Earned Credit	Credit Available
A1. Alarm Receipt (AR) Receipt of alarms shall meet the requirements in accordance with the criteria of NFPA 1221	**20.00**	**20**
A2. Alarm Processing (AP) Processing of alarms shall meet the requirements in accordance with the criteria of NFPA 1221	**13.39**	**20**
B. Emergency Dispatch Protocols (EDP) Telecommunicators have emergency dispatch protocols (EDP) containing questions and a decision-support process to facilitate correct call categorization and prioritization.	**20.00**	**20**
C. Telecommunicator Training and Certification (TTC) Telecommunicators meet the qualification requirements referenced in NFPA 1061, *Standard for Professional Qualifications for Public Safety Telecommunicator,* and/or the Association of Public-Safety Communications Officials - International (APCO) *Project 33.* Telecommunicators are certified in the knowledge, skills, and abilities corresponding to their job functions.	**20.00**	**20**
D. Telecommunicator Continuing Education and Quality Assurance (TQA) Telecommunicators participate in continuing education and/or in-service training and quality-assurance programs as appropriate for their positions	**20.00**	**20**
Review of Telecommunicators total:	**93.39**	**100**

Item 432 - Credit for Dispatch Circuits (3 points)

The third item reviewed is Item 432 "Credit for Dispatch Circuits (CDC)". This item reviews the dispatch circuit facilities used to transmit alarms to fire department members. A "Dispatch Circuit" is defined in NFPA 1221 as "A circuit over which an alarm is transmitted from the communications center to an emergency response facility (ERF) or emergency response units (ERUs) to notify ERUs to respond to an emergency". All fire departments (except single fire station departments with full-time firefighter personnel receiving alarms directly at the fire station) need adequate means of notifying all firefighter personnel of the location of reported structure fires. The dispatch circuit facilities should be in accordance with the general criteria of NFPA 1221. "Alarms" are defined in this Standard as "A signal or message from a person or device indicating the existence of an emergency or other situation that requires action by an emergency response agency".

There are two different levels of dispatch circuit facilities provided for in the Standard – a primary dispatch circuit and a secondary dispatch circuit. In jurisdictions that receive 730 alarms or more per year (average of two alarms per 24-hour period), two separate and dedicated dispatch circuits, a primary and a secondary, are needed. In jurisdictions receiving fewer than 730 alarms per year, a second dedicated dispatch circuit is not needed. Dispatch circuit facilities installed but not used or tested (in accordance with the NFPA Standard) receive no credit.

The score for Credit for Dispatch Circuits (CDC) is influenced by monitoring for integrity of the primary dispatch circuit. There are up to 0.90 points available for this Item. Monitoring for integrity involves installing automatic systems that will detect faults and failures and send visual and audible indications to appropriate communications center (or dispatch center) personnel. OSFM uses NFPA 1221 to guide the evaluation of this item. OSFM's evaluation also includes a review of the communication system's emergency power supplies.

Item 432 "Credit for Dispatch Circuits (CDC)" = 2.40 points

Fire Department

Fifty percent of a community's overall score is based upon the fire department's structure fire suppression system. OSFM's field representative evaluated:

- Engine and ladder/service vehicles including reserve apparatus
- Equipment carried
- Response to reported structure fires
- Deployment analysis of companies
- Available and/or responding firefighters
- Training

	Earned Credit	Credit Available
513. Credit for Engine Companies	**5.55**	6
523. Credit for Reserve Pumpers	**0.50**	0.5
532. Credit for Pumper Capacity	**3.00**	3
549. Credit for Ladder Service	**3.94**	4
553. Credit for Reserve Ladder and Service Trucks	**0.00**	0.5
561. Credit for Deployment Analysis	**1.94**	10
571. Credit for Company Personnel	**4.20**	15
581. Credit for Training	**6.06**	9
730. Credit for Operational Considerations	**2.00**	2
Item 590. Credit for Fire Department:	**27.19**	**50**

Basic Fire Flow

The Basic Fire Flow for the community is determined by the review of the Needed Fire Flows for selected buildings in the community. The fifth largest Needed Fire Flow is determined to be the Basic Fire Flow. The Basic Fire Flow has been determined to be 3000 gpm.

Item 513 - Credit for Engine Companies (6 points)

The first item reviewed is Item 513 "Credit for Engine Companies (CEC)". This item reviews the number of engine companies, their pump capacity, hose testing, pump testing and the equipment carried on the in-service pumpers. To be recognized, pumper apparatus must meet the general criteria of NFPA 1901, *Standard for Automotive Fire Apparatus* which include a minimum 250 gpm pump, an emergency warning system, a 300-gallon water tank, and hose. At least 1 apparatus must have a permanently mounted pump rated at 750 gpm or more at 150 psi.

The review of the number of needed pumpers considers the response distance to built-upon areas; the Basic Fire Flow; and the method of operation. Multiple alarms, simultaneous incidents, and life safety are not considered.

The greatest value of A, B, or C below is needed in the fire district to suppress fires in structures with a Needed Fire Flow of 3,500 gpm or less: **3 engine companies**

a) **1 engine companies** to provide fire suppression services to areas to meet NFPA 1710 criteria or within 1½ miles.

b) **3 engine companies** to support a Basic Fire Flow of 3000 gpm.

c) **3 engine companies** based upon the fire department's method of operation to provide a minimum two engine response to all first alarm structure fires.

The FSRS recognizes that there are **3 engine companies** in service.

The FSRS also reviews Automatic Aid. Automatic Aid is considered in the review as assistance dispatched automatically by contractual agreement between two communities or fire districts. That differs from mutual aid or assistance arranged case by case. OSFM will recognize an Automatic Aid plan under the following conditions:

- It must be prearranged for first alarm response according to a definite plan. It is preferable to have a written agreement, but OSFM may recognize demonstrated performance.
- The aid must be dispatched to all reported structure fires on the initial alarm.
- The aid must be provided 24 hours a day, 365 days a year.

FSRS Item 512.D "Automatic Aid Engine Companies" responding on first alarm and meeting the needs of the city for basic fire flow and/or distribution of companies are factored based upon the value of the Automatic Aid plan (up to 1.00 can be used as the factor). The Automatic Aid factor is determined by a review of the Automatic Aid provider's communication facilities, how they receive alarms from the graded area, inter-department training between fire departments, and the fire ground communications capability between departments.

For each engine company, the credited Pump Capacity (PC), the Hose Carried (HC), the Equipment Carried (EC) all contribute to the calculation for the percent of credit the FSRS provides to that engine company.

Item 513 "Credit for Engine Companies (CEC)" = 5.55 points

Item 523 - Credit for Reserve Pumpers (0.50 points)

The item is Item 523 "Credit for Reserve Pumpers (CRP)". This item reviews the number and adequacy of the pumpers and their equipment. The number of needed reserve pumpers is 1 for each 8 needed engine companies determined in Item 513, or any fraction thereof.

Item 523 "Credit for Reserve Pumpers (CRP)" = 0.50 points

Item 532 – Credit for Pumper Capacity (3 points)

The next item reviewed is Item 532 "Credit for Pumper Capacity (CPC)". The total pump capacity available should be sufficient for the Basic Fire Flow of 3000 gpm. The maximum needed pump capacity credited is the Basic Fire Flow of the community.

Item 532 "Credit for Pumper Capacity (CPC)" = 3.00 points

Item 549 – Credit for Ladder Service (4 points)

The next item reviewed is Item 549 "Credit for Ladder Service (CLS)". This item reviews the number of response areas within the city with 5 buildings that are 3 or more stories or 35 feet or more in height, or with 5 buildings that have a Needed Fire Flow greater than 3,500 gpm, or any combination of these criteria. The height of all buildings in the city, including those protected by automatic sprinklers, is considered when determining the number of needed ladder companies. Response areas not needing a ladder company should have a service company. Ladders, tools and equipment normally carried on ladder trucks are needed not only for ladder operations but also for forcible entry, ventilation, salvage, overhaul, lighting and utility control.

The number of ladder or service companies, the height of the aerial ladder, aerial ladder testing and the equipment carried on the in-service ladder trucks and service trucks is compared with the number of needed ladder trucks and service trucks and an FSRS equipment list. Ladder trucks must meet the general criteria of NFPA 1901, *Standard for Automotive Fire Apparatus* to be recognized.

The number of needed ladder-service trucks is dependent upon the number of buildings 3 stories or 35 feet or more in height, buildings with a Needed Fire Flow greater than 3,500 gpm, and the method of operation.

The FSRS recognizes that there are **0 ladder companies** in service. These companies are needed to provide fire suppression services to areas to meet NFPA 1710 criteria or within 2½ miles and the number of buildings with a Needed Fire Flow over 3,500 gpm or 3 stories or more in height, or the method of operation.

The FSRS recognizes that there are **1 service companies** in service.

Item 549 "Credit for Ladder Service (CLS)" = 3.94 points

Item 553 – Credit for Reserve Ladder and Service Trucks (0.50 points)

The next item reviewed is Item 553 "Credit for Reserve Ladder and Service Trucks (CRLS)". This item considers the adequacy of ladder and service apparatus when one (or more in larger communities) of these apparatus are out of service. The number of needed reserve ladder and service trucks is 1 for each 8 needed ladder and service companies that were determined to be needed in Item 540, or any fraction thereof.

Item 553 "Credit for Reserve Ladder and Service Trucks (CRLS)" = 0.00 points

Item 561 – Deployment Analysis (10 points)

Next, Item 561 "Deployment Analysis (DA)" is reviewed. This Item examines the number and adequacy of existing engine and ladder-service companies to cover built-upon areas of the city.

To determine the Credit for Distribution, first the Existing Engine Company (EC) points and the Existing Engine Companies (EE) determined in Item 513 are considered along with Ladder Company Equipment (LCE) points, Service Company Equipment (SCE) points, Engine-Ladder Company Equipment (ELCE) points, and Engine-Service Company Equipment (ESCE) points determined in Item 549.

Secondly, as an alternative to determining the number of needed engine and ladder/service companies through the road-mile analysis, a fire protection area may use the results of a systematic performance evaluation. This type of evaluation analyzes computer-aided dispatch (CAD) history to demonstrate that, with its current deployment of companies, the fire department meets the time constraints for initial arriving engine and initial full alarm assignment in accordance with the general criteria of in NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments.*

A determination is made of the percentage of built upon area within 1½ miles of a first-due engine company and within 2½ miles of a first-due ladder-service company.

Item 561 "Credit Deployment Analysis (DA)" = 1.94 points

Item 571 – Credit for Company Personnel (15 points)

Item 571 "Credit for Company Personnel (CCP)" reviews the average number of existing firefighters and company officers available to respond to reported first alarm structure fires in the city.

The on-duty strength is determined by the yearly average of total firefighters and company officers on-duty considering vacations, sick leave, holidays, "Kelley" days and other absences. When a fire department operates under a minimum staffing policy, this may be used in lieu of determining the yearly average of on-duty company personnel.

Firefighters on apparatus not credited under Items 513 and 549 that regularly respond to reported first alarms to aid engine, ladder, and service companies are included in this item as increasing the total company strength.

Firefighters staffing ambulances or other units serving the general public are credited if they participate in fire-fighting operations, the number depending upon the extent to which they are available and are used for response to first alarms of fire.

On-Call members are credited based on the average number staffing apparatus on first alarms. Off-shift career firefighters and company officers responding on first alarms are considered on the same basis as on-call personnel. For personnel, not normally at the fire station, the number of responding firefighters and company officers is divided by 3 to reflect the time needed to assemble at the fire scene and the reduced ability to act as a team due to the various arrival times at the fire location when compared to the personnel on-duty at the fire station during the receipt of an alarm.

The number of Public Safety Officers who are positioned in emergency vehicles within the jurisdiction boundaries may be credited based on availability to respond to first alarm structure fires. In recognition of this increased response capability the number of responding Public Safety Officers is divided by 2.

The average number of firefighters and company officers responding with those companies credited as Automatic Aid under Items 513 and 549 are considered for either on-duty or on-call company personnel as is appropriate. The actual number is calculated as the average number of company personnel responding multiplied by the value of AA Plan determined in Item 512.D.

The maximum creditable response of on-duty and on-call firefighters is 12, including company officers, for each existing engine and ladder company and 6 for each existing service company.

Chief Officers are not creditable except when more than one chief officer responds to alarms; then extra chief officers may be credited as firefighters if they perform company duties.

The FSRS recognizes **0.91 on-duty personnel** and an average of **14.90 on-call personnel** responding on first alarm structure fires.

Item 571 "Credit for Company Personnel (CCP)" = 4.20 points

Item 581 – Credit for Training (9 points)

Training	Earned Credit	Credit Available
A. Facilities, and Use For maximum credit, each firefighter should receive 18 hours per year in structure fire related subjects as outlined in NFPA 1001.	18.5	35
B. Company Training For maximum credit, each firefighter should receive 16 hours per month in structure fire related subjects as outlined in NFPA 1001.	21.20	25
C. Classes for Officers For maximum credit, each officer should be certified in accordance with the general criteria of NFPA 1021. Additionally, each officer should receive 12 hours of continuing education on or off site.	7.80	12
D. New Driver and Operator Training For maximum credit, each new driver and operator should receive 60 hours of driver/operator training per year in accordance with NFPA 1002 and NFPA 1451.	3.33	5
E. Existing Driver and Operator Training For maximum credit, each existing driver and operator should receive 12 hours of driver/operator training per year in accordance with NFPA 1002 and NFPA 1451.	5.00	5
F. Training on Hazardous Materials For maximum credit, each firefighter should receive 6 hours of training for incidents involving hazardous materials in accordance with NFPA 472.	0.76	1
G. Recruit Training For maximum credit, each firefighter should receive 240 hours of structure fire related training in accordance with NFPA 1001 within the first year of employment or tenure.	1.67	5
H. Pre-Fire Planning Inspections For maximum credit, pre-fire planning inspections of each commercial, industrial, institutional, and other similar type building (all buildings except 1-4 family dwellings) should be made annually by company members. Records of inspections should include up-to date notes and sketches.	9.00	12

Item 580 "Credit for Training (CT)" = 6.06 points

Item 730 – Operational Considerations (2 points)

Item 730 "Credit for Operational Considerations (COC)" evaluates fire department standard operating procedures and incident management systems for emergency operations involving structure fires.

Operational Considerations	Earned Credit	Credit Available
Standard Operating Procedures The department should have established SOPs for fire department general emergency operations	50	50
Incident Management Systems The department should use an established incident management system (IMS)	50	50
Operational Considerations total:	100	100

Item 730 "Credit for Operational Considerations (COC)" = 2.00 points

Water Supply

Forty percent of a community's overall score is based on the adequacy of the water supply system. The OSFM field representative evaluated:

- the capability of the water distribution system to meet the Needed Fire Flows at selected locations up to 3,500 gpm.
- size, type and installation of fire hydrants.
- inspection and flow testing of fire hydrants.

	Earned Credit	Credit Available
616. Credit for Supply System	8.36	30
621. Credit for Hydrants	2.26	3
631. Credit for Inspection and Flow Testing	7.00	7
Item 640. Credit for Water Supply:	17.62	40

Item 616 – Credit for Supply System (30 points)

The first item reviewed is Item 616 "Credit for Supply System (CSS)". This item reviews the rate of flow that can be credited at each of the Needed Fire Flow test locations considering the supply works capacity, the main capacity and the hydrant distribution. The lowest flow rate of these items is credited for each representative location. A water system capable of delivering 250 gpm or more for a period of two hours plus consumption at the maximum daily rate at the fire location is considered minimum in the OSFM review.

Where there are 2 or more systems or services distributing water at the same location, credit is given based on the joint protection provided by all systems and services available.

The supply works capacity is calculated for each representative Needed Fire Flow test location, considering a variety of water supply sources. These include public water supplies, emergency supplies (usually accessed from neighboring water systems), suction supplies (usually evidenced by dry hydrant installations near a river, lake or other body of water), and supplies developed by a fire department using large diameter hose or vehicles to shuttle water from a source of supply to a fire site. The result is expressed in gallons per minute (gpm).

The normal ability of the distribution system to deliver Needed Fire Flows at the selected building locations is reviewed. The results of a flow test at a representative test location will indicate the ability of the water mains (or fire department in the case of fire department supplies) to carry water to that location.

The hydrant distribution is reviewed within 1,000 feet of representative test locations measured as hose can be laid by apparatus.

For maximum credit, the Needed Fire Flows should be available at each location in the district. Needed Fire Flows of 2,500 gpm or less should be available for 2 hours; and Needed Fire Flows of 3,000 and 3,500 gpm should be obtainable for 3 hours.

Item 616 "Credit for Supply System (CSS)" = 8.36 points

Item 621 – Credit for Hydrants (3 points)

The second item reviewed is Item 621 "Credit for Hydrants (CH)". This item reviews the number of fire hydrants of each type compared with the total number of hydrants.

There are a total of 525 hydrants in the graded area.

620. Hydrants, - Size, Type and Installation	Number of Hydrants
A. With a 6 -inch or larger branch and a pumper outlet with or without 2½ -inch outlets	12
B. With a 6 -inch or larger branch and no pumper outlet but two or more 2½ -inch outlets, or with a small foot valve, or with a small barrel	509
C./D. With only a 2½ -inch outlet or with less than a 6 -inch branch	0
E./F. Flush Type, Cistern, or Suction Point	4

Item 621 "Credit for Hydrants (CH)" = 2.26 points

Item 630 – Credit for Inspection and Flow Testing (7 points)

The third item reviewed is Item 630 "Credit for Inspection and Flow Testing (CIT)". This item reviews the fire hydrant inspection frequency, and the completeness of the inspections. Inspection of hydrants should be in accordance with AWWA M-17, *Installation, Field Testing and Maintenance of Fire Hydrants.*

Frequency of Inspection (FI): Average interval between the 3 most recent inspections.

Frequency	Points
1 year	30
2 years	20
3 years	10
4 years	5
5 years or more	No Credit

Note: The points for inspection frequency are reduced by 10 points if the inspections are incomplete or do not include a flushing program. An additional reduction of 10 points are made if hydrants are not subjected to full system pressure during inspections. If the inspection of cisterns or suction points does not include actual drafting with a pumper, or back-flushing for dry hydrants, 20 points are deducted.

Total points for Inspections = 4.00 points

Frequency of Fire Flow Testing (FF): Average interval between the 3 most recent inspections.

Frequency	Points
5 years	40
6 years	30
7 years	20
8 years	10
9 years	5
10 years or more	No Credit

Total points for Fire Flow Testing = 3.00 points

Item 631 "Credit for Inspection and Fire Flow Testing (CIT)" = 7.00 points

Divergence = -2.07

The Divergence factor mathematically reduces the score based upon the relative difference between the fire department and water supply scores. The factor is introduced in the final equation.

Community Risk Reduction

	Earned Credit	Credit Available
1025. Credit for Fire Prevention and Code Enforcement (CPCE)	**1.97**	2.2
1033. Credit for Public Fire Safety Education (CFSE)	**1.31**	2.2
1044. Credit for Fire Investigation Programs (CIP)	**0.96**	1.1
Item 1050. Credit for Community Risk Reduction	**4.24**	**5.50**

Item 1025 – Credit for Fire Prevention Code Adoption and Enforcement (2.2 points)	Earned Credit	Credit Available
Fire Prevention Code Regulations (PCR) Evaluation of fire prevention code regulations in effect.	8.60	10
Fire Prevention Staffing (PS) Evaluation of staffing for fire prevention activities.	8.00	8
Fire Prevention Certification and Training (PCT) Evaluation of the certification and training of fire prevention code enforcement personnel.	3.75	6
Fire Prevention Programs (PCP) Evaluation of fire prevention programs.	15.45	16
Review of Fire Prevention Code and Enforcement (CPCE) subtotal:	35.80	40

Item 1033 – Credit for Public Fire Safety Education (2.2 points)	Earned Credit	Credit Available
Public Fire Safety Educators Qualifications and Training (FSQT) Evaluation of public fire safety education personnel training and qualification as specified by the authority having jurisdiction.	8.00	10
Public Fire Safety Education Programs (FSP) Evaluation of programs for public fire safety education.	15.75	30
Review of Public Safety Education Programs (CFSE) subtotal:	23.75	40

Item 1044 – Credit for Fire Investigation Programs (1.1 points)	Earned Credit	Credit Available
Fire Investigation Organization and Staffing (IOS) Evaluation of organization and staffing for fire investigations.	8.00	8
Fire Investigator Certification and Training (IQT) Evaluation of fire investigator certification and training.	3.45	6
Use of National Fire Incident Reporting System (IRS) Evaluation of the use of the National Fire Incident Reporting System (NFIRS) for the 3 years before the evaluation.	6.00	6
Review of Fire Investigation Programs (CIP) subtotal:	17.45	20

Summary of PPC Review

for

Sylvan Valley 2 FD

FSRS Item	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	3.00	3
422. Credit for Telecommunicators	3.74	4
432. Credit for Dispatch Circuits	2.40	3
440. Credit for Emergency Communications	9.14	10
Fire Department		
513. Credit for Engine Companies	5.55	6
523. Credit for Reserve Pumpers	0.50	0.5
532. Credit for Pumper Capacity	3.00	3
549. Credit for Ladder Service	3.94	4
553. Credit for Reserve Ladder and Service Trucks	0.00	0.5
561. Credit for Deployment Analysis	1.94	10
571. Credit for Company Personnel	4.20	15
581. Credit for Training	6.06	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	27.19	50
Water Supply		
616. Credit for Supply System	8.36	30
621. Credit for Hydrants	2.26	3
631. Credit for Inspection and Flow Testing	7.00	7
640. Credit for Water Supply	17.62	40
Divergence	-2.07	--
1050. Community Risk Reduction	4.24	5.50
Total Credit	56.12	105.5

Final Community Classification = 05/09

NORTH CAROLINA
DEPARTMENT OF INSURANCE
OSFM
OFFICE OF STATE FIRE MARSHAL

Training & Inspections

Mike Causey | Commissioner of Insurance
Brian Taylor | Assistant State Fire Marshal

July 24, 2017

Gerald M. Grose
Transylvania County Fire Marshal
155 Public Safety Way
Brevard, NC 28712

Re: Sylvan Valley #2 Fire District

Dear Gerald M. Grose:

We wish to thank you, Chief Budzinski, and others for the cooperation given to our representative during our recent survey. We have completed our evaluation of the fire insurance classification for Sylvan Valley #2 Fire District, and confirm that Class 5/9E continues to apply.

The purpose of our visit was to gather information needed to determine a fire insurance classification that may be used in the calculation of property insurance premiums. This survey was not conducted for property loss prevention or life safety purposes and no life safety or property loss prevention recommendations will be made. The rate will be effective on Wednesday, November 1, 2017.

Class 5 applies to all properties within five miles of fire insurance district with a fire flow of 3500 gpm or less. Class 9E applies to all other properties within the fire district outside the 5 miles, but no more than 6 miles. The private and public protection at properties with larger needed fire flows are individually evaluated, and may vary from the 5/9E classification.

We are attaching a copy of the Grading Sheet and the results of the hydrant flow tests witnessed during our visit.

If you have any questions concerning our survey and grading, please let us know.

Sincerely,

Davie W Summey

Davie Summey
Supervisor of Inspections

DS/sl

Enclosure

Cc: Craig F. Budzinski, Fire Chief