

Sylva Fire Department

Fire Department Staffing Study



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I. Executive Summary

The goal of the Fire Service is to protect life and property by delivering the highest possible level of services consistent with needs at the lowest possible cost consistent with overall safety. The goal of this report is to call attention to some of the strategies and options available to the Fire Service and community leaders who are looking to do just that. A natural evolution for a volunteer department is the growth in services and added responsibilities as the demographics of the community change. When the system develops problems, people generally know about them long before they are willing to admit that they need serious attention. For fire department managers and local government leaders, it is critical that they recognize these signs of problems ahead and prepare for change before it is forced on them by external circumstances. It is helpful when they recognize these pointers to change.

First is Community Growth. Emergency services are directly impacted by community growth – more people, more businesses, more emergencies. The larger a community, the higher level of service people expect. In many areas people moving to “suburbs” assume wrongly that emergency services are delivered in the same way they are provided in the more established cities and towns. A history of community growth and projected increases in demand can help managers forecast and plan for changes in the delivery of emergency services. In some cases, population growth projections might even help a department determine to limit its services based on available staffing.

Second is Community Aging. A fire department’s ability to recruit new members in part depends on the supply of new, younger people who can be tapped for service. A community’s age profile can be an indicator of problems ahead. The age factor in your community is revealed by data showing who are moving in and moving out. If the younger people are moving away, or if schools are showing or expecting declining enrollment, the fire department may have a difficult time maintaining appropriate levels of service in the future.

Third is Missed Calls. When an emergency call goes unanswered – a “scratch” in Western NC or in other communities, a “did not respond” – the fire department has a serious problem, not just because life and property are at stake but also because it is a failure highly visible to the public. Equally serious is a department’s over-reliance on mutual aid for coverage and the lack of adequate personnel to handle subsequent calls when primary units are on an assignment.

Fourth is Extended Response Times. When units regularly fail to get out of the fire station in a timely manner because of inadequate staffing resources, the community is endangered and fire department managers have a reliability problem. Response time is a critical factor for any fire department determined to provide appropriate service to the public. It is especially critical for medical calls when

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the first-due company fails to respond for whatever reason and an EMS unit responds but fails to meet the response-time standard, a common occurrence even when mutual aid is not involved.

Fifth is Reduced Staffing. Units responding with fewer than the required number of people need to perform that unit's functions pose a serious problem for the safety of citizens and the responders. This is another indicator of reduced service capability.

All of the above situations indicate an inconsistency in a department's ability to provide necessary service, though not all are necessarily caused by a shortage of volunteer members. Staffing deficits can be related to other factors, such as changes in local business and industry policies regarding an employee leaving the workplace, the number of volunteers who are employed outside their response areas, a lack of understanding on the part of new corporate managers of the community's needs, a tight labor market driven by rapid community growth, or even members' apathy. Where workforce restrictions are at play in the community, they typically lead to daytime response shortages and a significant challenge for the department.

While employment issues tend to be the major factor in volunteer staffing shortages, other factors also contribute. Decreased interest among members who fail to participate could be the result of unreasonable community expectations, some problem with the fire department's internal requirements, or other organization issues, such as:

- *Responsibilities outpace capabilities.* Mandated and selected responsibilities and response commitments exceed the department's capability to manage outcomes properly. Mandated responsibilities may have their basis in state statutes or local resolutions, proclamations, and ordinances. Selected responsibilities are response categories that result from self-imposed obligations to provide a service.
- *Inability to raise funds.* Growth in the department as it faces new demands outpaces the volunteers' ability to raise capital and operational funds.
- *Waning political support.* A once-supportive political climate begins to falter and less emphasis is placed on the volunteer-staffed fire company. This becomes noticeable when apparatus is not replaced, new purchases are postponed, or local government wants the volunteer company to operate with less expense. The volunteer-staffed fire company needs to be a vital, supportive and healthy part of the local governmental infrastructure.
- *Internal conflict.* A department has internal struggles over its mission in the community and that conflict involves the preservation of the system as a fraternal organization rather than a service-delivery system.

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- *Officers filling lower operational positions.* Staffing shortages that result in the Fire Chief driving the fire truck or fulfilling the responsibilities of other line firefighters is another sign of a serious staffing problem.
- *Mission creep.* When first-responder programs that once managed to provide essential services and also extra staffing for critical events and rescues become subject to all kinds of other assignments or to policies that dictate the fire units respond every time an ambulance is dispatched, chronic staffing shortages can be a problem.
- *Controversy.* When internal controversy becomes the focal point and public image of the department, its effectiveness is impaired. Controversy can be inflamed by a poorly managed emergency, an event that exceeds the capabilities of the volunteers, or public criticism that home response is no longer adequate for the number of emergency calls handled by the department. The problems are exacerbated when the volunteers are unable to reorganize and meet the increased demands, or when the news begins to publicly question the effectiveness of the service. Few volunteers join the department to fail or be exposed to a community philosophy that “they tried hard, but they are just volunteers.”
- *Too many jobs, too little time.* Another indicator: The department cannot provide fire prevention, public education or inspection responsibilities because of training and response demands occupy the time volunteers must commit.
- *Kingdoms come first.* Some jurisdictions consider their response areas their “kingdoms.” Boundary disputes can occur when department leaders fail to understand that the public does not care what color or name is on the fire truck. The “kingdom” attitude also leads to contentious working environments with neighboring agencies.
- *Lack of budget support.* Failure by elected officials to approve budgets that include capital expenditures for the department is an ominous sign.
- *Missed deadlines.* When critical administrative deadlines, such as daily response reports, training records, and legally required documentation are not completed or budget deadlines are not met, the department’s effectiveness is compromised.
- *Catastrophic losses.* Catastrophic events, such as the loss of a firefighter or a civilian fatality, focus great attention on the department, and perhaps its problems and deficits, which can discourage members.
- *Volunteers priced out of the community.* In many communities the price of homes and property taxes makes it difficult for the children of current volunteers or others who have time to volunteer to live in the community, thus reducing the pool of potential members.
- *Demographic changes.* Shifts in the community that drive decisions by current members to purchase homes outside the fire district are a detriment to member retention.

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Once a department recognizes the time for change has come and there is a need, it must examine carefully both the organization and the options available to it. It is essential that all members of the organization identify the department's mission and core values. Whether in the end the change is a revitalized volunteer organization or a move to some type of paid or part-paid organization, a careful articulation of core values is critical to the success of the organization. Those core values must be incorporated and reinforced as employee strategies in new career positions and the core values must be carried throughout the evolution process. If the members expect the organization to be a mirror of what it once was, everyone must believe in and apply its core values. If you expect to maintain big city services with small town pride, the organization must maintain the focus on their core values and reinforce those values at every opportunity.

Bucket Brigade Consulting, LLC Action Items that are most important for Transitioning to Combination Status:

- Decide if transitioning is right for the citizens served and the members of the fire department. What will the transition solve? Does transitioning to paid personnel help solve the problems? Is there good leadership in place to make the transition?
- It needs to be clear who is driving the transition, the Chief, the firefighters, the BOD, the elected officials.
- Call on other departments and chiefs that you know have transitioned.
- Engage with the membership early. Create an oversight committee. Is there volunteer input/buy in?
- At all levels, the Town Manager and HR Coordinator need to engaged.
- Establish clear expectations and hiring practices. Decide on options before engaging with your elected officials.
- Know/understand the FLSA, State and Federal Laws.
- Identify needs, what prompted the need to transition?
- Decide on needs: Do your GAP or SWOT analysis
 - Do you hire the Chiefs or firefighters – What gaps/times are you trying to fill?*
 - Do you have the Budget in place to make the transition?*
- Once paid staff have been hired, cross-train staff. Work towards tactical equality.
- Establish a uniform rank structure between volunteer and paid staff.
- Measure results and communicate out to the membership the impact of the transition.
- Stress the important role the volunteers play. Paid staff may only be seen on their shift days, where volunteers may be there more. The volunteer could actually provide a more consistent presence to the department.
- Make it a priority to maintain the retention and leadership of the volunteer officers.

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- Establish a clear chain of command, responsibilities, and expectations.
- If there were morale issues before, prepare for morale issues after unless underlying causes can be addressed.

Factors and Data for Recommendations:

- Safety of the first responders (enough personnel to safely engage offensive fire attack)
- Elected Official Support
- Citizens Support
- Management Support
- Financial Support, Revenue and Expenditure Needs
- Population Increase/Residential, Business, Commercial and Industrial potential growth (tourism)
- Expanding Roles of the Fire Department, i.e. vehicle accidents, vehicle fires, medical calls and mutual aid (multiple calls at the same time)
- Recruitment and Retention of volunteers
- Response and staffing level consistency
- Benchmark data (NFPA Standards/State Standards)
- Higher level of accountability for the fire department
- Opportunity for department wide basic NC certification training
- Higher level of productivity for fire department staff, i.e. fire reporting and pre-incident analysis

Recommendations: (Multiple Options can be found on pages 29-33)

After interviews with Town Management/Staff, Fire Department personnel, observing similar departments, studying the station and apparatus of the Fire Department as well as the call statistics, the option Bucket Brigade Consulting, LLC is recommending is Option #2. **Option #2: Staff the Fire Department with eight (8) career personnel on shift, one (1) career day-time floater/administrative firefighter and two (2) Chief Officers operating on a 24 on shift/72 off shift schedule.**

The Town Management/Staff made a major point that they did not want to have to pay out much, if any overtime, and the Department would like to have someone there in the day to handle administrative work that could also float as a firefighter. In the recommended option, the department would also have to monitor the amount of time the employee came back to twelve-hour ensuring overtime was kept in check, but running the 24 on/72 off schedule allows the shift personnel to come back much more often without going over the required FLSA hours. The employees would be working 168 hours per period. They would have forty-four (44) hours to come back for calls or training for the entire twenty-eight (28) day period. The floater firefighter/administrative person would be the one to watch for overtime issues. As a forty (40) hour week employee, if the person worked a shift in the week due to vacation or sick of a shift personnel, the floater firefighter/administrative person would not work sixteen (16) hours that

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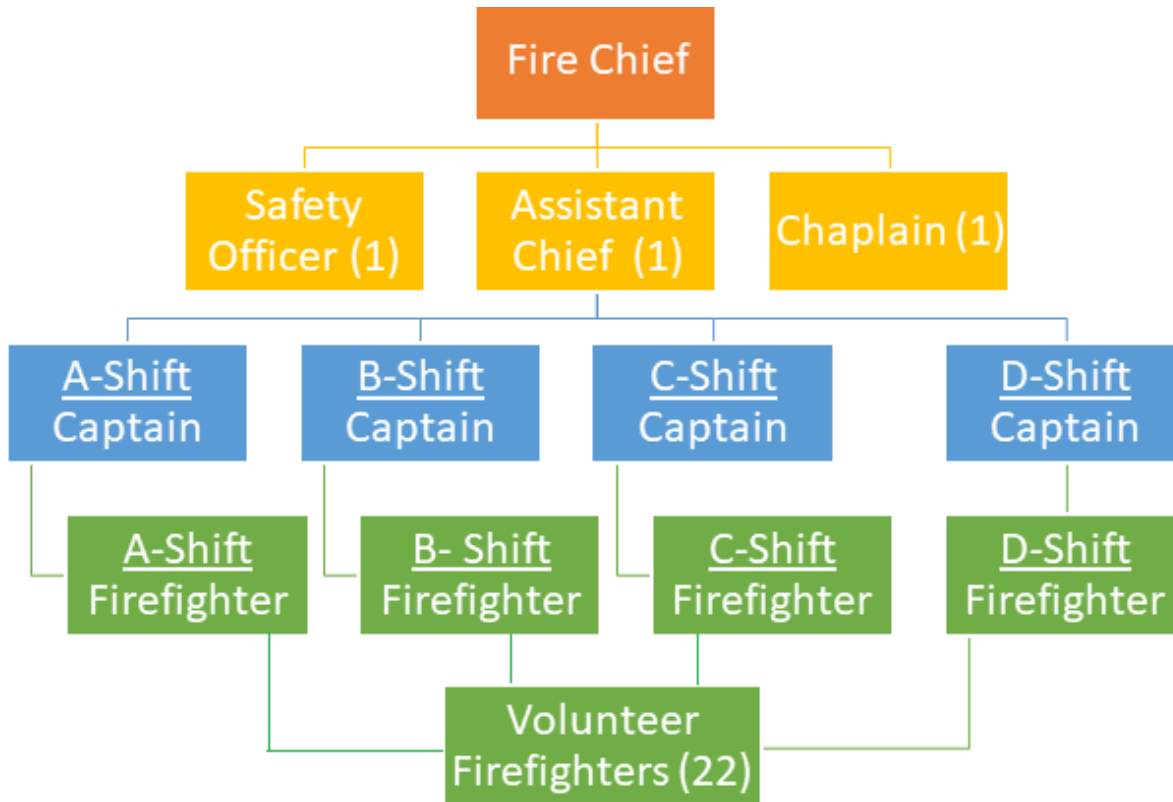
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week. All of this could be easily managed in house by the Fire Chief, Assistant Chief or floater firefighter/administrative person.

This option encompasses the major wishes of both the Town Management/Staff and Fire Department personnel. It also takes into effect sleeping arrangements at the station and office space. At the current time, the department can convert two (2) rooms to bunk rooms for sleeping. Two (2) rooms would have to be completed in the event a female firefighter was hired. The department would have to make accommodations to ensure separate sleeping spaces. In making two (2) rooms into sleeping rooms, the department loses some office space. The loss of office space would make it hard for two (2) Chief Officers and an Administrative Assistant to have the proper space to perform their job functions. With the Town more than likely planning to budget to twelve (12) personnel, there is just no good location to put an Administrative Assistant; therefore, the floater firefighter hired could take on some of those administrative roles. The Town would also be able to save some on the budgeted personnel cost hiring only eleven (11) personnel, and possibly use some of those savings to investigate adding more office space or even future sleeping spaces to the Sylva Fire Department.

As far as how the department would run operations, the two (2) shift personnel each day would include the Captain and the Firefighter. The Captain would be responsible for the day-to-day operations of the shift including supervision of the Firefighter. The Captain would answer directly to the Assistant Chief. The Assistant Chief would answer to the Fire Chief. The daily floater firefighter would answer to the Fire Chief when dealing with administrative issues and answer to the Captain when functioning in the emergency operations role. The new organizational chart is listed below. One item to note, there would be no volunteer officers of any sort. There needs to be a definitive chain-of-command in the organization, and a career firefighter doesn't need to answer to a volunteer officer when they have a career officer they should be answering to. It also clears up any issues with who the volunteers operate under on emergency responses. They answer directly to the Captain on-duty, and there would be no questions of authority or responsibility. This is not what Chief Mike Beck discussed as his idea during our initial meeting, but it allows for span of control as well as an easier chain-of-command for everyone on the department to understand.

Figure 5 – Organizational Chart for Option #2



This option also allows the Fire Department to normally meet OSHA “Two In/Two Out” from 8:00 am-5:00 pm every day. With a minimum staffing of two (2) personnel, there will typically be four to five personnel on the scene for the immediate dispatch of a working structure fire during those time periods. That allows the Assistant Chief and the floater firefighter to be the initial two exterior safety on-scene, with the Fire Chief acting as Incident Commander. Using this option also allows the department during 8:00 am-5:00 pm hours to be able to functionally handle three separate calls for service with the two (2) shift personnel the first response, the Assistant Chief and floater firefighter handling the second response, and the Fire Chief to be able to get an apparatus out of the station on a third call for response if necessary.

One other benefit to the 24 on/72 off schedule for the shift employees is that it gives them a good opportunity to make more income at another part-time job. Unfortunately, the starting pay for a firefighter or for any government employee is not as high as the private sector. Working the 24 on/72 off schedule will allow a shift employee to be able to make up some of the difference in income from

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working a government job. It is also a good recruitment and retention tool that fire departments are finding successful.

A final important item to note with the 24 on/72 off scheduling is the wellness benefit for the firefighters themselves. In organizations, leaders always say the most important part of the organization are the people. Working the 24 on/72 off schedule for firefighters proves to the firefighters they are being taken care of for their mental wellness. Mental wellness has become a huge hot topic in the fire and emergency services over the past five (5) years. Firefighters working twenty-four-hour shifts are having trouble sleeping on-duty because their bodies remain on even while sleeping. They are also having to cope with being away from family, and there are a lot more post-traumatic stress disorders diagnoses happening. The North Carolina State Firefighters' Association has been working on some of these mental wellness issues over the past few years creating the First Responder Assistance Program (FRAP) and getting a BlueCross Blue Shield grant of \$250,000.00 to help pay co-pays and other expenses related to mental wellness issues for firefighters. The extra twenty (24) hours off utilizing the 24 on/72 off schedule is allowing fire and emergency services shift employees more time to decompress and sleep meaning the employees are better focused and engaged and less likely to have injuries or illness. Below are two links that can help dive into the physical health, mental wellness, and sleep habits of firefighters:

[International Association of Fire Chiefs - Volunteer and Combination Officer Section report on "Best Practices in Behavioral Wellness for Emergency Responders" VCOs Resource Detail \(iafc.org\) www.iafc.org/about-iafc/sections/vcos/vcos-resource-detail/vcos-yellow-ribbon-report-update](http://www.iafc.org/about-iafc/sections/vcos/vcos-resource-detail/vcos-yellow-ribbon-report-update)

[St. Catherine University - Master of Social Work Clinical Research Papers School of Social Work 5 on "Sleep Deprivation and the Health of Firefighters"](https://sophia.stkate.edu/cgi/viewcontent.cgi?article=1852&context=msw_papers#:~:text=One%20of%20the%20primary%20workrelated%20health%20issues%20facing,includin%3A%20mental%20illness%2C%20metabolic%20disease%2C%20and%20cardiovascular%20disease)

https://sophia.stkate.edu/cgi/viewcontent.cgi?article=1852&context=msw_papers#:~:text=One%20of%20the%20primary%20workrelated%20health%20issues%20facing,includin%3A%20mental%20illness%2C%20metabolic%20disease%2C%20and%20cardiovascular%20disease

Again, the recommendation above is a report providing an outside perspective of the department's current fire service staffing and future career staffing needs. Nothing in the report is a negative reflection of the Town of Sylva, Sylva Fire Department, Town Manager, Fire Chief, or any staff members. The firefighters and staff are dedicated and hardworking, and they respond quickly to all calls for emergency services.

(See Staffing Study Options on pages 29-33 and Recommendations again on pages 34-37).

II. Introduction and Scope of Work

The Town of Sylva Town Manager Paige Dowling requested a fire department staffing study on the Sylva Fire Department be completed to make the transition from a volunteer to combination fire department. The study’s purpose is to answer the following questions:

1. Is the fire department appropriately staffed to provide currently targeted levels of service?
2. How does the staffing in the department compare to other similar size organizations?
3. Is the current organizational structure designed to provide oversight, operations, planning, command, and control?
4. Are there opportunities to make changes to the structure that would result in improved effectiveness or efficiency in the department?
5. How does the staffing in the department compare to other similar size organizations?
6. How do Fair Labor Standards Act affects Fire Department personnel?
7. What is the best staffing model to provide the Sylva Fire Department to provide the citizens with the most efficient and effective fire/rescue response?

Bucket Brigade Consulting, LLC management consultant team conducted the study of documents and statistics submitted by the staff of the Town of Sylva, Sylva Fire Department, and Jackson County Communications Center, field study work involving interviews with key operational staff members and a tour of the department and coverage area. Information and statistics from outside sources were also used in the preparation of this document, including national run statistics, National Fire Protection Agency data, and a pay study performed by the North Carolina Association of Fire Chiefs, among others.

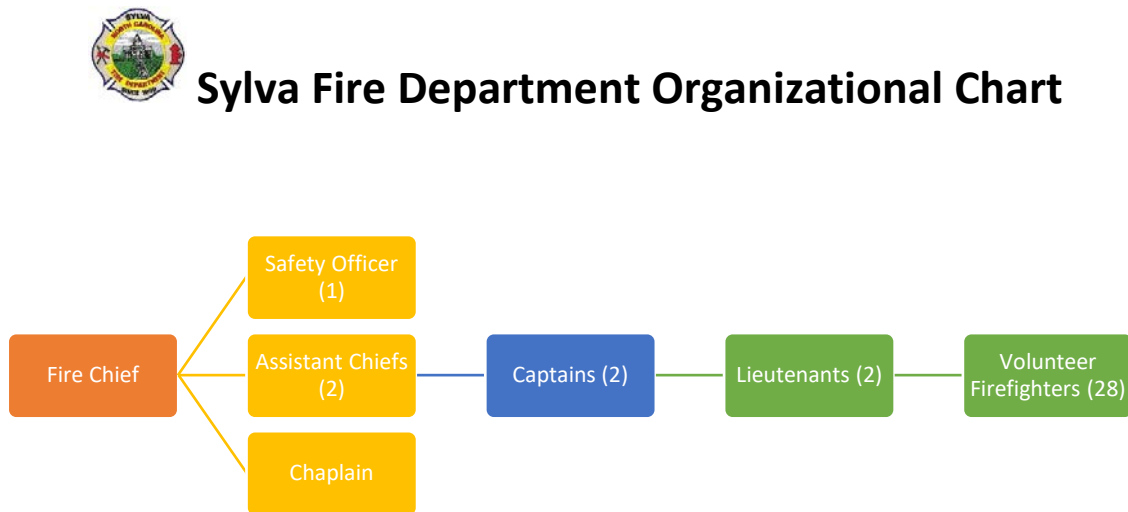
Nothing in the report is a negative reflection of the Town of Sylva, Sylva Fire Department, Town Manager, the Fire Chief, or any staff members. The firefighters and staff are dedicated and hardworking, and they respond quickly to all calls for emergency services. The report provides an outside perspective of the department’s current fire service staffing and future needs.

III. Current Staffing Levels

The Town of Sylva Fire Department currently has thirty-five (35) members on its staff. The membership is comprised of thirty-five (35) volunteers with two of those positions being part-time fire service personnel funded by Jackson County. The department is overseen by Town Manager who gives direction

to the Fire Chief of the organization. The Fire Chief manages the day-to-day operations of the department. The Fire Chief also has two (2) Assistant Chiefs, two (2) Captains, two (2) Lieutenants, one (1) Safety Officer and one (1) Chaplain who are all volunteers for the Department. The organizational chart is located **Figure 1 – Sylva Fire Department Organizational Chart**.

Figure 1 – Sylva Fire Department Organizational Chart



The department also runs part-time staffing from Monday through Friday from 8:00 am-5:00 pm (0800-1700 hours). There are two (2) personnel assigned to the fire station located at 24 Municipal Drive in Sylva during this time. Bucket Brigade Consulting, LLC reached out to the department to find out the hourly pay provided by Jackson County to the two (2) personnel, but never received any information back at the time of writing. Sylva Fire Department nor Jackson County requires the part-time firefighters currently working of the volunteers to hold any state certifications to work or volunteer. They do ask firefighters that drive the apparatus to obtain North Carolina Emergency Vehicle Driver certification, but again it is not a requirement. The volunteers also currently receive a stipend of twelve dollars (\$12.00) per call, up from five dollars (\$5.00) in the past. The Fire Chief has expressed the need for career staffing to both the Town Manager and the Jackson County Commissioner’s Board. The Fire Chief advised response has seen a steady decline in the department over the years, and response is typically lower between 7:00 am-5:00 pm and significantly lower from 12:00 am-7:00 am. This is a national and statewide trend that almost all volunteer departments are facing. Many of these departments are moving to the combination style departments or at a minimum putting on part-time personnel for twenty-four hours a day.

IV. National Standards and Regulations

National standards in the fire service are set by the National Fire Protection Association (NFPA). The NFPA was established in 1896 and is a global self-funded nonprofit organization devoted to eliminating death, injury, property, and economic loss due to fire, electrical and related hazards. NFPA has standards written on almost all areas of the fire service from the Fire and Life Safety codes that govern inspections, to fire and arson investigation, to firefighter health and safety. NFPA standards are the industry best practices and provide useful guides for fire ground operations. Some of the more common standards include our personnel protective equipment (PPE) and maintenance, fire hose testing and maintenance, self-contained breathing apparatus (SCBA) purchase, use, and maintenance, firefighter physical and rehab requirements, and staffing levels.

The two standards most associated with staffing include NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Department and NFPA 1720: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Departments. NFPA 1720's title says volunteer fire departments, but its scope includes volunteer and combination departments serving suburban areas with less than five hundred (500) to one thousand (1000) people per square mile in population.

NFPA 1710 and NFPA 1720 were created and originally released in 2001. The development of the benchmark standard was the result of a considerable amount of work by a technical committee with members composed of numerous fire service organizations. It was the first organized approach to define levels of service, deployment capabilities, and staffing levels for career, combination, and volunteer fire departments. NFPA 1710 states that a career department in an urban area with an aerial apparatus should assemble fifteen (15) staff members on a scene of a working structure fire in eight (8) minutes of dispatch or less ninety percent (90%) of the time. If the agency doesn't have an aerial apparatus, the staffing requirements drops to fourteen (14) personnel. NFPA 1720 states that in a combination or volunteer fire department in suburban or rural areas should assemble ten (10) staff members on the scene of a working structure fire within ten minutes of dispatch or less eighty-percent (80%) of the time. Currently the Sylva Fire Department would fall under NFPA 1720 standards and minimums. The standards also relay the expected assignments the personnel on the scene should be assigned to listed below in **Table 1 - NFPA 1710 and 1720 Staffing Breakdown** with an image below drawing out the

needed fourteen (14) or (15) staffing in **Figure 2 – Initial Full Alarm Assignment Capability Deployed within 8 Minutes.**

Table 1 - NFPA 1710 and 1720 Staffing Breakdown

NFPA 1710 and 1720 Staffing Breakdown		
	1710 Needs	1720 Needs
Assignment:	Number of Personnel:	Number of Personnel:
Incident Commander:	1	1
Pump Operator:	1	1
Attack Line Firefighters:	2	2
Back-Up Line Firefighters:	2	2
Attack Line Support:	1	n/a
Back-Up Line Support:	1	n/a
Search and Rescue:	2	n/a
Ventilation:	2	2 (Vent, Enter, Search)
Initial RIC:	2	2
With Aerial Device:	1	n/a
Total:	14/15	10

Figure 2 – Initial Full Alarm Assignment Capability Deployed within 8 Minutes



Besides the staffing levels deemed important, the NFPA Fire Protection Handbook also establishes response risk hazards in **Table 2 - Typical Initial Attack Response Capability Assuming Interior Attack and Operations plus Command Capability** below. This should serve as a guide to the current and future

needs of the department, as well as giving the Sylva Fire Department the means to request funding for more personnel in the future if personnel numbers aren't consistently met. The low-hazard occupancy risk of one, two, or three-family dwellings, and scattered small businesses and industrial occupancies requires at least two (2) engine/pumpers, one (1) ladder truck (or combination of apparatus with equivalent capabilities), 1 chief officer, and other specialized apparatus as may be needed or available with no fewer than fourteen (14) firefighters and one (1) chief officer, plus a safety officer and a rapid intervention team. **Table 2 - Typical Initial Attack Response Capability Assuming Interior Attack and Operations plus Command Capability**

Typical Initial Attack Response Capability Assuming Interior Attack and Operation Plus Command Capability		
Risk	Description	Personnel and Apparatus
High-hazard Occupancy	Schools, hospitals, nursing homes, explosive plants, refineries, high-rise buildings, and other high life hazard or large fire potential occupancies	At least 4 pumpers, 2 ladder trucks (or combination apparatus with equivalent capabilities), 2 chief officers, and other specialized apparatus as may be needed to cope with the combustible involved; not fewer than 24 firefighters and 2 chief officers. Extra staffing of units first due to high-hazard occupancies is advised. One or more safety officers and a rapid intervention team(s) are also necessary.
Medium-hazard Occupancy	Apartments, offices, mercantile, and industrial occupancies not normally requiring extensive rescue or firefighting forces	At least 3 pumpers, 1 ladder truck (or combination apparatus with equivalent capabilities), 1 chief officer, and other specialized apparatus as may be needed or available; not fewer than 16 firefighters and 1 chief officer, plus a safety officer and a rapid intervention team.
Low-hazard Occupancy	One, two-, or three-family dwellings and scattered small businesses and industrial occupancies	At least 2 pumpers, 1 ladder truck (or combination apparatus with equivalent capabilities), 1 chief officer, and other specialized apparatus as may be needed or available; not fewer than 14 firefighters and 1 chief officer, plus a safety officer and a rapid intervention team.
Rural Operations	Scattered dwellings, small businesses, and farm buildings	At least 1 pumper with a large water tank (500 gal or more), one mobile water supply apparatus (1,000 gal or larger), and other specialized apparatus as may be needed to perform effective initial firefighting operations; at least 12 firefighters and 1 chief officer, plus a safety officer and a rapid intervention team.
Additional Alarms		At least the equivalent of that required for rural operations for second alarm; equipment as may be needed according to the type of emergency and capabilities of the fire department. This may involve the immediate use of mutual-aid companies until local forces can be supplemented with additional off-duty personnel. In some communities, single units are "special called" when needed, without always resorting to a multiple alarm. Additional units may also be needed to fill empty fire stations
Source: NFPA Fire Protection Handbook 20th Edition— Table 12.1.1, Page 12-12		

NFPA 1710 and NFPA 1720 are used because they have been proven successful over the last twenty (20) plus years and because it is an insurance policy for the community and its businesses by guaranteeing

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that fire and emergency medical services will respond promptly and appropriately in an emergency. It enhances public safety by ensuring a quick response to a fire, keeping it contained to lower fire losses. Third, it saves lives because firefighters are responding to the scene to keep the fires contained allowing for a better chance of survivability in a structure fire. Last, they help protect the community against liability. Since NFPA standards are industry best practices, NFPA standards are often brought up in negligence claims. By meeting these standards, the department helps protect itself from litigation in some cases.

As it currently stands, the Sylva Fire Department is not meeting the requirements for NFPA 1720 in **Table 1 - NFPA 1710 and 1720 Staffing Breakdown**. Looking at the average response for structure fires from the Sylva Fire Department's last ISO rating, the average response was currently under ten people (9.71) which is under the required ten (10) personnel. Fire Chief Mike Beck advised in the initial meeting with Town personnel and Fire Department staff that they average eight (8) personnel per call, but it is a little higher than that. Chief Beck was quoted in the [Smokey Mountain News](#) in the article *Sylva Fire Requests Funding for More Paid Staff*, "There are currently 33 volunteers on the Sylva Fire Department Roster and two paid employees per shift. During the hours of 8:00 a.m.-5:00 p.m., the average response for an incident is between four (4) and ten (10) people, including the two paid positions at the department. Between the hours of 5:00 p.m.-midnight, the average response to an incident is five (5) to twelve (12) people, and from midnight-8:00 a.m. response to an incident range from two (2) to five (5) volunteers." The addition of career staffing would help push that number closer to or higher than ten (10) personnel on average if the volunteer response is similar in the future.

The other important national standard the department should be attempting to cover on first alarm assignments is Occupational Safety and Health Safety Administration (OSHA) 29 CFR 1910.134(g)(4). This rule is commonly referred to as the "Two In, Two Out" rule in the fire service. This was a safety regulation added into law for any hazardous atmosphere that is deemed immediately dangerous to life or health by the US National Institute for Occupational Safety and Health (NIOSH). Any fire beyond the incipient stage is considered an IDLH (immediately dangerous to life or health) by NIOSH definition due to the atmospheric conditions of the smoke, heat, and carcinogens. The "Two In, Two Out" rule basically states that a firefighter cannot enter an IDLH without having a team member with them and two members outside ready to rescue should the team entering the structure need help. It is a safety and accountability feature that has helped saved firefighters lives. There is an exception to the regulation if a known life safety issue exists, meaning a firefighter can hear or see a victim that needs to be rescued. The regulation is a law, industry standard and most departments have it written in their standard operating procedures (SOPs) or general operating guidelines (GOGs).

In layman's terms, the Sylva Fire Department should not enter a working structure fire to extinguish it until a minimum of four (4) members were on the scene of an incident. As it currently stands, the department is only sending in two (2) part-time personnel on immediate dispatched provided by Jackson

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County. In the future with the addition of the career staff, the department would meet the initial “Two In, Two Out” for all the options that are discussed in the staffing options section Monday through Friday 8:00 am through 5:00 pm but would not immediately meet it after 5:00 pm and on the weekends unless career staff or volunteers were on-scene quickly. If not, the department would take the risk of losing lives because if they can’t see a victim or hear one, they legally can’t enter the structure; therefore, the department members would have to fight every fire externally until more staffing arrived. With the addition of the new career staffing positions, the department could begin interior operations sooner.

V. Fair Labor Standards Act (FLSA)

The Fair Labor Standards Act, commonly known as “FLSA” first became a federal law in 1938. It has been changed many times throughout its history. This law is intended to protect workers from unfair pay prices including limits on child labor, minimum wages, overtime requirements, and determination on whether employees can be considered exempt or not, among many other items. For use for the Town of Sylva to determine what staffing option best works for the fire department and the Town’s budget, there are four important parts of the law to consider. All four parts discussed below can be found directly from the U.S. Department of Labor’s website ([Wages and the Fair Labor Standards Act | U.S. Department of Labor \(dol.gov\)](#)) and on the website “Fact Sheets.”

The first consideration deals with salary with overtime exemptions for exempt and non-exempt employees. The information can be found in **Fact Sheet #17A: Exemption for Executive, Administrative, Professional, Computer & Outside Sales Employees Under the Fair Labor Standards Act**. The fact sheet was updated in 2019 and first advises that the exemptions do not apply to firefighters regardless of rank or pay level whose work includes preventing, controlling, or extinguishing fire of any type, rescuing fire victims, or other similar duties. The fact sheet goes on to explain the only exemptions for fire service personnel are found under the executive and administrative exemptions. Exemptions found under the executive exemption include the employee’s primary duty must be managing a recognized department, have the authority to hire and fire or any other change of employee status. Exemptions found under the administrative exemptions include the employee’s primary duty must be the performance of office or non-manual work directly related to the management or general business operations of the employer. Fact Sheet #17A sets up the definition for the Town of Sylva’s Fire Department personnel, which falls in line with most career and combination in the state that the Fire Chief and Assistant Chief are salaried employees exempt from earning overtime. On the other side, all other staff members would be eligible for overtime no matter what rank or title the agency uses whether it be Captain, Lieutenant, Driver/Engineer, or Firefighter.

The second consideration of FLSA laws includes paying overtime to the non-exempt employees. The information on overtime compensation can be found in **Fact Sheet #8: Law Enforcement and Fire**

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Protection Employees Under the Fair Labor Standards Act (FLSA). Fact Sheet #8 states the following: the FLSA requires that all covered non-exempt employees be paid overtime pay at no less than time and one-half their regular rates of pay for all hours worked more than 40 in a workweek except for Section 13(b)(20) of the FLSA which provides an overtime exemption to law enforcement or fire protection. Section 7(k) of the FLSA provides that employees engaged in fire protection or law enforcement may be paid overtime on a "work period" basis. A "work period" may be from 7 consecutive days to 28 consecutive days in length. For work periods of at least 7 days but less than 28 days, overtime pay is required when the number of hours worked exceeds the number of hours that compares to the same relationship to 212 (fire) or 171 (police) as the number of days in the work period compares to 28. For example, fire protection personnel are due overtime under such a plan after 106 hours worked during a 14-day work period, while law enforcement personnel must receive overtime after 86 hours worked during a 14-day work period. Under certain prescribed conditions, a State or local government agency may give compensatory time, at a rate of not less than one and one-half hours for each overtime hour worked, in lieu of cash overtime compensation. Employees engaged in police and fire protection work may accrue up to 480 hours of compensatory time. In layperson terms, if a firefighter works more than 212 hours in a 27 or 28-day cycle, then the firefighter must be compensated at a minimum rate of one and a half times pay per hour over 212 hours. For the agency, the Town of Sylva would be responsible for overtime pay or compensatory time for all employees but the Fire Chief and Assistant Chief who work over the 212 hours per period. The best option for the Town to avoid having to do it is included the staffing options.

The third consideration of FLSA laws for the Town to understand is commonly referred to as "moonlighting." This term is used in the fire service as either volunteering for the employees' fire department on times when the fire department employee is off or if the employee is also working another "part-time" job for the employer, for example this would be a career firefighter for Sylva who also works part-time at the Sylva Police Department. Neither of the two options are allowed by FLSA. It is considered dual employment. Law states, employees may not "volunteer" to do similar work for the same employer without the time being counted as FLSA work time. Firefighters may not perform "additional" fire related activities for their employers without that time being included as hours worked for FLSA pay computation purposes. Also, employees who work "two jobs" for the same employer must aggregate their total hours worked for FLSA pay purposes. For example, a firefighter who works 40 hours as a firefighter and an additional 20 hours as an animal control officer has a total of 60 FLSA hours worked. Employees are permitted to work "moonlighting" jobs -- for separate employers -- without the hours being aggregated. So, any time that a career exempt employee of the Fire Department comes back to calls, training, or for shift strength, the Town would have to pay the employee at their current rate and overtime for any hours over 212.

The fourth and final consideration for the Town to be aware of is sleep time. A small number of fire departments across the state do not pay their firefighters for sleep time. The information on sleep time

can be found in **Fact Sheet #22: Hours Worked Under the Fair Labor Standards Act (FLSA)**. An employee required to be on duty for 24 hours or more may agree with the employer to exclude from hours worked bona fide regularly scheduled sleeping periods of not more than 8 hours, provided adequate sleeping facilities are furnished by the employer and the employee can usually enjoy an uninterrupted night's sleep. No reduction is permitted unless at least five hours of sleep is taken. Not paying for sleep time is a possible option for the Town of Sylva, but it is an extremely hard process to accurately track. First, someone must physically keep track of the sleep time. It becomes difficult because of the five hours of sleep. The department must establish a basic time for sleep, say for example 10:00 pm to 6:00 am. If fire department personnel get up for a call for service or mutual aid call, do they still get five hours of sleep? What happens if Jackson County Communications accidentally hits the wrong tone, if a telephone call comes in, or if someone knocks at the door? All these are considered sleep interruptions. Some individuals can go back to sleep quicker than others, and some firefighters may not be able to go back to sleep at all; therefore, it becomes very hard to track. It is also important to note from the call statistics received from the Sylva Fire Department, that roughly thirty percent (30%) on average of the last three years are received after 7:00 pm at night. Currently they were unable to provide a breakdown of calls by actual hours.

VI. Departmental Staffing Comparisons

The North Carolina Association of Fire Chiefs performed a pay study that was published in January 2018 at their annual Mid-Winter Chief's Conference. The study was originally created to give Fire Chiefs a tool to evaluate pay ranges for different positions in comparison to other similar size departments across the state. The pay study had further benefits though besides just comparing salaries. It allowed Fire Chiefs the ability to compare annual budgets and career staffing levels in other similar departments to give current data and statistics to show their Town, City and County Managers and Board of Directors.

Table 3 – Comparison Table from NCAFC for 1,000-10,000 Population Service Areas below shows an abbreviated version of the full pay study to show similar service areas in population to that of the Sylva Fire Department. The data excludes any department under 1,000 and over 6,500 as not to skew the data. The average of the fifteen (15) departments below shows a population service area of 3,922 with an annual budget of \$713,450.93 with six (6) full-time employees. The smallest population listed in the comparison is 1,200 at Garren Creek VFD with the largest area served of 6,500 at the Woodfin Fire Department. The smallest budget is \$252,490.00 at the Garren Creek VFD, and the largest budget is \$1,659,450.00 at Reems Creek VFD. The department with the least number of full-time employees is

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the Woodfin and Tryon Fire Departments both with one (1) employee, and the largest career staffing is eleven (11) personnel at the Reynolds Fire Department.

So how does The Sylva Fire Department compare with these departments? The population in Sylva is listed as an estimated 2,738. That puts the population of the town served as below the average of the fifteen departments at roughly thirty percent (30.19%) lower. The budget from Sylva in 2020 was \$494,378.00, which is \$219,072.93 lower than the average of the fifteen (15) departments at roughly thirty-one percent (30.71%). The budget would increase up to \$956,672.66 as shown in **Table 4 – Sylva Proposed Personnel Budget for the Fire Department 2022-2023 Options** if the department put on twelve personnel. The Sylva Fire Department budget would then be \$1,451,050.66 which is fifty percent (50.83%) higher than the average of the comparison budgets. As far as staff goes, Sylva currently has zero (0) career staffing. This is a one hundred percent (100%) decrease. If the career statistic is amended to include the new staffing from the budget proposal at fourteen (14) personnel, Sylva would be over one hundred percent (133.33%) higher in career staffing than the average. If the career statistic is amended to include the new staffing from the budget proposal at twelve (12) personnel, Sylva would be at over eighty percent (83.33%) higher in career staffing than the average. If the career statistic is amended to include the new staffing from the budget proposal at eight (8) personnel, Sylva would be over thirty percent (33.33%) higher in career staffing than the average. Current statistics show the Sylva Fire Department is behind comparable sized departments in all key areas of the North Carolina Association of Fire Chiefs Pay Study until they can at least meet six (6) career personnel.

Table 3 – Comparison Table from NCAFC for 1,000-10,000 Population Service Areas

Comparison Table from NCAFC for 1,000-10,00 Population Service Areas				
Fire Department Name	County	Population of Service Area	Budget	Number of Full Time Employees
Woodfin Fire	Buncombe	6,500	\$ 867,000.00	10
Cherryville Fire	Gaston	5,800	\$ 1,100,000.00	9
Whiteville Fire	Columbus	5,500	\$ 901,824.00	10
Reynolds Fire	Buncombe	5,000	\$ 1,000,000.00	11
Riceville VFD	Buncombe	4,800	\$ 950,000.00	8
Spindale FD	Rutherford	4,300	\$ 365,000.00	4
Colington FD	Dare	4,179	\$ 910,000.00	9
Reems Creek VFD	Buncombe	3,550	\$ 1,659,450.00	7
Moncure VFD	Chatham	3,500	\$ 760,000.00	7
Yadkinville VFD	Yadkin	3,500	\$ 550,000.00	3
Tryon Fire	Polk	3,500	\$ 311,000.00	1
French Broad VFD	Buncombe	3,000	\$ 475,000.00	7
Jamesville VFD	Martin	2,500	\$ 100,000.00	2
Weldon Fire	Halifax	2,000	\$ 500,000.00	6
Garren Creek VFD	Buncombe	1,200	\$ 252,490.00	1
Average Totals:		3,922	\$ 713,450.93	6

Table 4 – Sylva Proposed Personnel Budget for the Fire Department 2022-2023 Options

Town of Sylva				
Paid Sylva Fire Department				
	Personnel	Gross Payroll	Benefits	Total
A	12 & 2	\$ 615,772.62	\$ 340,900.05	\$ 956,672.66
B	9 & 2	\$ 491,759.08	\$ 269,780.45	\$ 761,539.53
C	6 & 2	\$ 367,745.54	\$ 198,660.86	\$ 566,406.40
**These amounts are projected budget only and are subject to change.				

Table 5 – Comparison Table of Surrounding Departments with Career below shows how Sylva compares to neighboring departments with some similar characters and career staff. More departments were contacted in in the surrounding counties, but budgeting and staffing wise were not good comparisons because they didn’t have the information requested. So how does the Sylva Fire Department compare with Cashiers Fire Department and the Cullowhee Fire Department? First, looking strictly at staffing, adding twelve (12) personnel will make Sylva the highest in career members with three (3) over Cullowhee and one (1) over Cashiers, which equates to forty percent (40%) more than Cullowhee and less than nine percent (8.70%) than Cashiers. Sylva’s budget is more than Cullowhee’s by \$317,144.00 or over twenty-five percent (25.67%) and it is less than Cashiers by \$358,067.00 or over twenty-two percent (22.76%) lower. The last statistic is call volume. Both Cashiers and Cullowhee Fire Departments added career personnel due to the drop in volunteer response and recruitment and retention, as well as an increase in call volume significantly over the last ten (10) years. Looking strictly at call volume alone, the Sylva Fire Department has on average over the last three (3) years run 164.33 more responses a year or over twenty percent (20.76) than Cullowhee and run more than 135.33 responses or over sixteen percent (16.79%) more than Cashiers. Overall these statistics show the Sylva Fire Department is behind in comparing to other departments in the county if they do not get some career personnel.

Table 5 – Comparison Table of Surrounding Departments with Career Staffing

Comparison Table of Surrounding Departments with Career Staffing				
Name:	ISO Rating:	Budget:	Career Staff:	2019-2021 Call Averages:
Cashiers	5	\$ 1,752,000.00	11	738.33
Cullowhee	5	\$ 1,076,789.00	8	709.33
Sylva	5	\$ 1,393,933.00	12	873.66

VII. The Use of the Public Protection Classification (ISO Rating) as an Evaluation Tool

The information on the Public Protection Classification (PPC®), often referred to as the Insurance Service Office Rating will assist in understanding the complexities of providing modern fire service. Communities use the ISO rating and the information provided by the Public Protection Classification Report as an indicator of fire department capabilities, assistance in making decisions, assistance in prioritizing community needs, and assistance in future departmental needs.

The term ISO is discussed often in North Carolina fire departments, but what exactly does ISO mean? The ISO Mitigation website (www.isomitigation.com) explains ISO as:

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“The Public Protection Classification (PPC®) program recognizes the efforts of communities to provide fire protection services for citizens and property owners. A community’s investment in fire mitigation is a proven and reliable predictor of future fire losses. Insurance companies use PPC information to help establish fair premiums for fire insurance — generally offering lower premiums in communities with better protection. By offering economic benefits for communities that invest in their firefighting services, the program provides an additional incentive for improving and maintaining public fire protection. The program also provides help for fire departments and other public officials as they plan, budget for, and justify improvements. The most significant benefit of the PPC program is its effect on losses. Statistical data on insurance losses bears out the relationship between excellent fire protection — as measured by the PPC program — and low fire losses. PPC helps communities prepare to fight fires effectively.”

The Public Protection Classification (PPC®) program is managed and administered in the state of North Carolina by the Ratings and Inspections Division of the Office of the State Fire Marshal which falls under the authority of the North Carolina Department of Insurance. The outcomes can range from a rating of one (1) through a ten (10) with one (1) being the best score attainable. The rating is calculated using the Sylva Fire Department FSRS Feature Form found below in **Table 6 – Sylva Summary of Credit**. The components of the rating system include Emergency Communications, Fire Department, Water Supply, and Community Risk Reduction. Fire departments typically only have control over the Fire Department and Community Risk Reduction sections as they have no control over Communications unless they dispatch themselves running their own Communications Division. The departments also do not have control over the Water Supply because most town, cities, or counties control the water supply system, not the department. The Fire Department section is worth a total of fifty (50) points of the 105.5 maximum points. The two components of the Fire Department that affect staffing include the Deployment Staffing and Personnel components. These two components equate for twenty-five (25) points of the maximum fifty (50) points in the section, which is fifty percent (50%) of the section and over twenty-three percent (23.7%) of the total score. An increase in staffing and an increase in response generates an increase in the points achieved in both components. The personnel section only counts for over fourteen percent (14.21%) of your total score, and the deployment analysis for over nine percent (9.46%).

Table 6- Sylva Summary of Credit

FSRS Feature	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	2.55	3
422. Credit for Telecommunicators	3.20	4
432. Credit for Dispatch Circuits	1.95	3
440. Credit for Emergency Communications	7.70	10
Fire Department		
513. Credit for Engine Companies	5.39	6
523. Credit for Reserve Pumpers	0.00	0.50
532. Credit for Pump Capacity	3.00	3
549. Credit for Ladder Service	2.95	4
553. Credit for Reserve Ladder and Service Trucks	0.18	0.50
561. Credit for Deployment Analysis	3.21	10
571. Credit for Company Personnel	5.78	15
581. Credit for Training	3.51	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	26.02	50
Water Supply		
616. Credit for Supply System	20.51	30
621. Credit for Hydrants	2.25	3
631. Credit for Inspection and Flow Testing	1.70	7
640. Credit for Water Supply	24.46	40
Divergence	-1.82	--
1050. Community Risk Reduction	3.42	5.50
Total Credit	59.78	105.50

North Carolina Department of Insurance/Office of State Fire Marshal

The two charts below show the rating classifications nationwide and in the state of North Carolina through 2021 in **Figure 3 – Public Protection Rating in the United States** and **Figure 4 – Public Protection Classification in North Carolina**. Nationally there are 38,747 rated fire departments. Of that 38,747 there are 13,239 departments with a better rating than the Sylva Fire Department or thirty-four percent (34.16%). In North Carolina, there are 1,686 rated fire departments. Of that 1,686 there are 738 departments with a better rating than the Sylva Fire Department or forty-three percent (43.77%).

The Sylva Fire Department received its last full ratings inspection in 2020. During the initial meeting with Town and Fire Department personnel, the agency advised they received a 5/9 split rating. The five (5) rating is good for a volunteer fire department as typically a volunteer fire department loses a large amount of points in the Fire Department sections of Credit for Fire Department Personnel and Credit for Training. The Fire Chief advised in our initial meeting that the agency just missed moving to a 4/9 split by a couple tenths of a point. It was less than a couple of tenths at 0.18 points. Historically from the Office of the State Fire Marshal, the addition of career staffing and the increase in training hours for the

department due to the career staffing has resulted in a better ISO score for the department being inspected. Look again above at the information provided from **Table 6 – Sylva Summary of Credit**, the Sylva Fire Department had a little over five points (5.78) in the credit for company personnel. The maximum number of points that could be obtained was fifteen points (15). The department received credit for 9.71 personnel per response during the department rating. So, the department missed out on more than nine (9.22) points in this area meaning the department lost out on over sixty-one percent (61.47%) of possible points in this credited area. The addition of career staffing would also increase the number of points in the credit for training area of the ISO/NCRRS rating, because the Fire Chief indicated that the full-time staff would be required to do shift training that would add hours in the training category. For the last inspection, the department received credit in the training area of over three points (3.51) out of a possible nine (9.00) points. So, the department missed out on just under six points (5.49) in the training category equating to missing out on sixty-one percent (61.00%) of the possible points. Adding up both the credit for company personnel and the credit for training, the department missed out on over fourteen points (14.71) or almost sixty-two percent (61.29%) of these two categories added up. These are the two areas where the fire department has the most control over the scoring and where the most points can be made up. This is an area that should improve with the addition of the career personnel.

A decrease in Sylva Fire Department’s classification rating would not make a huge difference for homeowners, as anything lower than a five (5) has minimal effects on homeowners insurance. A substantial effect would be in the insurance costs for commercial and industrial businesses though, and it can be used as a tool for recruitment of businesses into the town’s tax base.

Figure 3 – Public Protection Classification in the United States

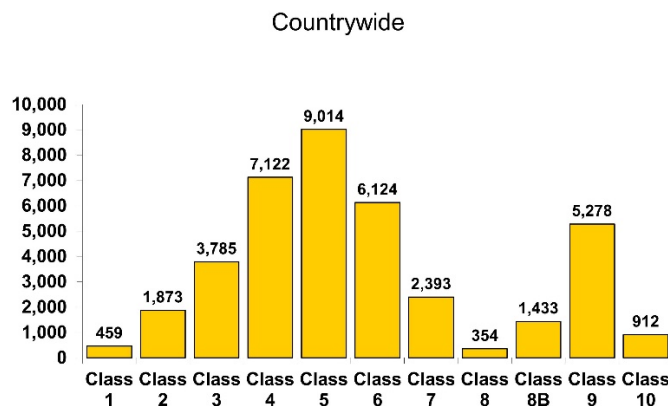
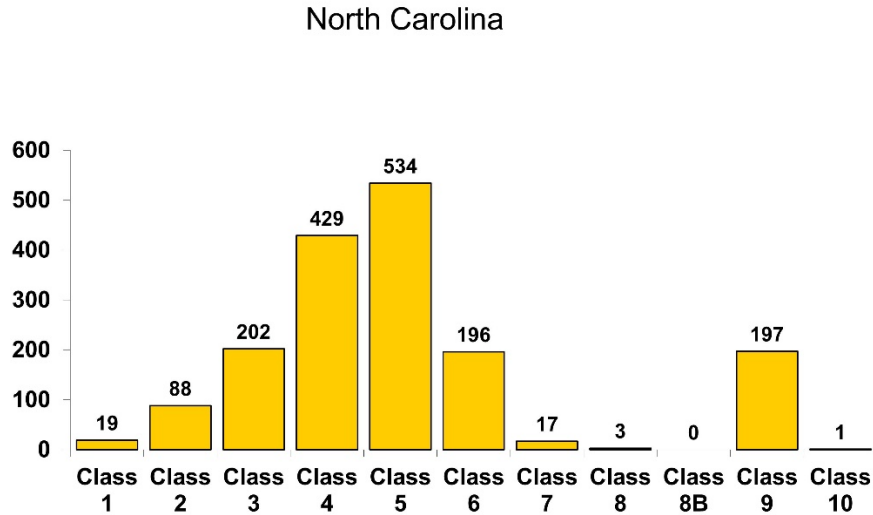


Figure 4 – Public Protection Classification in the North Carolina



Charts from ISO Mitigation Webpage (<https://www.isomitigation.com/ppc/program-works/facts-and-figures-about-ppc-codes-around-the-country/>). Both charts have current data through year-end 2021.

VIII. Call Statistics

The Sylva Fire Department has continued to increase in call volume since its inception. The department ran 857 calls for service in 2021, and it is on pace to exceed that number again in 2022. As far as total percent increase in calls on an average basis, **Table 7 – Incident Totals Per Year**, shows the last four (4) years, the number of calls has increased every year except one in 2020, where the COVID pandemic saw a slight decrease in medical calls the department ran. Nationally the call average for medical calls dropped due to COVID in 2020 and 2021, but Sylva didn’t see the drop in 2021 most departments saw. Taking the 2020 drop for COVID out of play, the percent of annual increase from 2018 to 2019 was just below twelve percent (11.96%) and from 2020 to 2021 was right at six percent (6.01%). If the current average increase between those two years of just under nine percent (8.99%) increase was applied over the next five years, the call volume would be expected to be over 1317 incidents in 2026 found below in **Table 8 – Expected Call Volume Growth at 8.99%**.

Table 7 – Incident Totals Per Year

Incident Totals per Year	
Year	Call Volume:
2018	849
2019	957
2020	807
2021	857

Table 8 – Expected Call Volume Growth at 8.99%

Expected Call Volume Growth at 8.99%	
Year	Call Volume:
2021	857
2022	934
2023	1018
2023	1109
2025	1208
2026	1317

Another important calls statistic to view is the number of incidents run per year broken down by the area the responses were ran. Below **Table 9 – Fire Department Runs by Area** shows the department is currently running on a four (4) year average a little over thirty-five percent (35.59%) of its calls in Town and a little over forty-two percent (42.42%) in the rural area of Sylva. The combination of the two totals equates to Sylva only running an average of a little over seventy-eight percent (78.01%) to its main coverage area. The other twenty-two percent (21.99%) are being run in other areas of Jackson County. So, one (1) out of every (5) calls is outside of Sylva; therefore, Jackson County should be funding around twenty percent (20%) of the department’s budget strictly looking at call data.

Table 9 – Fire Department Runs by Area

Fire Department Runs By Area						
Area:	2018	2019	2020	2021	Total Calls:	Percent of Calls:
Sylva Town	264	343	316	312	1235	35.59%
Sylva Rural	384	390	315	383	1472	42.42%
Dillsboro	18	24	25	23	90	2.59%
Webster	12	13	11	8	44	1.27%
Mutual Aid	171	187	140	131	629	18.13%
Total	849	957	807	857	3470	

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The time incidents dispatched are of great importance in a staffing study as well. It has been noted above and by the Fire Chief in the initial meeting with Town and Fire Department personnel, the agency has a better response from volunteers from 5:00 pm-12:00 am, and that it is lower from 12:00 am-7:00 am. It is important to note just how many calls are coming between the different time blocks. **Table 10 – Average Fire Department Responses by Twelve Hour Blocks and Table 11 – Average Fire Department Response During Business Hours** below shows the averages of the last three years’ worth of responses between 7:00 am-7:00 pm and 7:00 pm-7:00 am and between the hours of 8:00 am-5:00 pm and 5:00 pm-8:00 am. The busiest time for responses looking at the twelve-hour blocks is by far 7:00 am-7:00 pm over sixty-nine percent (69.60%) of the time compared to just over thirty percent (30.41%) of responses coming from 7:00 pm-7:00 am. Looking at the responses on an average during business hours, which are the current hours that the two (2) part-time personnel are working from Jackson County shows a slightly different picture. It shows that the average response during normal business hours is just under thirty-six percent (35.95%) compared to over sixty-four percent (64.05%) after working hours. Looking between the two charts, the department runs many its calls between 7:00 am-8:00 am and 5:00 pm-7:00 pm. On average, over thirty-three percent (33.95) of the department calls are coming during this three-hour time frame. The three-hour time frame is time that isn’t covered by the two (2) part-time personnel requiring that the volunteers have to be available to run one third of the responses with personnel coverage at the department.

Table 10 – Average Fire Department Responses by Twelve Hour Blocks

Average Fire Department Responses by Twelve Hour Blocks		
Year:	<u>7:00am-7:00pm</u>	<u>7:00pm-7:00am</u>
2019	70.11%	29.89%
2020	68.77%	31.27%
2021	69.92%	30.08%
Average:	69.60%	30.41%

Table 11 – Average Fire Department Response During Business Hours

Average Fire Department Response During Business Hours		
Year:	8:00am-5:00pm	5:00pm-8:00am
2019	39.29%	60.71%
2020	35.56%	64.44%
2021	32.99%	67.01%
Average:	35.95%	64.05%

Bucket Brigade Consulting, LLC asked the Town and Department personnel for more response statistics to bring more focus to the workload and response capabilities of the Sylva Fire Department, but the data was not available at the time of writing. Due to the timeline of the budget process, the report was needed before additional data could be obtained from Jackson County Communications. Firefighter Mallary Caraway was able to send us to the NC Fire Bridge Incident Reporting site, but the information provided in the overview is generic and doesn't match the data provided by Jackson County to the Town Manager. The data that Bucket Brigade Consulting, LLC requested included but was not limited to: Fire Department total responses in five year increments, responses broke down by NFIRS major code categories, structure fire responses for the last four (4) years, response totals for the last four (4) years broke down by hour, response average over the last four (4) years by personnel, responses where one than one call happened at one time over the last four (4) years, responses that the Sylva Fire Department were canceled in route or did not have a response to over the last four (4) years, and how many times the department received mutual aid over the last four (4) years. The data requested was not needed for the actual staffing study, but it would help in justification to Town personnel and Jackson County Commissioners of the true required current and future needs of the Department.

The current data provided though clearly shows the only way for the Sylva Fire Department to be successful in the future is the addition of career personnel, in addition to ensuring volunteer response continues at the current level. If the volunteer response drops off further in the future, the department would need to look at adding more career personnel.

IX. Staffing Study Options

The staffing study was aimed to have an outside consultant's view of the staffing options of the Sylva Fire Department. The study revealed the following options for career staffing and how it affects FLSA rules. A recommendation from Bucket Brigade Consulting, LLC can be found in the recommendation section along with a full department organizational chart. Should the Town and Department personnel

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choose to go with the option that is not recommendation or any other option altogether, Bucket Brigade Consulting, LLC will be glad to provide an updated organizational chart free of charge. In all examples, the career day-time staff that is not working shift (i.e., the Fire Chief, Assistant Chief, Floater Firefighter and Administrative Assistant would not be considered for overtime). The shift employees would be eligible for overtime, and the goal of Town personnel is to eliminate overtime.

Option #1: Staff the Fire Department with six (6) career personnel on shift and two (2) Chief Officers operating on a 24 on/48 off shift schedule.

In Option #1, the Fire Department would operate three twenty-four (24) hours shifts with two (2) personnel on each shift for a total of six (6). The period worked for FLSA would be a twenty-seven (27) day period. With six (6) career personnel, there is no option to work a 24 on/72 off schedule. The shifts would be generally divided into A, B, and C shift. There would be a Captain and a Firefighter for each shift with the Fire Chief and Assistant Chief as the day-time staff. The Department would need to ensure at least one person was at work each shift, so the minimum staffing would be one (1). When an individual took off, one of the Chief Officer staff would have to pull a shift or get overtime coverage for the employee taking off.

The Department would also have to force each shift employee to take a mandatory twelve (12) hours off during the twenty-seven (27) day cycle as to avoid earning automatic overtime. The Department would also have to monitor the amount of time the employee came back to calls, because the employees would be working 204 hours period. They would only have eight (8) hours to come back for calls or training for the entire twenty-seven (27) day period.

Option #2: Staff the Fire Department with eight (8) career personnel on shift, one (1) career day-time floater/administrative firefighter and two (2) Chief Officers operating on a 24 on shift/72 off shift schedule.

In Option #2, the Fire Department would operate four twenty-four (24) hours shifts with two (2) personnel on each shift for a total of eight (8). The period worked for FLSA would be a twenty-eight (28) day period. With eight (8) career shift personnel, there is no option to work a 24 on/48 off schedule. The shifts would be generally divided into A, B, C, and D shift. There would be a Captain and a Firefighter for each shift with the Fire Chief and Assistant Chief as the day-time staff. The additional staff would be a forty (40 hour) a week employee that would still be a firefighter for running calls, but also be floater to assist in covering vacation or sick time for the eight (8) shift employees. When an individual took off, the floater firefighter/administrative person or one of the Chief Officer staff would have to pull a shift or get overtime coverage for the employee taking off.

In Option #2, the Department would also have to monitor the amount of time the employee came back to twelve-hour ensure overtime was kept in check, but running the 24 on/72 off schedule allows the shift

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personnel to come back much more often without going over the required FLSA hours. The employees would be working 168 hours per period. They would have forty-four (44) hours to come back for calls or training for the entire twenty-eight (28) day period. The floater firefighter/administrative person would be the one to watch for overtime issues. As a forty (40) hour week employee, if the person worked a shift in the week due to vacation or sick of a shift personnel, the floater firefighter/administrative person would not have to be at work sixteen (16) hours that week.

Option #3: Staff the Fire Department with nine (9) career personnel on shift and two (2) Chief Officers operating on a 24 on/48 hour off shift schedule.

In Option #3, the Fire Department would operate three twenty-four (24) hours shifts with three (3) personnel on each shift for a total of nine (9). The period worked for FLSA would be a twenty-seven (27) day period. With nine (9) career personnel, there is no option to work a 24 on/72 off schedule. The shifts would be generally divided into A, B, and C shift. There would be a Captain and two (2) Firefighters for each shift with the Fire Chief and Assistant Chief as the day-time staff. The Department would need to ensure at least two (2) people were at work each shift, so the minimum staffing would be two (2). When an individual took off, there would be no need to replace that individual because the apparatus would still be at two (2) for the day. Should there be more than one (1) vacation or sick employee, one of the Chief Officer staff would have to pull a shift or get overtime coverage for the employee taking off or sick.

The Department would also have to force each shift employee to take a mandatory twelve (12) hours off during the twenty-seven (27) day cycle as to avoid earning automatic overtime. The Department would also have to monitor the amount of time the employee came back to calls, because the employees would be working 204 hours period. They would only have eight (8) hours to come back for calls or training for the entire twenty-seven (27) day period.

Option #4: Staff the Fire Department with twelve (12) career personnel on shift and two (2) Chief Officers operating on a 24 on/48 off shift schedule.

In Option #4, the Fire Department would operate three twenty-four (24) hours shifts with four (4) personnel on each shift for a total of twelve (12). The period worked for FLSA would be a twenty-seven (27) day period. With twelve (12) career personnel, there would be an option to work a 24 on/72 off schedule, which is discussed in Option #5. The shifts would be generally divided into A, B, and C shift. There would be a Captain, a Driver/Engineer and two (2) Firefighters for each shift with the Fire Chief and Assistant Chief as the day-time staff. The Department would need to ensure at least two (2) people were at work each shift, so the minimum staffing would be two (2). When an individual took off, there would be no need to replace that individual because the apparatus would still be at two (2) for the day. Should there be more than two (2) vacation or sick employee, one of the Chief Officer's Staff would have to pull a shift or get overtime coverage for the employee taking off or sick.

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The Department would also have to force each shift employee to take a mandatory twelve (12) hours off during the twenty-seven (27) day cycle as to avoid earning automatic overtime. The Department would also have to monitor the amount of time the employees came back to calls, because the employees would be working 204 hours period. They would only have eight (8) hours to come back for calls or training for the entire twenty-seven (27) day period.

Option #5: Staff the Fire Department with twelve (12) career personnel on shift and two (2) Chief Officers operating on a 24 on/72 off shift schedule.

In Option #5, the Fire Department would operate four twenty-four (24) hours shifts with three (3) personnel on each shift for a total of twelve (12). The period worked for FLSA would be a twenty-eight (28) day period. The shifts would be generally divided into A, B, C, and D shift. There would be a Captain, a Driver/Engineer and a Firefighter for each shift with the Fire Chief and Assistant Chief as the day-time staff. The Department would need to ensure at least two (2) people were at work each shift, so the minimum staffing would be two (2). When an individual took off, there would be no need to replace that individual because the apparatus would still be at two (2) for the day. Should there be more than two (2) vacation or sick employees, one of the Chief Officer's Staff would have to pull a shift or get overtime coverage for the employee taking off or sick.

In Option #5, the Department would also have to monitor the amount of time the employee came back to ensure overtime was kept in check, but running the 24 on/72 off schedule allows the shift personnel to come back much more often without going over the required FLSA hours. The employees would be working 168 hours per period. They would have forty-four (44) hours to come back for calls or training for the entire twenty-eight (28) day period. The floater firefighter/administrative person would be the one to watch for overtime issues. As a forty (40) hour week employee, if the person worked a shift in the week due to vacation or sick of a shift personnel, the floater firefighter/administrative person would not have to be at work sixteen (16) hours that week.

Option #6: Staff the Fire Department with nine (9) career personnel on shift, one (1) career day-time floater/administrative firefighter and two (2) Chief Officers operating on a 24 on/48 off shift schedule.

In Option #6, the Fire Department would operate three twenty-four (24) hours shifts with three (3) personnel on each shift for a total of nine (9). The period worked for FLSA would be a twenty-seven (27) day period. With nine (9) career personnel, there is no option to work a 24 on/72 off schedule. The shifts would be generally divided into A, B, and C shift. There would be a Captain and two (2) Firefighters for each shift with the Fire Chief, Assistant Chief and a floater firefighter/administrative person as the day-time staff. The Department would need to ensure at least two (2) people were at work each shift, so the minimum staffing would be two (2). When an individual took off, there would be no need to replace that individual because the apparatus would still be at two (2) for the day. Should there be more

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than one (1) vacation or sick employee, the floater firefighter/administrative person or one of the Chief Officer's Staff would have to pull a shift or get overtime coverage for the employee taking off or sick.

The Department would also have to force each shift employee to take a mandatory twelve (12) hours off during the twenty-seven (27) day cycle as to avoid earning automatic overtime. The Department would also have to monitor the amount of time the employee came back to calls, because the employees would be working 204 hours period. They would only have eight (8) hours to come back for calls or training for the entire twenty-seven (27) day period. The floater firefighter/administrative person would be the one to watch for overtime issues. As a forty (40) hour week employee, if the person worked a shift in the week due to vacation or sick of a shift personnel, the floater firefighter/administrative person would not have to be at work sixteen (16) hours that week.

Option #7: Staff the Fire Department with eight (8) career personnel on shift, one (1) career day-time floater firefighter, one career Administrative Assistant and two (2) Chief Officers operating on a 24 on/72 off shift schedule.

In Option #7, the Fire Department would operate four twenty-four (24) hours shifts with two (2) personnel on each shift for a total of eight (8). The period worked for FLSA would be a twenty-eight (28) day period. With eight (8) career shift personnel, there is no option to work a 24 on/48 off schedule. The shifts would be generally divided into A, B, C, and D shift. There would be a Captain and a Firefighter for each shift with the Fire Chief, Assistant Chief, one (1) floater firefighter, and one (1) Administrative Assistant as the day-time staff. The additional staff would be a forty (40) hour a week employee that would still be a firefighter for running calls, but also be floater to assist in covering vacation or sick time for the eight (8) shift employees. As well as the addition of a forty (40) hour week dedicated Administrative Assistant. The Department would need to ensure at least two (2) people were at work each shift, so the minimum staffing would be two (2). When an individual took off, the floater firefighter or one of the Chief Officer's Staff would have to pull a shift or get overtime coverage for the employee taking off.

In Option #7, the Department would also have to monitor the amount of time the employee came back to twelve-hour ensure overtime was kept in check, but running the 24 on/72 off schedule allows the shift personnel to come back much more often without going over the required FLSA hours. The employees would be working 168 hours per period. They would have forty-four (44) hours to come back for calls or training for the entire twenty-eight (28) day period. The floater firefighter would be the one to watch for overtime issues. As a forty (40) hour week employee, if the person worked a shift in the week due to vacation or sick of a shift personnel, the floater firefighter/administrative person would not have to be at work sixteen (16) hours that week.

It is important to note that Fire Chief Mike Beck was in favor of running the department with Option #7 if they were allowed fourteen (14) personnel.

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X. Recommendations

After interviews with Town Management/Staff, Fire Department personnel, looking at similar departments, studying the station and apparatus of the Fire Department as well as the call statistics, the option Bucket Brigade, Consulting LLC is recommending is Option #2. **Option #2: Staff the Fire Department with eight (8) career personnel on shift, one (1) career day-time floater/administrative firefighter and two (2) Chief Officers operating on a 24 on shift/72 off shift schedule.**

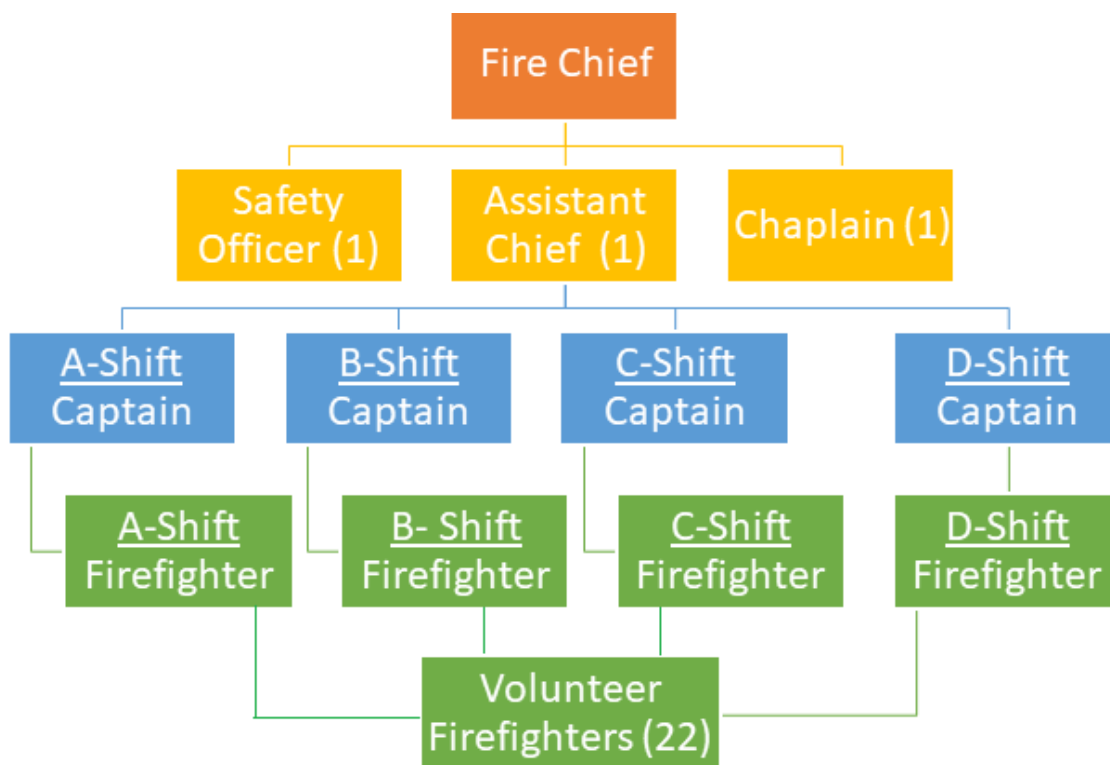
The Town Management/Staff made a major point that they did not want to have to pay out much, if any overtime, and the Department would like to have someone there in the day to handle administrative work that could also float as a firefighter. In the recommended option, the Department would also have to monitor the amount of time the employee came back to twelve-hour ensuring overtime was kept in check, but running the 24 on/72 off schedule allows the shift personnel to come back much more often without going over the required FLSA hours. The employees would be working 168 hours per period. They would have forty-four (44) hours to come back for calls or training for the entire twenty-eight (28) day period. The floater firefighter/administrative person would be the one to watch for overtime issues. As a forty (40) hour week employee, if the person worked a shift in the week due to vacation or sick of a shift personnel, the floater firefighter/administrative person would not have to be at work sixteen (16) hours that week. All of this could be easily managed in house by the Fire Chief, Assistant Chief or floater firefighter/administrative person.

This option encompasses the major wishes of both the Town Management/Staff and Fire Department personnel. It also takes into effect sleeping arrangements at the station and office space. At the current time, the department can convert two (2) rooms to bunk rooms for sleeping. Two (2) rooms would have to be completed in case a female firefighter was hired. The department would have to make accommodations to ensure separate sleeping spaces. In making two (2) rooms into sleeping rooms, the department loses some office space. The loss of office space would make it hard for two (2) Chief Officers and an Administrative Assistant to have the proper space to perform their job functions. With the Town more than likely planning to budget to twelve (12) personnel, there is just no good location to put an Administrative Assistant; therefore, the floater firefighter hired could take on some of those administrative roles. The Town would also be able to save some on the budgeted personnel cost only hiring eleven (11) personnel, and possibly use some of those savings to investigate adding more office space or even future sleeping spaces to the Sylva Fire Department.

As far as how the department would run operations, the two (2) shift personnel each day would include the Captain and the Firefighter. The Captain would be responsible for the day-to-day operations of the shift including supervision of the Firefighter. The Captain would answer directly to the Assistant Chief. The Assistant Chief would answer to the Fire Chief. The daily floater firefighter would answer to the Fire Chief when dealing with administrative issues and answer to the Captain when functioning in the

emergency operations role. The new organizational chart is listed below. One item to note, there would be no volunteer officers of any sort. There needs to be a definitive chain-of-command in the organization, and a career firefighter doesn't need to answer to a volunteer officer when they have a career officer they should be answering to. It also clears up any issues with who the volunteers operate under on emergency responses. They answer directly to the Captain on-duty, and there would be no questions of authority or responsibility. This is not what Chief Mike Beck discussed as his idea during our initial meeting, but it allows for span of control as well as an easier chain-of-command for everyone on the Department to understand.

Figure 5 – Organizational Chart for Option #2



This option also allows the Fire Department to normally meet OSHA “Two In/Two Out” from 8:00 am-5:00 pm every day. With a minimum staffing of two (2) personnel, there will typically be four to five personnel on scene for the immediate dispatch of a working structure fire during those time periods. That allows the Assistant Chief and the floater firefighter to be the initial two exterior safety on-scene with the Fire Chief acting as Incident Commander. Using this option also allows the department during 8:00 am-5:00 pm hours to be able to functionally handle three separate calls for service with the two (2) shift personnel the first response, the Assistant Chief and floater firefighter handling the second

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response, and the Fire Chief to be able to get an apparatus out of the station on a third call for response if necessary.

One other benefit to the 24 on/72 off schedule for the shift employees is that it gives them a good opportunity to make more income at another part-time job. Unfortunately, the starting pay for a firefighter or for any government employee is not as high as the private sector. Working the 24 on/72 off schedule will allow a shift employee to be able to make up some of the difference in income from working a government job. It is also a good recruitment and retention tool that fire departments are finding successful.

A final important item to note with the 24 on/72 off scheduling is the wellness benefit for the firefighters themselves. In organizations, leaders always say the most important part of the organization are the people. Working the 24 on/72 off schedule for firefighters proves to the firefighters they are being taken care of for their mental wellness. Mental wellness has become a huge hot topic in the fire and emergency services over the past five (5) years. Firefighters working twenty-four-hour shifts are having trouble sleeping on-duty because their bodies remain on even while sleeping. They are also having to cope with being away from family, and there are a lot more post-traumatic stress disorders diagnoses happening. The North Carolina State Firefighters' Association has been working on some of these mental wellness issues over the past few years creating the First Responder Assistance Program (FRAP) and getting a BlueCross Blue Shield grant of \$250,000.00 to help pay co-pays and other expense related to mental wellness issues for firefighters. The extra twenty (24) hours off utilizing the 24 on/72 off schedule is allowing fire and emergency services shift employees more time to decompress and sleep meaning the employees are better focused and engaged and less likely to have injuries or illness. Below are two links that can help dive into the physical health, mental wellness, and sleep habits of firefighters:

[International Association of Fire Chiefs - Volunteer and Combination Officer Section report on "Best Practices in Behavioral Wellness for Emergency Responders" VCOS Resource Detail \(iafc.org\) www.iafc.org/about-iafc/sections/vcos/vcos-resource-detail/vcos-yellow-ribbon-report-update](http://www.iafc.org/about-iafc/sections/vcos/vcos-resource-detail/vcos-yellow-ribbon-report-update)

[St. Catherine University - Master of Social Work Clinical Research Papers School of Social Work 5 on "Sleep Deprivation and the Health of Firefighters" https://sophia.stkate.edu/cgi/viewcontent.cgi?article=1852&context=msw_papers#:~:text=One%20of%20the%20primary%20workrelated%20health%20issues%20facing,includin%3A%20mental%20illness%2C%20metabolic%20disease%2C%20and%20cardiovascular%20disease.](https://sophia.stkate.edu/cgi/viewcontent.cgi?article=1852&context=msw_papers#:~:text=One%20of%20the%20primary%20workrelated%20health%20issues%20facing,includin%3A%20mental%20illness%2C%20metabolic%20disease%2C%20and%20cardiovascular%20disease.)

Again, the recommendation above is a report providing an outside perspective of the department's current fire service staffing and future career staffing needs. Nothing in the report is a negative reflection of the Town of Sylva, Sylva Fire Department, Town Manager, Fire Chief, or any staff members. The firefighters and staff are dedicated and hardworking, and they respond quickly to all calls for emergency services.

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XI. Appendix

The following documents were used in the study in no particular order to help develop the charts as well as providing statistical data and references. The documents do not have page numbers as they are printed reports from other documents.

- 1- Fact Sheet #17A: Exemption for Executive, Administrative, Professional, Computer & Outside Sales Employees Under the Fair Labor Standards Act
- 2- Fact Sheet #8: Law Enforcement and Fire Protection Employees Under the Fair Labor Standards Act (FLSA)
- 3- Fact Sheet #22: Hours Worked Under the Fair Labor Standards Act (FLSA)
- 4- Jackson County Fire Department Calls 2018, 2019, 2020 & 2021 provided by Town Manger
- 5- Jackson County Fire Department Calls 2018, 2019, 2020 & 2021 Charts provided by Town Manager
- 6- Sylva Fire Department Calls 2018, 2019, 2020 & 2021 provided by Town Manager
- 7- Sylva Fire Department Calls 2019, 2020, and 2021 Breakdown by Times 07:00-19:00 and 19:00-07:00 provided by Town Manager
- 8- Total Calls: Mon – Fri (8 to 5) for Years 2019, 2020, 2021 provided by Town Manager

XII. Resources Utilized

1. A Leadership Guide for Volunteer Fire Departments, Fourth Edition, International Association of Fire Chiefs, Jack W. Snook, Richard B. Gasaway, and Tim L. Holman.
2. Transforming the Volunteer Fire Service, Second Edition, Volunteer Fire Insurance Services, Dr. William F. Jenaway.
3. The Leadership Guide for Combination Fire Departments, International Association of Fire Chiefs, Fred C. Windisch and Fred C. Crosby.
4. The Red Ribbon Report, Leading the Transition in Combination and Volunteer Fire Departments, International Association of Fire Chiefs, Multiple Authors.
5. The NC Response Rating Schedule, Office of the State Fire Marshal.
6. National Fire Protection Association, 1710 and 1720.
7. Personal observations and experiences, including education from the Staff of Bucket Brigade Consulting, LLC.
8. Local information/data/facts from the Town of Sylva and Jackson County, NC.
9. Personal interviews Town of Sylva Management, Staff and Fire Department Personnel.
10. Personal interview with retired Fire Chief Ron Cheavis, nationally known expert in fire department transitions from volunteer to combination.