

2018 Washington Survey and Rating Bureau Assessment

Pullman Fire Department



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Washington Survey and Rating Bureau Assessment

Overview

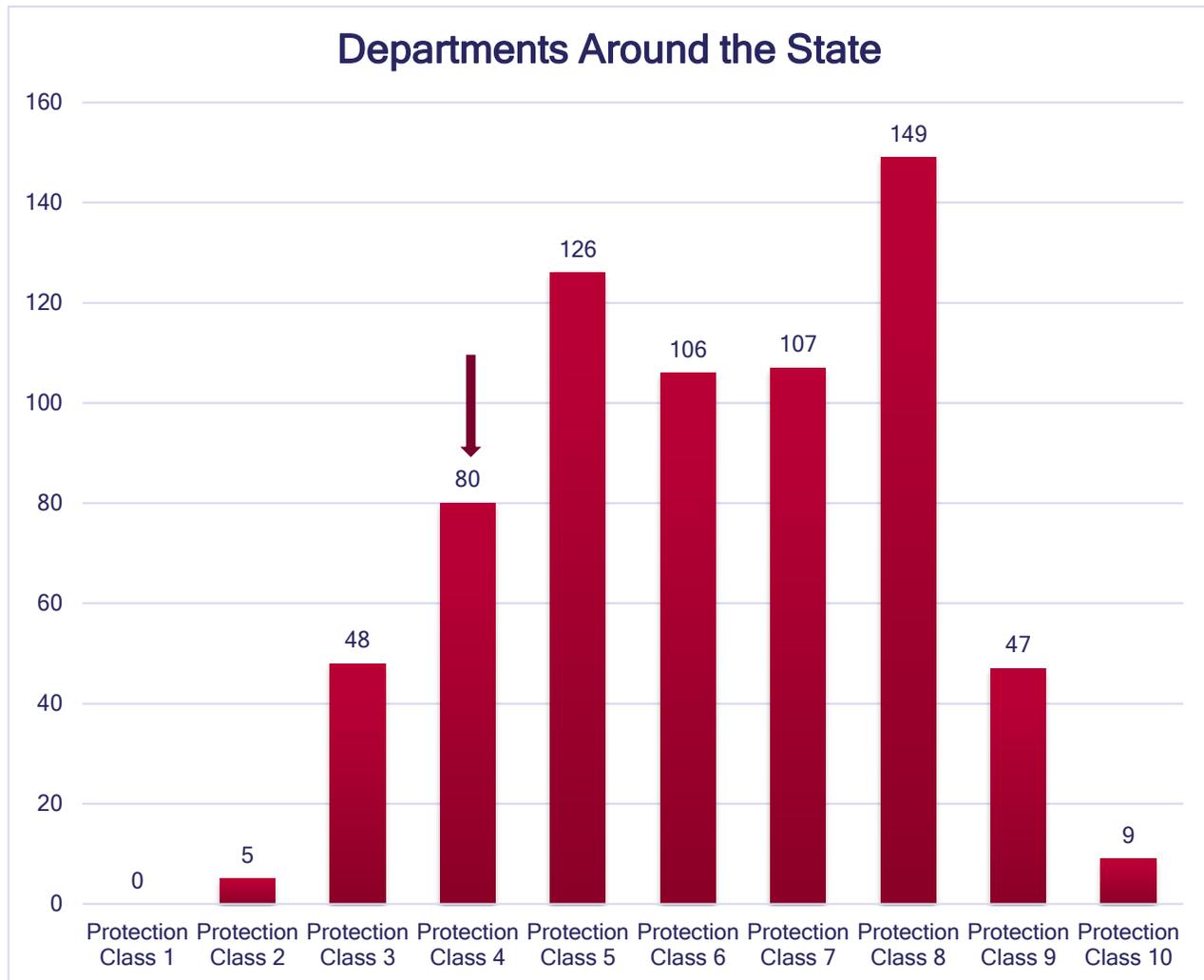
Established in 1912, the Washington Survey and Rating Bureau is an entity in Washington State that aides the insurance industry in setting insurance rates within fire department jurisdictions based on their capabilities. The areas assessed are the jurisdictions ability to supply the needed fire flow, water supply and system capabilities; the capabilities of the fire department including staffing, station location, response times, firefighter training, number and type of apparatus, hose, and pre-fire information for commercial occupancies; emergency communication is assessed on the dispatch building, security of the building, capabilities of the dispatch equipment, number of dispatchers per calls received, and training of the dispatchers; fire safety control centers around code enforcement and fire prevention programs, and is assessed in the areas of plan review, commercial occupancy inspections, public education programs (both kids and adults alike), fire investigation, and building code enforcement. Departments, before 2013, were rated every 10-years to adjust the jurisdictions insurance rating. The new schedule will see Pullman re-rated every 5-years to make these rating adjustments. There is no cost to the department for these ratings.

When the Pullman Fire Department was rated in 2003, the department was rated as a Fire Protection Class 4. In 2005, the fire department took over coverage of the Washington State University campus adding a large area that was not previously graded by WSRB. In 2013, when the department was again re-rated, the department rating dropped from a Protection Class 4 to a Protection Class 5. This caused insurance rates for both residential and commercial occupancies to increase, the amount of increase is based off of the amount of insured property and is unique to each insurance company.

There are currently 677 fire departments in Washington State that have ratings on file with the Washington Survey and Rating Bureau. After the 2018 re-rate of the Pullman Fire Department, the department sits in the top 133 of all rated fire

departments putting us in the top 80th percentile. There are a few areas in which the department, and the City, can focus on that would place the fire department into the top 55 in the entire State putting us into the top 92nd percentile. However, these areas are also the most expensive to address.

2018 ASSESSMENT

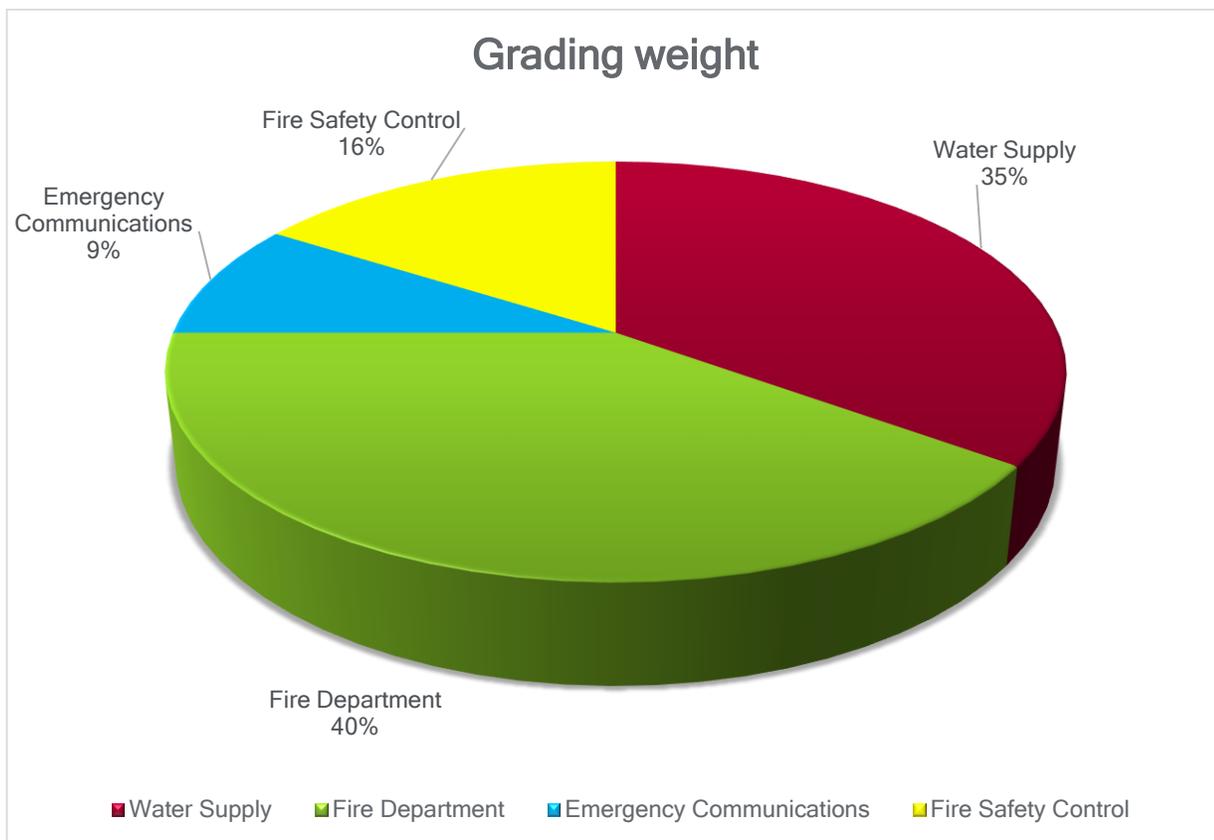


Source: Washington Survey and Rating Bureau Report

In April of this year, the department was rated in the afore-mentioned categories. During the assessment, WSRB evaluators interviewed department personnel with responsibilities in the graded areas and confirmed the information that was provided to the agency prior to their site visit. WSRB evaluators also visited Whitcom to interview the interim director and operations supervisor to confirm and assess all facets of the dispatch center. After the site

visit was completed, the WSRB evaluator made contact with the department representative multiple times to gather further information to ensure a complete and thorough assessment. When the report was compiled, the Pullman Fire Department was rated back to a Protection Class 4 fire department, in turn potentially decreasing insurance costs within the City of Pullman. See Appendix A for a summary of the grading score.

Within the grading schedule, each of the four sections is given a different weight based on its importance in providing adequate fire protection. These four sections are weighted as follows:



Source: Washington Survey and Rating Bureau Report

Obviously the two most important categories are those that pertain to applying water to the fire in a reasonable amount of time. This is what causes fire damage, and, therefore, is most important to the insurance industry in an effort to prevent monetary loss. This ability to prevent monetary loss, or not, in some cases, is why insurance rates rise and fall with the rating of the fire department.

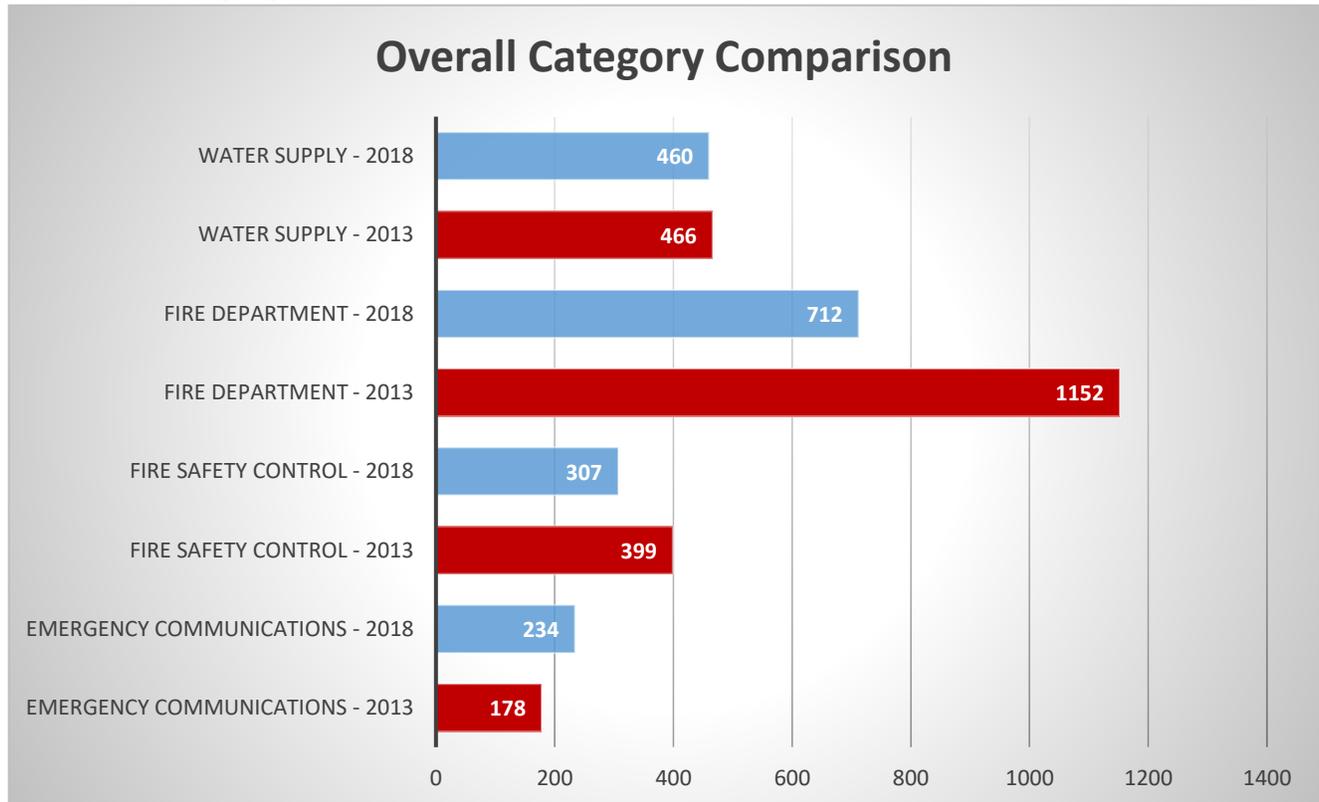
This applies to residential properties, however, more importantly, to commercial properties as well. In this instance, the fire department can effectively decrease, or increase, the cost of doing business within the City of Pullman depending on its capabilities to respond to and extinguish fire.

Because we are so close to Moscow, at times, their Insurance Services Office rating has been injected into conversations. The question is asked, why are they a Class 3 fire department with an all-volunteer staffing model, while Pullman is a Class 4 with 30 career staff and 25 reserves? The simple answer is ISO, why similar to WSRB, is not as stringent in many areas as WSRB is. For example, in order to receive no deficiency points in the area of occupancy inspections under WSRB Fire Safety Control, a department would have to inspect every business twice a year as well as inspect each “H-Class” occupancy bi-monthly. To receive no deficiency points in this same area for ISO, a department only need to inspect every business annually. There are other areas like this throughout the ISO grading criteria that are not as stringent as WSRB. Within the United States there are only five States that do not use ISO to set their insurance rates, Idaho, Louisiana, Hawaii, North Carolina, and Washington. However Idaho, Louisiana, Hawaii, and North Carolina use ISO as the basis for their rating schedule. Whereas Washington is the only State in the US to have our own grading schedule.

Because WSRB is more stringent, I believe it gives us a more accurate picture of what the fire department’s capabilities are. When Charleston, SC lost nine firefighters in the Sofa Superstore fire, they were rated a Class 1 fire department under ISO, the best rating you can receive. Yet, they did not have large diameter supply hose, their water system was not adequate for the buildings, they had undersized attack hose, and they had discontinued their occupancy inspection program just to name a few areas where they were found deficient in the after action investigation. This is just my opinion based off my knowledge of WSRB, but were they rated under our WSRB grading schedule, they would have been rated a Class 5 fire department or lower. So as you can see, there are definitely differences in how departments in other states are rated, but I truly believe we have a system here in Washington that gives us a comprehensive picture of what our capabilities actually are.

Now that we know how we scored, where those scores come from, and what they mean, how do we compare to our 2013 WSRB assessment?

Overall Category Comparison:



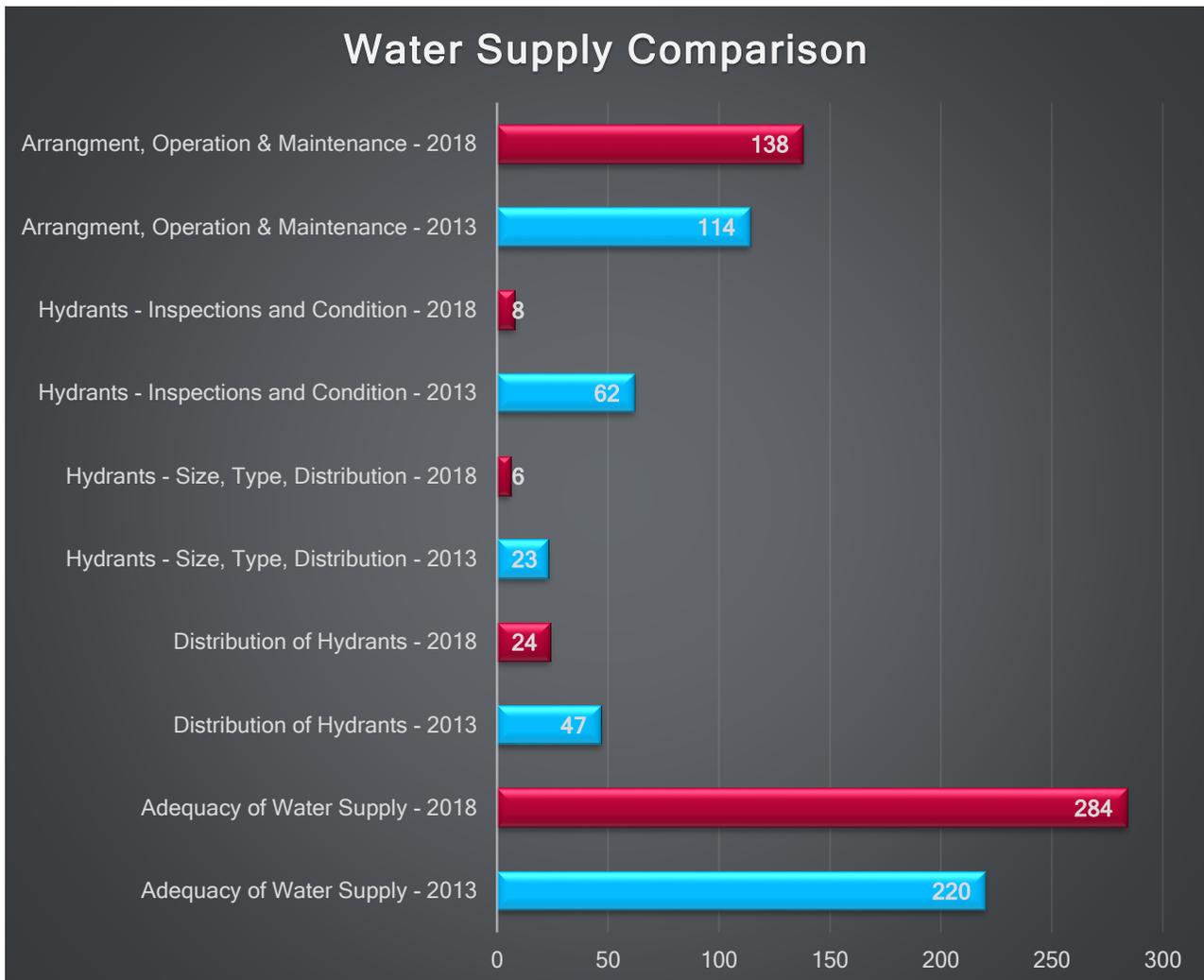
Source: 2013, 2018 Grading Reports

To clarify how these scores work, WSRB scores are like golf, the lower the score the better the rating. The points identified in this chart, and any subsequent charts, are deficiency points. If we can decrease our deficiency points, the department receives a better rating, therefore lowering the insurance rates within the City of Pullman.

The areas with the largest deficiency points happen to be the areas we can have the most control over: Fire Department, Fire Safety Control, and Water Supply. Noting the fact Whitcom is a separate agency, there is very little we can do to effect the score we receive from their operations.

There are many areas within each major category that are broken down and scored based on that subsection of the grading schedule. The following charts will compare how each major subsection measures up to the previous rating.

WATER SUPPLY



Source: 2013, 2018 Grading Reports

Water adequacy in our commercial areas will continue to be an issue for our department, due in large part, the age of our buildings. Quite a few of our commercial structures were built before the requirement for automatic sprinkler systems. Depending on the size of the building, it can greatly affect the fire flow needed for the building, creating an increase in the deficiency points for this category. Our safety net in this area is the fact we do very well with our water supply in the residential areas of the City. This could be a category which could decrease in points over time, however, it is not something we will be able to make a marked improvement in before our next re-rate.

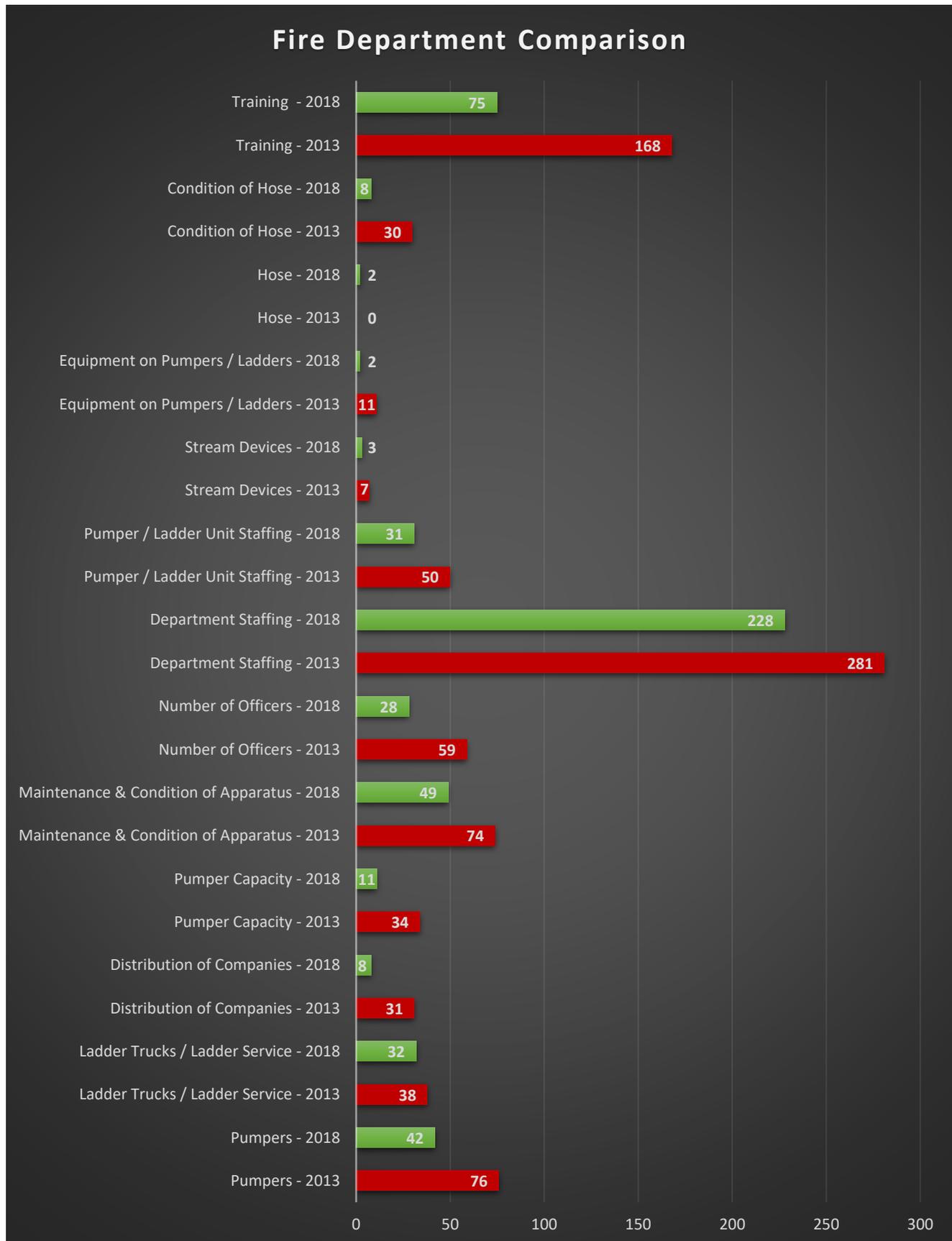
In sections 2, 3, and 4 of water supply, we continue to do well. This is due to the commitment of our Public Works department and Fire Marshal's office to require

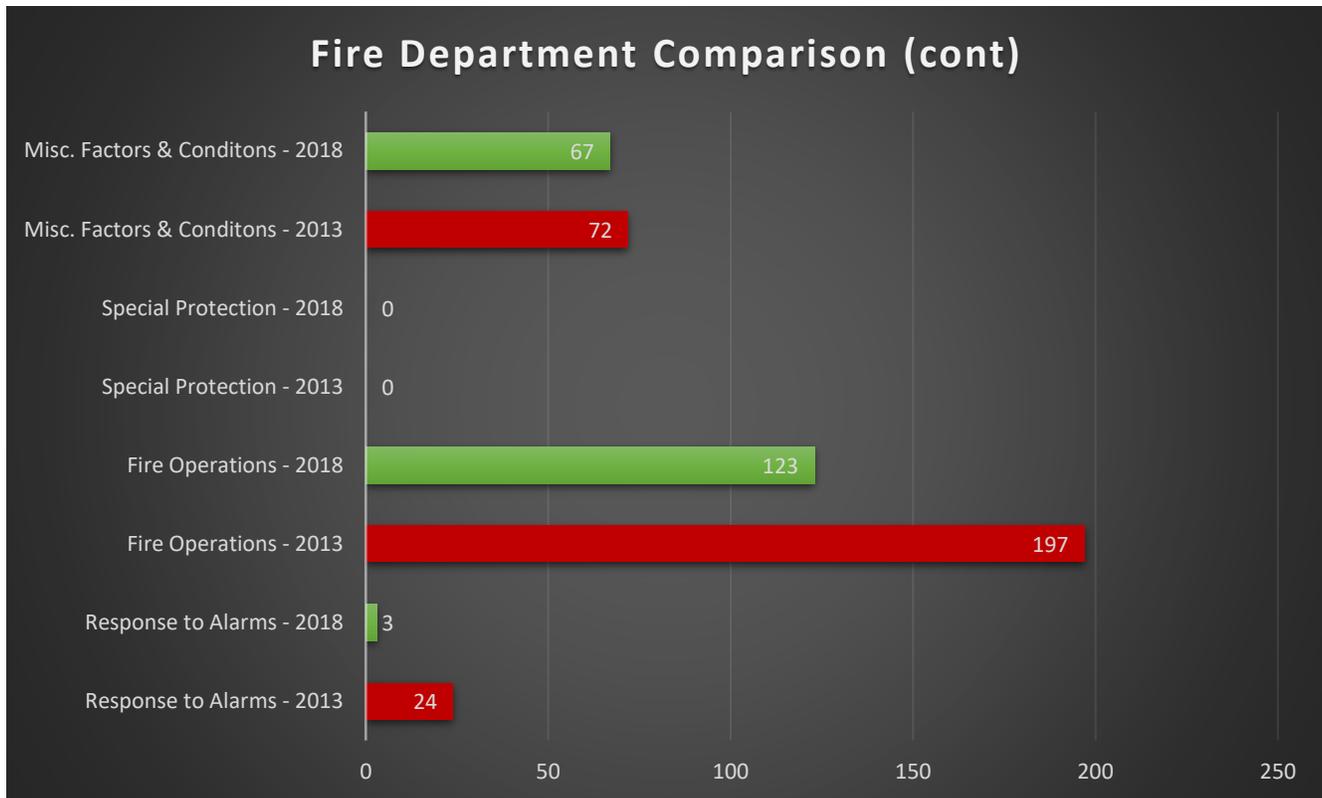
adequate sized and proper distribution of fire hydrants in new construction projects.

Section 5a, Water Supply, is an area where we can make improvements over the next five years. The largest area where we received deficiency points was not having permanent backup power for the five wells within the City. If backup generators were installed in each well, this grade increases from 66% to 90%. Section 5b is another area where we can make significant improvements over the next five years to decrease our deficiency points. The three main areas in this sub-group, where we received major deficiency points, are: inadequate frequency of well inspections, inadequate frequency of water tank inspections, and inadequate exercising of street valves. According to WSRB, wells should be inspected daily, water tanks should be inspected every three years, and street valves are exercised according to their diameter. Valves with a diameter up to 10-inches should be exercised annually, and valves with a diameter 10-inches or greater should be exercised every six months.

After meeting with Kevin Gardes, public works in fact does visit the wells daily, this is something we will need to point out in the next rating to ensure we get credit. For the expense, the current schedule of every three years for water tank inspection is adequate. The unknown is exercising the water valves. This portion of section 5b, Water Supply, accounts for a large portion of the deficiency points we receive. However, when compared to what the cost would be if valves were constantly being broken if we started exercising them would need to be weighed out.

In conclusion, we decreased our overall deficiency points in this category by six points. Many reasons may be attributed to this, the main cause is the addresses the WSRB used to assess the City's fire flow were different addresses than in the previous rating. Additionally, many of these occupancies do not have sprinkler systems, and/or do not have adequate fire flow supply to the building. See Appendix C for further details on which addresses were assessed, what the required fire flow is for each address, and what is available at each address.

FIRE DEPARTMENT



Source: 2013, 2018 Grading Reports

The fire department made some great improvements for the rating in this category. The cooperation between Labor and Management had a significant impact on how the department was able to decrease its deficiency points, as well as the investments the City has made in equipment and staffing since the last re-rate. In the fire department category, staffing is a component in many of the sub-categories. Some examples would be prioritizing productivity hours, turning hydrant maintenance over to the Reserves so the career staff can focus on other areas such as training and hose testing just to name a couple of areas. Since the last rating the City has invested in staffing by increasing from 27 to 30, and purchasing two fire engines.

To garner a perfect score in the pumper's sub-category, it would be necessary to enter a third staffed engine into service, and staff our reserve engine as much as possible. The first step into obtaining this is to remove the cross staffing model at Station 2, and hire four more firefighters to ensure the engine is in service 24/7, 365-days a year. Our current call volume is 75% EMS and 25% fire, therefore, the engine is only in service 25% of the time resulting in one fire engine in the City to respond to fire incidents. The reserve pumper is an area in which we could improve, however, it would not be worth the cost at this time.

As you can see we have done well in the sub-category of ladder trucks / ladder service. There are areas in this category where we can decrease our deficiency points with little to no added resources. When the ladder truck is replaced, holding on to the current ladder as a reserve would take us from 0% to 100%. Re-starting our ground ladder testing program is another easy way we can decrease our points, from 12 deficiency points down to 5. The remaining five points would come from equipping our fire apparatus with 24-foot ladders versus 35-foot ladders. Equipping the apparatus with 24-foot ladders is due in large part to our lack of staffing at fires. A 24-foot ladder only needs two people, and can be done with one, in order to raise it. To perform the raise safely, it takes three people to raise a 35-foot ladder due to the extra weight of the ladder.

In the areas of distribution of companies and pumper capacity, we have made vast improvement in these sub-categories. Our distribution of company score was decreased from 34 to 11 points, and pumper capacity was decreased from 31 to 8 points. Since we have not changed the location of our stations, this is most likely due to a change in evaluators. The decrease of points in the pumper capacity is due to the department specifying larger pumps in our fire engines, in turn, increasing the amount of water we are able to pump.

Maintenance and condition of apparatus is an area we will make an enormous gain in our next re-rate with minimal monetary investment. ERD is currently working on getting three of their personnel Emergency Vehicle Technician certified to work on emergency vehicles. This will take our score in the facilities and personnel sub-category from 40% to 90+%. In the area of preventative maintenance, the evaluator recommended three items that will vastly decrease our deficiency points. We road test vehicles during inspections, weigh the vehicles annually, and inspect the vehicles either quarterly, or by mileage. If we take these steps, we can increase our score to 90+%. However, in order to gain any further decrease in this sub-category, the City would have to invest in another engine, and as stated earlier these monies would be better spent in other categories.

With the inception of the one-week on, two-weeks off duty chief schedule, the three chief officers currently operate under, this has taken our score from 54% to 100%. The number of company officers is tied to the number of fire apparatus required, four engines and one ladder truck, meaning WSRB is requiring us to

have five officers on-duty every shift. Even though we improved from 28% to 44%, this sub-category will not really change without an increase in staffing.

Department staffing is where we were given the largest deficiency points in the Fire Department category. There are a couple of ways we can improve this category. The first, and preferred option, is to increase career staffing and raise the minimum daily shift staffing. The second option is to increase the number of reserve firefighters, and give them a place to sleep at the stations while they are on-duty. By having them stay at the station while on-duty, instead of responding from home, this allows us to count them as if they were a career member on-duty. Obviously there are some modifications that need to be made to the stations in order to accommodate more sleeping areas, but we believe this is a viable option until the City can afford to hire more career staff. Sub-category 8 is directly tied to sub-category 7.

In sub-categories 9 through 11, which deal with Hose, Stream Devices and Equipment for Fire Apparatus, we did very well during this re-rate. We were able to increase our score by 4% over our last assessment. All three areas will be close to 100% during the next re-rate due to changes in the new grading schedule which is due out in 2019. In sub-category 12, we have one area that we need to improve upon before our next re-rate. The age of the hose, based on the standards set forth in NFPA 1962, cannot be older than 10-years. We are close to meeting this, and I am confident that by our next re-rate, our inventory of hose will garner us a 100% score.

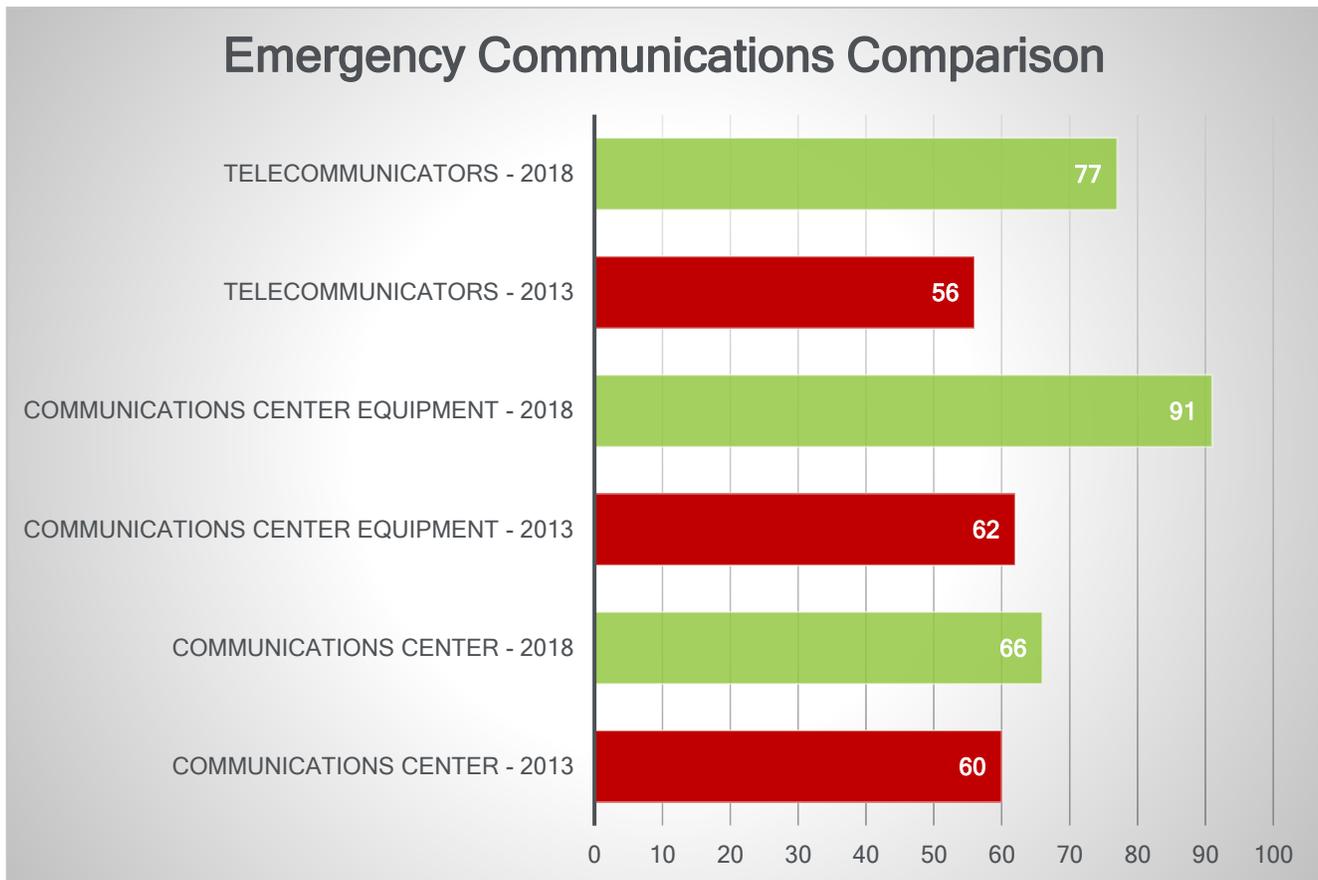
Training had the largest gain decreasing our deficiency points from 168 to only 75. The first area within training that garnered a considerable change was when the department changed the qualifications of the training officer and now require certain certifications in order to serve in this position. This change allowed us to go from 60% to 100% credit. Another large gain was in company training. The line personnel have done an outstanding job documenting their training hours, giving WSRB a more complete picture of what training they participate in. Their actions allowed us to go from getting 20% credit to 75%. The last area we made significant gains is officer training. In 2016 the department made the decision to move from ITAC as our incident command system to Blue Card. Since Blue Card comes with a certification, with annual continuing education, it allowed us to go from receiving 40% credit to 100%. The area the department is committing

to fixing is sub-category 13g - pre-fire planning. WSRB requires that we have a pre-fire plan for every commercial occupancy in the City of Pullman. Currently, there are 965 commercial occupancies in the City, including the WSU campus, and the department has pre-fire plans for 167 of them. The other area of improvement was in Fire Operations. This category takes the average of sections 7, 8, and 13. Section 7 covers departmental staffing, which through the increase of shift staffing from 26 to 30 decreased our deficiency points by 35 or 17%. Section 8 covers Pumper and Ladder Unit Staffing that, due to the increase in shift staffing, garnered us another 12 points or 6%. Section 13 covers Training, and as stated previously, decreased 93 points and gained the department 31%.

The Pullman Fire Department does not meet the threshold for needing a fire boat, therefore, we receive no deficiency points in this area. The new grading schedule, set for release in January 2019, will include a wildland category that the department will qualify for. Since we already have a type 6 engine, soon to become a type 3, and the department certifies all personnel to a minimum of National Wildland Coordinating Group Firefighter 2, the department should continue to receive no deficiency points in this category.

Category 17 covers those items not included in any other category. These items are Fire Stations, Fuel, and Delays in Response. The area where we can affect the greatest change here is by adding a backup generator to the City's central fueling station. While WSRB requires fuel stations at each station, they have stated that our fueling station will suffice once there is backup power. The department already has agreements in place in case fuel is needed at the scene of an incident. To receive no deficiency points in this sub-category, ERD would need to have a shop service truck which can carry a minimum of 120 gallons of diesel fuel. This would meet the requirement for the City to have its own mobile fuel truck. The other area, which is in process at the time of writing this report, is the amount of railroad track within the City. Since emergency apparatus, similar to buses, are required to stop at railroad crossings, this incurs a delay in response times. The main issue railroad tracks obviously is when there is a train blocking the road it is impossible for emergency apparatus to get through. Since most of the tracks are currently being removed, we should perform better in this sub-category for the next re-rate.

EMERGENCY COMMUNICATIONS



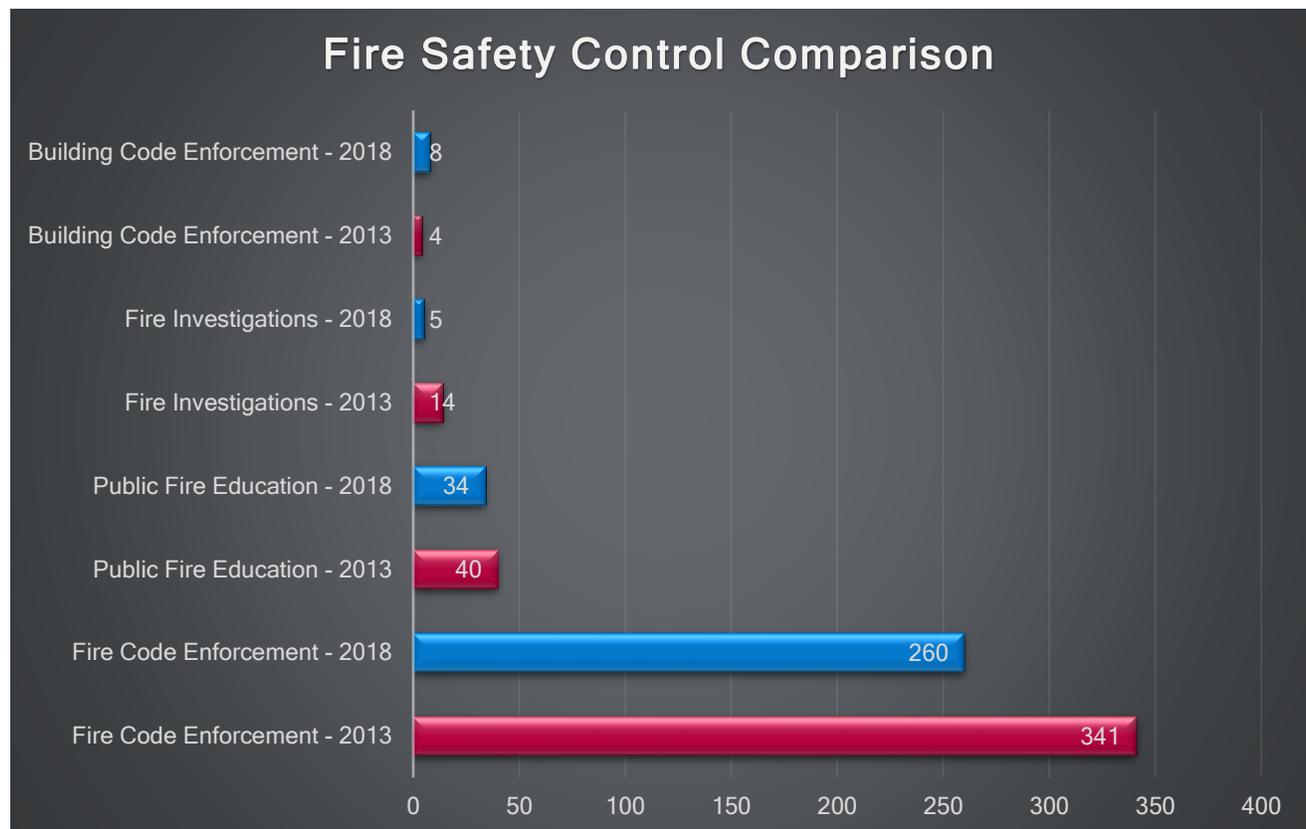
Source: 2013, 2018 Grading Reports

The emergency communications category is the only area we have no real control over. The other factor in this category is it does not cover just Pullman proper, but the entire service area for the dispatch center. If the system is deficient somewhere outside of the Pullman service area, we still receive the deficiency points assessed to our evaluation.

The largest areas the dispatch center was deficient in are also the most expensive areas to improve, staffing and the building. In order to obtain no deficiency points, the building needs to be a “Type 1 Fire Resistive Structure” with bullet-proof windows, a security system to limit vulnerabilities, and a full fire suppression system. Staffing is an issue in most public agencies and Whitcom is no exception. When taking into account the number of calls they process and the number of dispatchers they have to process those calls, they are severely understaffed. These two areas alone account for 117 of the 234 deficiency points we received in this category.

After meeting with the Whitcom's interim director, it appears some projects are in process, as well as plans in process which will improve their score. The department is also working with WSRB management to see if there is a way to credit departments like Pullman who are in this unique situation. If agreeable, we could see a decrease in our deficiency points since the part of the system we have direct control over is within the requirements of WSRB expectations.

FIRE SAFETY CONTROL



Source: 2013, 2018 Grading Reports

Fire Safety Control is the last area where the fire department can make a huge difference in its next re-rate. The main deficiency in the area of Fire Code Enforcement is due to 965 occupancy inspections that need to be done annually, but only having three certified fire inspectors to do them. The WSU fire inspector/fire investigator is included as one of these three.

There are programs the fire department is working on to ensure we can inspect all 965 occupancies annually. This will include working with the current WSU fire inspector, and looking at ways to better utilize current staffing to meet this need.

We are also looking at adding four fire prevention programs for children, and one more adult program, to decrease our deficiency points in this category.

SUMMARY

Every item in the grading schedule has a dollar attached to it when you look at what we can do to improve our score. Obviously some items are more expensive than others, however, in order to continue to provide the service our citizens deserve, we need to strive to always improve within the confines of the budget provided for that service.

In 2013, the Pullman Fire Department amassed 2,195 deficiency points. In 2018, we decreased that number to 1,713 deficiency points showing a vast improvement in just 5 years. We have made great strides in improving the service we provide for our citizens, and this third-party assessment of our capabilities quantifies our efforts. However, we cannot become complacent in our position, we must continue to improve in the areas where it makes sense. In making these improvements the fire department can affect the cost of doing business within the City of Pullman, and with this rating, it is something no other department in the City can do. While it is hard to place an exact dollar value on the savings for each citizen, every occupancy will be different, it is fair to say that commercial occupancies will see a greater savings due to the dollar amounts insured over a residential property. Please note, the fire department is not able to accomplish this without the support of both the Public Works and ERD as their areas are part of the grading assessment. The work they do is integral, not only to the City, but to the core missions of the fire department to respond quickly, respond safely, save lives, and protect property.

The fire department looks forward to continued collaboration with our city and fire service partners to continue to increase the service we provide to our citizens. Please feel free to contact any one of the chiefs should you have any questions regarding our grading.

Respectfully submitted,



Ray Lamoureux
Deputy Chief / Training Officer

Appendix A

Summary of Points

Sections Evaluated	Water Supply	Fire Department	Emergency Communications	Fire Safety Control
Points Scored	460	712	234	307
Maximum Points	1450	1950	450	650
% of Credit	68	63	48	53
Relative Value of Section	0.35	0.40	0.09	0.16
Relative Class of Section	4	4	6	5

Total credit for all sections: **6.18**

Divergence Score: **0**

Community Protection Class (PC) Grade = (10-total Credit) + divergence score

Community Protection Class Grade = **3.82** (unrounded grade)

Community Protection Class (PC) Grade = 4

Protection Class	Unrounded Grade
1	0.0 to 1.00
2	1.01 to 2.00
3	2.01 to 3.00
4	3.01 to 4.00
5	4.01 to 5.00
6	5.01 to 6.00
7	6.01 to 7.00
8	7.01 to 8.00
9	8.01 to 9.00
10	9.01 to 10.00

Appendix B

FINAL CALCULATION



Community Protection Class Grade

Explanation of Points	Points Scored	% of Credit
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Water Supply	460	68%
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The water supplies in the community that provide fire hydrants are evaluated in this section. In communities with multiple water supplies, the water supplies are prorated by their size (number of fire hydrants) to determine the overall score. Water Supply Items 1 through 5 make up the total score for this section.

Fire Department	712	63%
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The fire department servicing the community is evaluated in this section. The total service area of the fire department including incorporated and unincorporated area will be considered. Fire Department Items 1 through 17 make up the total score for this section.

Emergency Communications	234	48%
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The Emergency Communication Center responsible for dispatching the fire department that services the community is evaluated. This evaluation will also apply to other communities the communication center dispatches fire services to. Emergency Communication Items 1 through 3 make up the total score for this section.

Fire Safety Control	307	53%
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Fire Safety Control or fire prevention activities provided in the community are evaluated in this section. These activities may be provided by local, county or state authorities, all of which will be included in the evaluation. Fire Safety Control Items 1 through 4 make up the total score for this section.

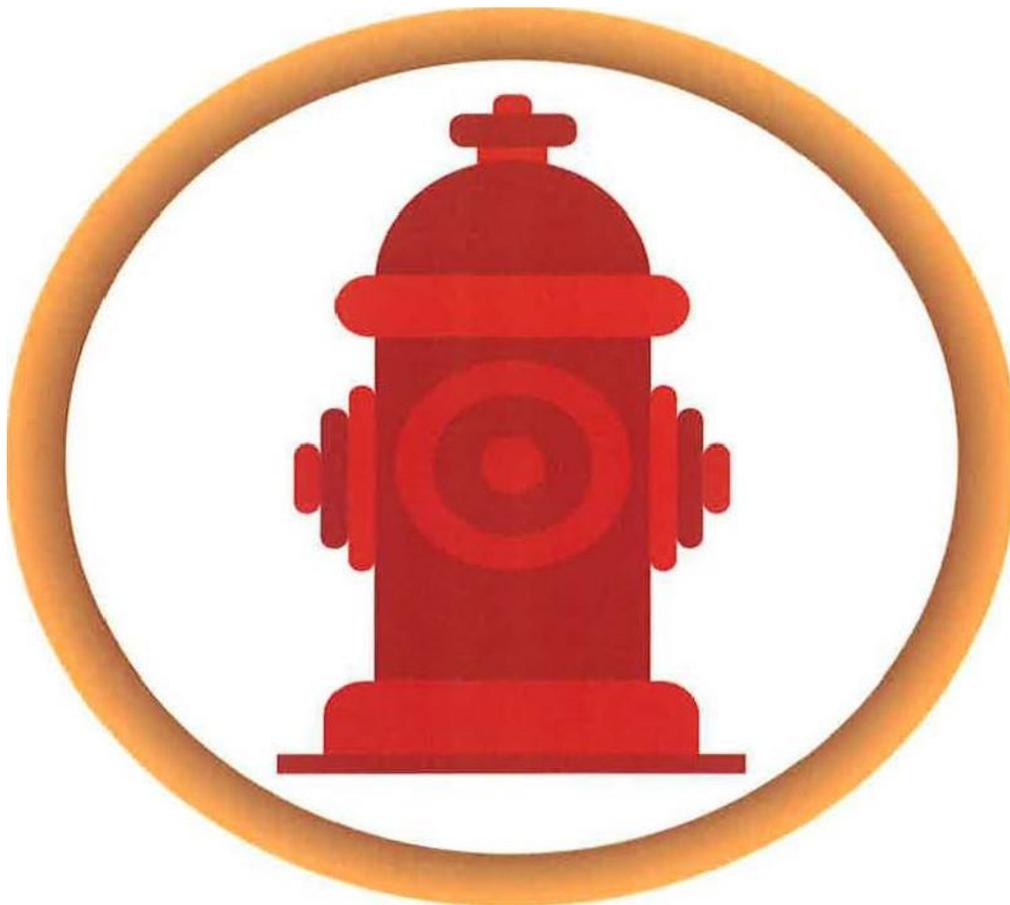
Divergence	0	
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Excessive difference between the class of the Water Supply and the class of the Fire Department prevents the more effective feature from being utilized to its full relative value. An additional number of points are assigned to the grading of the community to recognize this divergence. Divergence in class between Water Supply and Fire Department of 2 classes or more shall have points added to the final grading of the community.

Community Protection Class (PC) Grade	4	
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The Protection Class produced by this schedule is the overall class of the community, not the classification of all property located in the community. The rules of the applicable protection class manual must be applied to the Community Protection Class to determine the PC of an individual property located within the community.

Water Supply





SUMMARY OF POINTS

Item		Points
1. Adequacy of Water Supply		
1a. Commercial Districts		278
1b. Residential Districts		6
Total Points for Item		284
2. Distribution of Hydrants		
2a. Commercial Districts		23
2b. Residential Districts		1
Total Points for Item		24
3. Hydrants - Size, Type, and Installation		
Total Points for Item		6
4. Hydrants - Inspection and Condition		
Total Points for Item		8
5. Arrangement, Operation, and Maintenance of Water System Components		
5a. Arrangement and Operation		34
5b. Maintenance		104
Total Points for Item		138
Water Supply - Total Points		460



Water Supply

Explanation of Points	Points Scored	% of Credit
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1. Adequacy of Water Supply

1a. Commercial Districts	278	63%
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This item evaluates the water system's ability to deliver the required fire flow for commercial properties in the community. The score for this item is determined by comparing the required fire flow for a building to the available fire flow. A building's required fire flow is calculated using type of construction, square footage, occupancy, external exposure, and whether the building is equipped with an automatic sprinkler system. Available fire flow is measured using hydrant flow tests and the capacity of the water system storage, pumps, filters, and mains.

1b. Residential Districts	6	98%
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Fire flow availability is also evaluated in the residential districts of the community. The base fire flow requirement for residential properties is 1,000 gpm for a one-hour duration. In the context for the Protection Class Grading Schedule, "residential" refers to one- to four-family dwellings.

2. Distribution of Hydrants

2a. Commercial Districts	23	93%
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This item evaluates whether commercial buildings located in the community have an adequate number of fire hydrants and if the fire hydrants are well distributed around the building. Buildings specifically rated by WSRB are used in evaluating this item.

2b. Residential Districts	1	100%
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Residential structures in the community will be evaluated to determine if a fire hydrant is available within 600 feet. Point score is based on the total number of properties as compared to the number of properties with a fire hydrant within 600 feet.

3. Hydrants - Size, Type, and Installation

	6	94%
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Hydrants shall conform to American Water Works Association (AWWA) Standards for dry-barrel hydrants. Standard hydrants must have a minimum of one pumper outlet and two 2.5-inch outlets, be connected to at least a 6-inch water main, and be provided with a control valve on connections between the hydrant and street main. Hydrants should also have a quick-connect fitting on the pumper port and uniform operating direction.

4. Hydrants - Inspection and Condition

	8	92%
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Hydrants must be inspected annually, including operating the hydrant and checking the static pressure. Flow tests of hydrants must be conducted at least every 5 years. Fire hydrants shall be marked for available water flow, free of obstructions, and kept in good condition.

5. Arrangement, Operation, and Maintenance of Water System Components

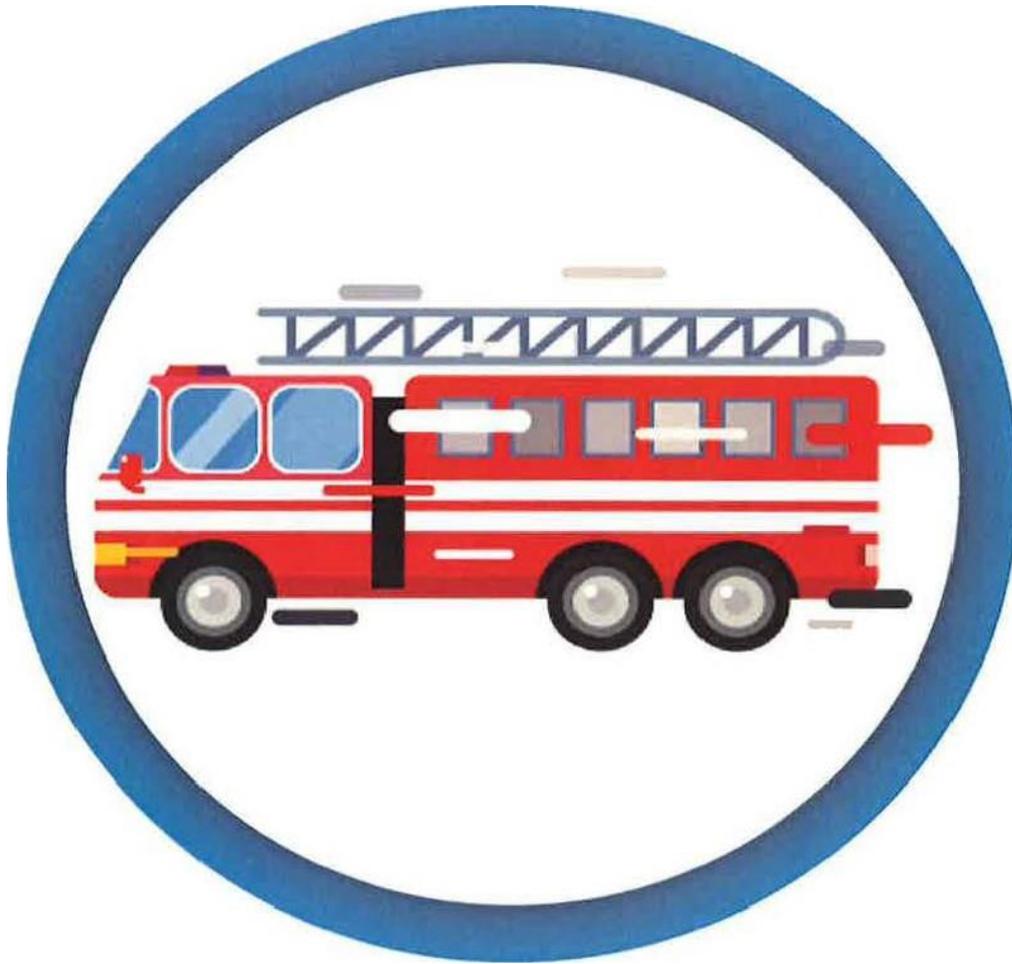
5a. Arrangement and Operation	34	66%
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"Arrangement" of the water system components evaluates the location and number of water sources and water storage units. Multiple water sources and water storage locations provide redundancy in order to reduce the impact of failure of one part of the system. "Operation" considers how the system is monitored and controlled (telemetry), how water is delivered (pumps or gravity), and if backup power is provided for pumps. The water system shall be managed by a state-certified operator.

5b. Maintenance	104	48%
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This item evaluates the frequency of visits to and inspections of water system components other than hydrants. Regular visits and inspections allow for timely maintenance and repair of components. Water system components including wells, pumps, water tanks and reservoirs, pressure reducing, altitude, float control and isolation valves shall be regularly inspected.

Fire Department





SUMMARY OF POINTS

Item		Points
1. Pumpers		
1a. Number of Pumpers		29
1b. Number of Reserve Pumpers		13
Total Points for Item		42
2. Ladder Trucks / Ladder Service		
2a. Number of Ladders Trucks in Service		0
2b. Number of Reserve Ladder Trucks		20
2c. Ground Ladder Service		12
Total Points for Item		32
3. Distribution of Companies		
Total Points for Item		8
4. Pumper Capacity		
4a. Pumper Capacity		10
4b. Reserve Pumper Capacity		1
Total Points for Item		11
5. Maintenance and Condition of Apparatus		
Total Points for Item		49

6. Number of Officers	
6a. Number of Chief Officers	0
6b. Number of Company Officers	28
Total Points for Item	28
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7. Department Staffing	
7a. Normal Minimum Strength of Day Staffing	114
7b. Normal Minimum Strength of Night Staffing	114
Total Points for Item	228
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8. Engine and Ladder Company Unit Staffing	
Total Points for Item	31
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9. Stream Devices	
Total Points for Item	3
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10. Equipment for Pumpers and Ladder Trucks	
Total Points for Item	2
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11. Hose	
11a. Total Amount of LDH and 2 ½ - inch Hose	2
11b. Total Amount of 1 ½ - inch Hose	0
11c. Total Amount of Pre-Connected Hose	0
Total Points for Item	2
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12. Condition of Hose	
Total Points for Item	8
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13. Training

Total Points for Item	75
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14. Response to Alarms

Total Points for Item	3
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15. Fire Operations

Total Points for Item	123
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16. Special Protection

16a. Fire Boats in Service	0
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16b. Other Needed Special Protection	0
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Total Points for Item	0
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17. Miscellaneous Factors and Conditions

17a. Fire Stations	21
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17b. Fuel	17
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17c. Delay in Response	29
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Total Points for Item	67
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Fire Department - Total Points	712
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Fire Department

Explanation of Points	Points Scored	% of Credit
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1. Pumpers

1a. Pumpers	29	86%
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The number of pumpers in service and regularly responding to alarms must be sufficient to properly protect the community. The number of pumpers required is determined by evaluating the fire flow requirements in the community, geographical distribution of structures, response of engines outside the community, and frequency of alarms. The required number of pumpers is compared to the number of pumpers in service. Pumper-ladder trucks will be credited under this item. Automatic aid will be considered in this item.

1b. Reserve Pumpers	13	68%
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To maintain the required number of pumpers in service, one reserve pumper is required for every 8 pumpers required to be in service, but no fewer than 1. Reserve pumpers shall be fully equipped, tested, and maintained for service.

2. Ladder Trucks / Ladder Service

2a. Number of Ladder Trucks in Service	0	100%
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The number of ladders trucks in service and regularly responding to alarms must be sufficient to properly protect the community. A ladder truck is required when a community has at least 5 buildings with a required fire flow of 4,000 gpm or greater and/or 3 stories (35 feet) in height. The required number of ladders is compared to the number of ladders in service. Pumper-ladder trucks will be credited under this item. Automatic aid will be considered in this item. The height and type of ladder truck will also be evaluated in this item.

2b. Number of Reserve Ladder Trucks	20	0%
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To maintain the required number of ladder trucks in service, one reserve ladder truck is required for every five ladder trucks required to be in service, but no fewer than one. Reserve ladders shall be fully equipped, tested, and maintained for service.

2c. Ground Ladder Service	12	76%
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In those communities not considered to require a standard ladder truck, sufficient ground ladders to reach the roofs of buildings must be carried on pumpers or special apparatus. The number, type, height, and testing of ground ladders will be evaluated in the item.

3. Distribution of Companies

	8	96%
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Engine and ladder companies must be distributed to provide effective protection to the community. Structures should be within 1.5 road miles of a first-alarm engine company and 2.5 miles of a ladder company. Distances may be increased to 4 road miles in areas with separation of 100 feet or more between buildings. Pumper-ladders and automatic aid will be considered in this item.

4. Pumper Capacity

4a. Pumper Capacity	10	95%
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Adequate pumper capacity must be provided on the first alarm to meet or exceed basic fire flow. All fire pumps must be tested annually to receive full credit. Automatic aid will be considered in this item.

4b. Reserve Pumper Capacity	1	95%
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The total pumper capacity, including reserve pumpers, with 1 for each 8 required pumpers (but not fewer than 1 and including the largest) out of service, must be sufficient to maintain the total pumper capacity required.

5. Maintenance and Condition of Apparatus

	49	67%
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The points scored in this item are based on the percentage scores of the sub-items below. No points are assigned to these sub-items.

5a. Facilities and Personnel		40%
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Facilities, preferably departmental, must be adequate to properly service all apparatus, and an adequate number of personnel trained in fire apparatus maintenance must be provided. This item evaluates who operates the maintenance facility and the certifications of the maintenance personnel.

5b. Preventative Maintenance		66%
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A suitable preventive maintenance program must be in effect; this includes service tests of pumpers and inspection and testing of aerial ladders and elevating platforms. This item evaluates how often apparatus are checked and inspected. The testing frequency of pumps, aerials, foam systems, CAFS, breathing air systems, apparatus road test, and weight verification are also evaluated.

5c. Age of Apparatus		84%
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The age of apparatus will be considered in determining condition. Pumpers, ladders, and support vehicles older than 15 years will receive deficiency points. Apparatus older than 25 years will receive additional deficiency points.

2c. Ground Ladder Service	12	76%
---------------------------	----	-----

In those communities not considered to require a standard ladder truck, sufficient ground ladders to reach the roofs of buildings must be carried on pumpers or special apparatus. The number, type, height, and testing of ground ladders will be evaluated in the item.

6. Number of Officers

6a. Number of Chief Officers	0	100%
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A chief officer in charge of the department must be on duty at all times but need not sleep at a fire station to be considered on duty provided there are adequate means for notification and response to alarms. Departments with more than 8 companies, in addition to the chief and assistant chief, must have sufficient battalion or district chiefs to provide one on duty in a fire station at all times for each 8 companies or major fraction required. Two active volunteer officers may be considered equivalent to one full on-duty officer, up to half the number of officers required.

6b. Number of Company Officers	28	44%
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There must be sufficient company officers to provide one on duty at all times with each required engine or ladder company. Two active volunteer officers may be considered equivalent to one full on-duty officer, up to half the number of officers required.

7. Department Staffing

7a. Normal Minimum Strength of Day Shift	114	43%
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There must be 6 firefighters on duty for each of the required engine and ladder companies. Only personnel who participate in actual structural firefighting operations will be credited. Personnel staffing ambulances or other units serving the general public may be credited depending on the extent they are available for firefighting duties. Three call and/or volunteer firefighters will be considered equivalent to 1 on-duty firefighter. Call or volunteer firefighters may not exceed half the required strength of required companies. If adequate records of response are not kept, credit may be limited to 1 on-duty for each 6 call or volunteer firefighters. Call or volunteer firefighters working defined shifts at fire stations may be considered equivalent to on-duty firefighters. Response of firefighters on automatic aid apparatus and the response of off-shift personnel will also be considered in this item.

7b. Normal Minimum Strength of Night Shift	114	43%
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There must be 6 firefighters on duty for each of the required engine and ladder companies. Only personnel who participate in actual structural firefighting operations will be credited. Personnel staffing ambulances or other units serving the general public may be credited depending on the extent they are available for firefighting duties. Three call and/or volunteer firefighters will be considered equivalent to 1 on-duty firefighter. Call or volunteer firefighters may not exceed half the required strength of required companies. If adequate records of response are not kept, credit may be limited to 1 on-duty for each 6 call or volunteer firefighters. Call or volunteer firefighters working defined shifts at fire stations may be considered equivalent to on-duty firefighters. Response of firefighters on automatic aid apparatus and the response of off-shift personnel will also be considered in this item.

8. Engine and Ladder Company Unit Staffing

	31	90%
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Unit staffing strength for engine and ladder companies only considers companies with apparatus in service credited in items 1 and 2. The amount by which the required 6 on-duty firefighters per company exceeds the on-duty strength (as determined in Item 7), divided by the number of in-service companies, equals the average deficiency per company.

9. Stream Devices

	3	94%
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Turrets, nozzles, foam equipment, and, where required, elevated stream devices must be provided. This item evaluates the required stream devices to the devices provided. Credit will be limited if annual testing is not conducted and maintenance records are not provided.

10. Equipment for Pumpers and Ladder Trucks

	2	98%
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This item will consider equipment for existing pumpers and ladder trucks, except for such equipment considered in Items 2c (ground ladders), 9 (stream devices), and 11 (hose). Credit for SCBA's will be limited if inspection and testing is not conducted and maintenance records are not provided.

11. Hose

11a. Total Amount of LDH and 2 ½ inch Hose	2	98%
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This Item considers whether adequate hose is carried on each pumper and whether adequate reserve hose is provided. The requirement for large diameter hose (3.5 inches or larger) for each pumping apparatus is 600 feet on the apparatus and 300 feet in reserve. The requirement for 2.5-inch + hose is 800 feet on the apparatus and 400 feet in reserve.

11b. Total Amount of 1 ½ inch Hose	0	100%
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The requirement for 1.5-inch + hose on each pumping apparatus is 400 feet with 200 feet in reserve.

11c. Total Amount of Pre-Connected Hose	0	100%
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The requirement for pre-connected, 1.5-inch + hose on each pumping apparatus is 200 feet. Booster hose that is pre-connected to the pump is creditable, but booster hose smaller than 1.5 inches will only receive 50% credit.

12. Condition of Hose

	8	90%
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The points scored in this item are based on the percentage scores of the sub-items below. No points are assigned to these sub-items.

12a. Hose Testing Frequency		100%
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All hose, in service and reserve, must be maintained in good condition and tested annually in accordance with NFPA Standard 1962.

12b. Age of Hose		47%
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The points scored in this item are based on the percentage scores of the sub-items below. No points are assigned to these sub-items.

12c. Hose Washing, Drying, and Storage Facilities		100%
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Suitable facilities and procedures must be provided for washing, drying, and storing hose. This is to prevent mildew in the hose jackets and rust / corrosion in hose compartments.

12d. Cotton Jacket Hose		100%
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An additional deficiency will be added for cotton-jacketed hose.

13. Training

	75	75%
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The points scored in this item are based on the percentage scores of the sub-items below. No points are assigned to these sub-items.

13a. Supervision		100%
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Training must be under the guide of a qualified training officer. Maximum credit is achieved when the training officer has at least 10 years of direct incident command experience, a rank of captain or better, and certification as a Fire Instructor II. Personnel in charge of training sessions must be certified as fire instructors.

13b. Company Training		73%
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Firefighters are required to have a minimum of 20 hours of structural firefighting training per firefighter, per month. This amount can be reduced by 25%, to 15 hours, for firefighters that are certified Firefighter I and by 50%, to 10 hours, for firefighters that are certified firefighter II. Training should include topics outlined in NFPA 1001: Standard for Fire Fighter Professional Qualifications.

13c. Training Center Training		60%
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This item evaluates the quantity of training at a training center and the quality of the training center. A minimum of 8 half-day (3-hour) drills per year, including 2 drills at night and 4 multiple-company drills, shall be provided for all firefighters. Training centers shall be provided with a drill tower that is 3 stories in height (4 stories in height if a ladder truck is required in the community), a structure to support live fire simulation, a combustible liquid pit (minimum of 20-foot radius accessible from all directions), training aids and props, and an area of at least 2 acres suitable for multi-company operations.

13d. Officer Training		100%
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A minimum of two days per year (16 hours) is required for all officers. This amount can be reduced by 25%, to 12 hours, for officers that are certified Fire Officer I and by 50%, to 8 hours, for officers that are certified Fire Officer II. Officer training should include topics outlined in NFPA 1021: Standard for Fire Officer Professional Qualifications that focus on leadership, fire tactics, and incident command.

13e. Driver and Operator Training		100%
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Personnel who drive and/or operate apparatus shall participate in a minimum of 1 day (8 hours) of training per year. Training should include topics outlined in NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications. Current state-approved EVIP certification can serve in lieu of annual training.

13f. Recruit Training		100%
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New fire department members shall receive a minimum of 240 hours of recruit training before becoming active firefighters. Training should include topics outlined in NFPA 1001: Standard for Fire Fighter Professional Qualifications.

13g. Pre-Fire Planning		20%
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An annual inspection of all commercial or similar type buildings is required. Pre-fire information shall be readily available on responding apparatus. Pre-fire plans should be in accordance with NFPA 1620: Recommended Practice for Pre-Incident Planning.

14. Response to Alarms

	3	97%
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The points scored in this item are based on the percentage scores of the sub-items below. No points are assigned to these sub-items.

14a. Run Cards		100%
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Run cards detailing the fire department response to fires must be developed for all areas of the community.

14b. Commercial Districts		90%
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Adequate response to alarms must be established. The required first alarm response depends on the district's basic fire flow. For districts with basic fire flow from 1500-3,999 gpm, at least 1 chief officer, 2 engine companies, and 1 ladder service company are required. For districts with basic fire flow from 4,000-8,999 gpm, at least 1 chief officer, 3 engine companies, and 1 ladder truck company are required. When basic fire flow is 9,000 gpm or higher, at least 1 chief officer, 3 engine companies, and 2 ladder truck companies are required.

14c. Residential Districts		100%
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At least 1 chief officer, 2 engine companies, and adequate ladder equipment are required to respond to residential districts.

14d. Multiple Alarms		90%
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Engine company response to each additional alarm for the same fire should approximate the number of engine companies required for the first alarm.

14e. Cover Plan		100%
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Response areas in the community must have a cover plan for when the first due companies are out of service.

15. Fire Operations

	123	62%
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The points scored in this item are based on the percentage scores of the sub-items below. No points are assigned to these sub-items.

16. Special Protection

16a. Insufficient Fire Boats In-Service	0	100%
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A suitably staffed, equipped, and maintained fireboat will be required where at least 1 mile of wharf frontage necessitates firefighting operations from the water side. Such frontage must be within 1.5 miles of a fireboat.

16b. Lack of Other Needed Special Equipment	0	100%
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Conditions in the municipality that require special fire department protection in addition to that covered elsewhere in this schedule will be considered in this item. Conditions considered in this item include but are not limited to: waterfront properties needing some special protection but not requiring a conventional fireboat, extensive brush areas, extensive bulk oil and other hazardous storage.

17. Miscellaneous Factors and Conditions

17a. Fire Stations	21	79%
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This item considers suitability of fire stations, including construction, housing of apparatus, and if the station is provided with a secondary power source. Communication equipment should be provided at fire stations and include two-way radios, spare portable radios, commercial telephone, and means for public reporting to the dispatch center. Firefighters must have two separate means for receiving alarms from the communication center that are under the control of the

communications center. At least one means must be supervised. If the stations are not staffed, firefighters must be equipped with the means to receive alarms.

17b. Fuel	17	15%
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Fuel must be available in sufficient quantities at fire stations. Suitable arrangements must be made for delivery of fuel to apparatus at fires of long duration.

17c. Delays in Response	29	71%
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The possibility of delays due to poor condition of roads, including snow and ice, steep grades, vehicle parking, traffic, railroad grade crossings, and similar features are considered in this item.

Emergency Communications





SUMMARY OF POINTS

Item		Points
1. Communications Center		
1a. Building Construction, Exposures, Communicating Openings		43
1b. Fire Protection		15
1c. Security		5
1d. Emergency Lighting		3
Total Points for Item		66
2. Communication Equipment		
2a. Computer Aided Dispatch (CAD)		21
2b. Recording		0
2c. Telephone Service		10
2d. Supervision		20
2e. Dispatch Circuits		40
2f. Emergency Power		0
Total Points for Item		91
3. Telecommunicators		
3a. Training		26
3b. Number of Telecommunicators on Duty		51
Total Points for Item		77
Emergency Communications - Total Points		234

Emergency Communications

Explanation of Points	Points Scored	% of Credit
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1. Communications Center

1a. Building Construction, Exposures, Communicating Openings	43	14%
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This item evaluates the building where the communication center is located. Communication centers should be in fire-resistive, separate buildings without internal or external exposures.

1b. Fire Protection	15	50%
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This item evaluates the adequacy of fire protection provided for the communication center, including portable fire extinguishers, fire alarms, automatic sprinkler systems and suppression systems in computer and data-processing equipment rooms.

1c. Security	5	50%
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Communication center security is meant to protect against vandalism, terrorism, and civil disturbances. Restricted access, security of doors and windows, and the vulnerability of the areas surrounding the center are considered.

1d. Emergency Lighting	3	70%
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Communication centers must be provided with emergency lighting that will be placed in service immediately after a power loss so operations can continue uninterrupted. At least one self-charging lantern or flashlight should also be provided.

2. Communications Center Equipment

2a. Computer Aided Dispatch (CAD)	21	70%
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Features and capabilities of the Computer-Aided Dispatch (CAD) system are evaluated. Maximum credit is achieved when the CAD system has enhanced 911 , wireless and VoIP capabilities; allows data exchange; has a redundant backup system with automatic switch-over to backup; selects and recommends

units to be dispatched; is MDC-capable; and has automatic vehicle locating, GIS capabilities, and management information system (MIS). Credit will be prorated depending on the communication center's CAD capabilities.

2b. Recording	0	100%
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All incoming and outgoing voice transmissions shall be recorded including the date and time. All telecommunicators should have access to immediate playback of recordings.

2c. Telephone Service	10	67%
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Adequate pumper capacity must be provided on the first alarm to meet or exceed basic fire flow. All fire pumps must be tested annually to receive full credit. Automatic aid will be considered in this item.

2d. Supervision	20	0%
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The total pumper capacity, including reserve pumpers, with 1 for each 8 required pumpers (but not fewer than 1 and including the largest) out of service, must be sufficient to maintain the total pumper capacity required.

2e. Dispatch Circuits	40	0%
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The communication center must have separate primary and secondary dispatch circuits for transmitting alarms. Maximum credit is obtained when dual circuits are provided, circuits are supervised, there is automatic switchover to a secondary circuit, and all components of the system are owned by the communication center.

2f. Emergency Power	0	100%
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The Communication Center shall be provided with an emergency power source. An uninterruptible power supply (UPS) shall be provided along with an automatically starting generator.

3. Telecommunicators

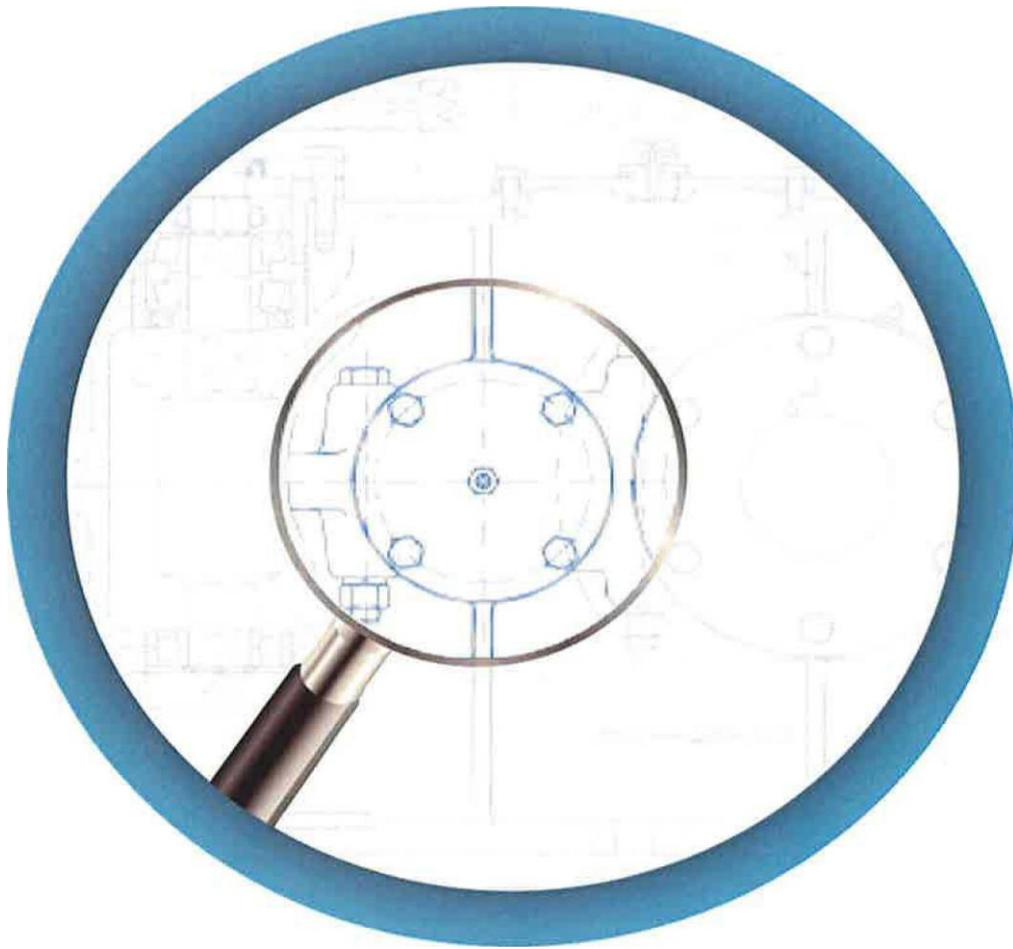
3a. Training	26	48%
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A minimum of 480 hours of initial training is required for Telecommunicators. General dispatch training and fire dispatch training should be a minimum of 240 hours each. Non-certified telecommunicators should receive 40 hours of continuing education per year. Certified Telecommunicator I personnel and certified Telecommunicator II personnel shall receive 30 hours and 24 hours of continuing education, respectively.

3b. Number of Telecommunicators on Duty	51	49%
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The age of apparatus will be considered in determining condition. Pumpers, ladders, and support vehicles older than 15 years will receive deficiency points. Apparatus older than 25 years will receive additional deficiency points.

Fire Safety Control





SUMMARY OF POINTS

Item		Points
1. Fire Code Enforcement		
1a. Fire Marshal		11
1b. Fire Plan Review		15
1c. Inspections of Fire Code Permits		2
1d. Fire Code Inspections of Existing Occupancies		232
1e. Confidence Testing of Fire Protection Systems		0
Total Points for Item		260
2. Public Fire Education		
2a. School Programs		28
2b. Adult Programs		6
Total Points for Item		34
3. Fire Investigations		
Total Points for Item		5
4. Building Code Enforcement		
Total Points for Item		8
Fire Safety Control - Total Points		307



Fire Safety Control

Explanation of Points	Points Scored	% of Credit
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1. Fire Code Enforcement

1a. Fire Marshal	11	45%
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The fire marshal shall oversee fire code enforcement. The fire marshal shall have 10 or more years of code enforcement experience, be certified as a fire marshal, and receive at least 16 hours of fire-code related continuing education per year.

1b. Fire Plan Review	15	70%
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Review of plans for fire code compliance must be done by experienced, certified personnel. The plan reviewer shall have 5 or more years of plan review experience, be a registered design professional (licensed professional engineer), and receive at least 16 hours of plan review related continuing education per year. The plan review department needs to have adequate staffing to ensure comprehensive plan reviews.

1c. Inspection of Fire Code Permits	2	96%
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New and renovated occupancies requiring a fire code permit must be inspected prior to issuing a Certificate of Occupancy. Fire inspectors shall be certified with 5 or more years of experience in inspections and receive at least 16 hours of fire inspection related continuing education per year. Adequate department staffing levels must be maintained to ensure comprehensive inspections.

1d. Fire Code Inspections of Existing Occupancies	232	42%
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Fire Code Inspections of existing occupancies shall be conducted. The frequency of inspections will be evaluated using Table 7 in the Protection Class Grading Schedule. Fire code inspectors should be certified with 5 or more years of experience and receive minimum of 16 hours of fire inspection related continuing education per year. Staffing levels must be sufficient to ensure comprehensive inspections.

1e. Confidence Testing of Fire Protection Systems	0	100%
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Fire protection systems must be inspected and tested in accordance with the applicable NFPA standards. A program shall be in place to ensure these inspections are done, monitor the inspections results, and ensure deficiencies found with the systems are corrected.

2. Public Fire Education

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Fire safety education must be provided to the general public. Fire educators should be Certified Public Educators in accordance with NFPA 1035, have 5 or more years of experience, and receive 16 hours of public education related continuing education per year. All education programs and events should be documented and should include date, instructor, topics taught, length of class, and number of students.

2a. School Programs	28	20%
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School programs should include age appropriate subjects for all students, preschool to the 12th grade.

2b. Adult Programs	6	60%
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Adult education should include programs for all segments of the adult population in the community.

3. Fire Investigations

	5	75%
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Fire investigations must be done to determine the cause and origin of all fires. Fire investigator shall have 5 or more years of experience, be a commissioned law officer, be certified as a fire investigator, and receive at least 16 hours of fire-investigation-related continuing education per year. In addition, sufficient staff levels are required to ensure adequate response to fires, and all fires should be reported to NE-IRS.

4. Building Code Enforcement

	8	80%
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Current building codes must be adopted and effectively enforced. The score for this item is based on the current Building Code Class of the community.

Appendix C

Fire Flow Report

Property Address	Occupant	Avail *FF	Needed *FF
255 E Main St	Global Travel	2776	5750
1035 S Grand Ave	Living Faith Fellowship	2577	2875
115 NW State St	Young Children & Families Program	2676	4500
1400 SE Bishop Blvd	Paradise Creek Quality Inn	2655	5250
1500 NE Terrell Mall	Villa Fresh Italian Kitchen	**805	2500
700 NE Thatuna St	Chinook Student Center	**716	2500
305 NW State St	Moscow and Pullman Building Supply	2909	4500
110 NE Whitman St	Grand Avenue Storage	3008	4250
150 W Main St	Cougar Land Motel	2969	4250
3200 Pullman Airport Rd	Pullman-Moscow Airport Terminal	2500	2125
430 SE Bishop Blvd	Safeway	4618	2125
345 SW Kimball Dr	Pullman Christian School	1751	4000
1300 SE Sunnymead Way	Emmanuel Baptist Church	3080	4000
835 SE Bishop Blvd	Pullman Regional Hospital	4321	4000
1205 SE Professional Mall Blvd	The Professional Mall X-Ray Lab	3280	3750
535 SE Riverview Dr	Renaissance Fine Woodworking	2659	3750
928 NW Olsen St	Hilltop Inn	2811	3750
805 NW Guy St	City Shop	3512	3500
325 NE Maple St	Simpson Methodist Church	2065	3500
425 NW Albion Dr Bldg A	VMRD	1288	3500
1190 SE Bishop Blvd	Holiday Inn Express Hotel	2107	3500
2115 NE Westwood Dr	Cedar Pointe Condominiums	1612	1625
815 SE Klemgard St	Bishop Place	2811	3000
2450 S Grand Ave	Brian's Body Shop	3514	1500
325 SE Paradise St	City Hall	2557	3000

*FF = Fire Flow

**WSU Water System