



Protection Classification Report for:

Pierce County Fire District 22

Effective Date: April 1, 2020

Washington Surveying and Rating Bureau (WSRB) is an independent, non-profit public service organization that has been serving the State of Washington since 1911.

As a data and information organization, WSRB is an authoritative resource for the property insurance industry.

Our mission is to provide our customers with trusted information and services that enhance their decision-making and success.

One of the services WSRB provides is determining the Protection Class of communities and the Protection Class Ratings of individual properties in those communities. Protection Class Ratings are used by insurance companies to help determine fire insurance premiums for properties. WSRB determines the Protection Class of cities and fire protection districts by evaluating their fire protection/suppression capabilities using a schedule approved by the Washington State Office of the Insurance Commissioner. As a result of this evaluation the communities are assigned a Protection Class of 1 through 10, where 1 indicates exemplary fire protection capabilities, and 10 indicates the capabilities, if any, are insufficient for insurance rating credit. WSRB evaluates communities in four major areas:

Water Supply: WSRB evaluates the capacity, distribution and maintenance of water systems and fire hydrants.

Fire Department: WSRB evaluates the fire department, including fire stations, apparatus, equipment, personnel and their training.

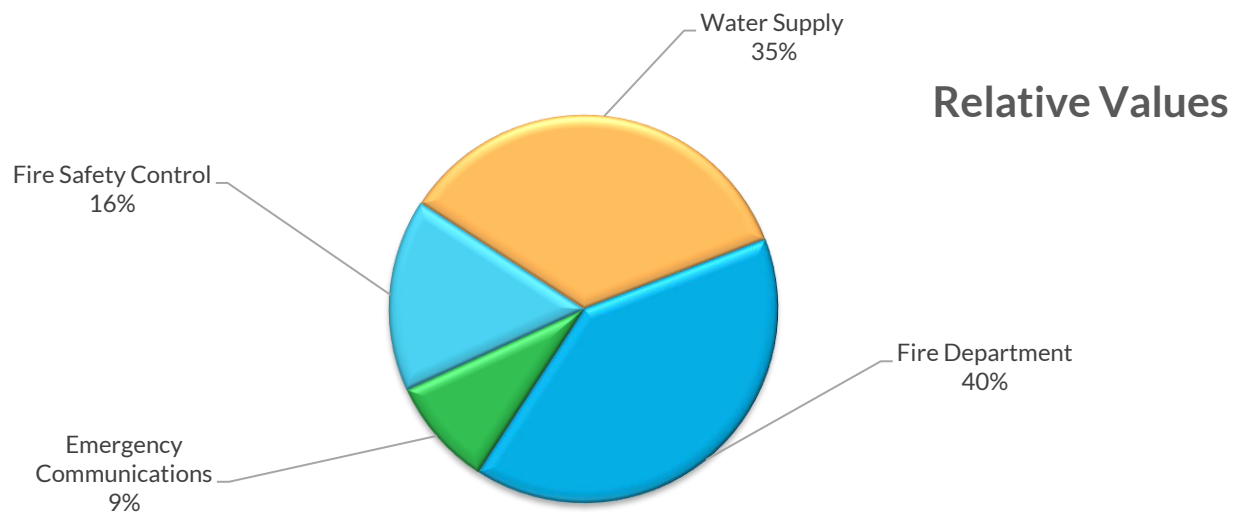
Emergency Communications: WSRB evaluates the emergency communication system used to dispatch the fire department.

Fire Safety Control: WSRB evaluates the fire code enforcement and fire safety education activities in the community.

The Protection Class evaluation process recognizes the efforts of communities to provide fire-protection services for citizens and property owners. Insurance companies use Protection Classes to help establish fair premiums for fire insurance — generally offering lower premiums in communities with better protection. Offering economic benefits for communities investing in their firefighting services, provides an incentive for improving and maintaining fire protection.

To determine a community's Protection Class, WSRB uses the Community Protection Class Grading Schedule. The Grading Schedule measures the fire protection capabilities of a community by means of a point system or, for communities without a recognized water supply, by comparison with minimum criteria. Under the point system, pertinent items are evaluated against the standards set forth in the schedule and items are scored, depending on the importance of the item and the degree of deviation for the standard.

The four major areas considered under the point system, as well as the relative value allocated to each, are shown below.

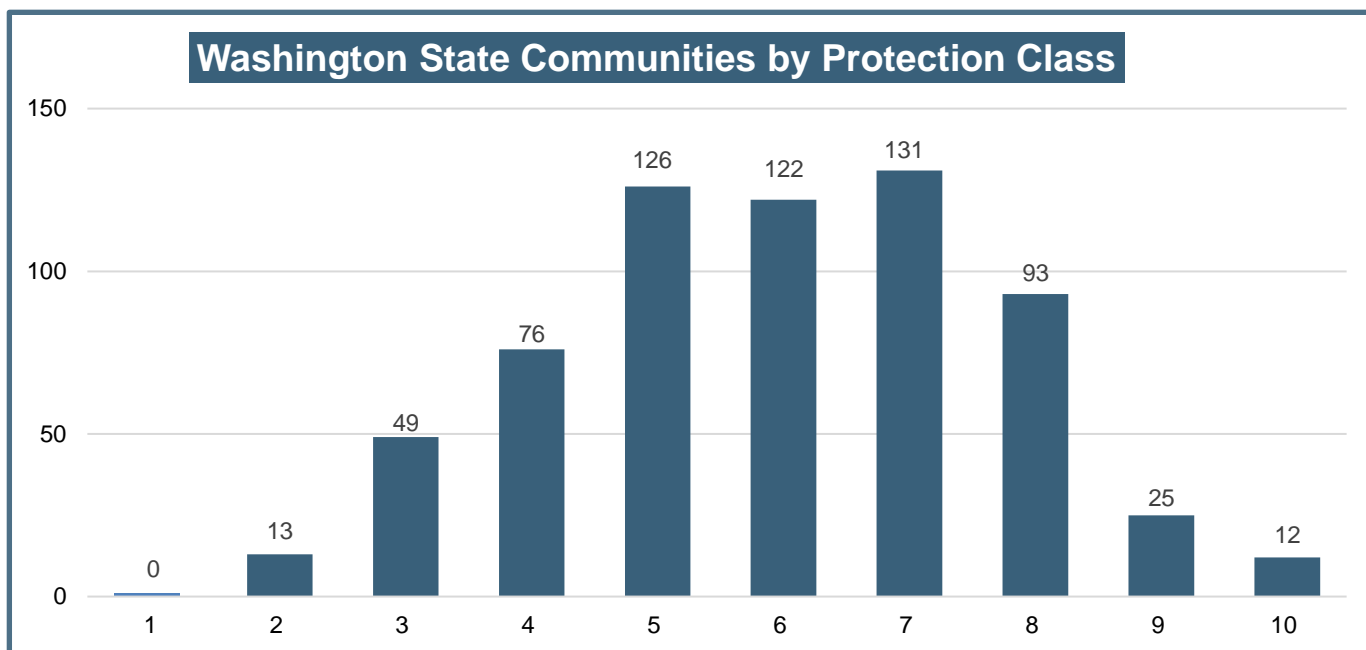


These four areas are evaluated and scored independently of each other. The scores are then combined in a final calculation to determine the Protection Class for the community.

The following pages provide a summary of all the items evaluated, the percentage of credit attained for each item and the final calculation to determine the Protection Class for the community.

The Community Protection Class produced by WSRB’s evaluation is the overall Protection Class for the community, not the Protection Class for all the properties located in the community. Distance to fire station and fire hydrant criteria along with the other rules of the applicable protection class manual must be applied to the Community Protection Class to determine the Protection Class Rating of an individual property located within the community.

Buildings and property located within the community are eligible for the Protection Class of the community, but no better, if they meet the distance to fire station and applicable fire hydrant requirements. If these requirements are not met, the building will receive a different Protection Class Rating than the Protection Class of the community. The chart below shows the number



QUESTIONS?

Please contact WSRB Fire Protection Analyst that conducted the evaluation if there are any questions. Their contact information is located on the results letter that accompanied this report or contact WSRB at 206-217-9772 or email us at publicprotection@wsrb.com

Please contact WSRB Customer Service at 206-217-0101 or customerservice@wsrb.com for questions on the Protection Class Rating for individual properties in your community. If the fire department or community officials are receiving Protection Class inquiries from insurance professionals or citizens of the community, feel free to refer these inquiries to WSRB Customer

FINAL CALCULATION



Community Protection Class (PC)

	Evaluation Areas			
	Water Supply	Fire Department	Emergency Communication	Fire Safety Control
Percent of Credit	81%	58%	76%	78%
Relative Value of Area in Evaluation	35%	40%	9%	16%
Relative Class of Evaluation Area	2	5	3	3

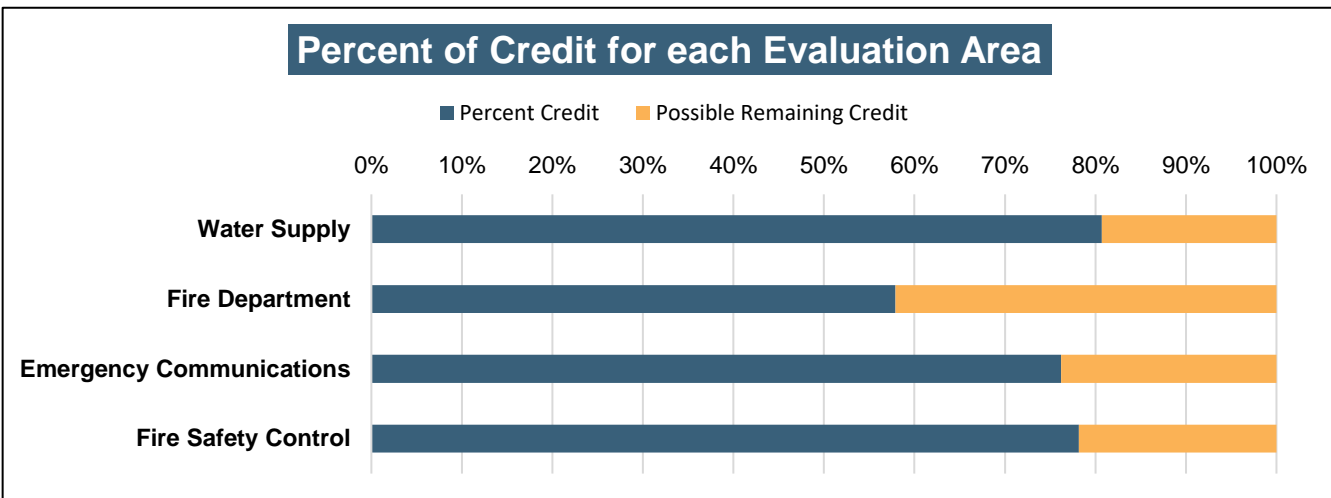
Total Credit (sum of each area credit X relative value) 7.09

Divergence Score 0.04

Community PC = (10-Total Credit)+Divergence Score 2.95 (Unrounded Score)

Community Protection Class = 3

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



FINAL CALCULATION



Evaluation Area Scores:

Percent of Credit

Water Supply 81%

The water supplies in the community providing 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 4 make up the total score for this section.

Fire Department 58%

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

Emergency Communications 76%

The Emergency Communication Center responsible for dispatching the fire department servicing the community is evaluated. This evaluation applies to all 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 78%

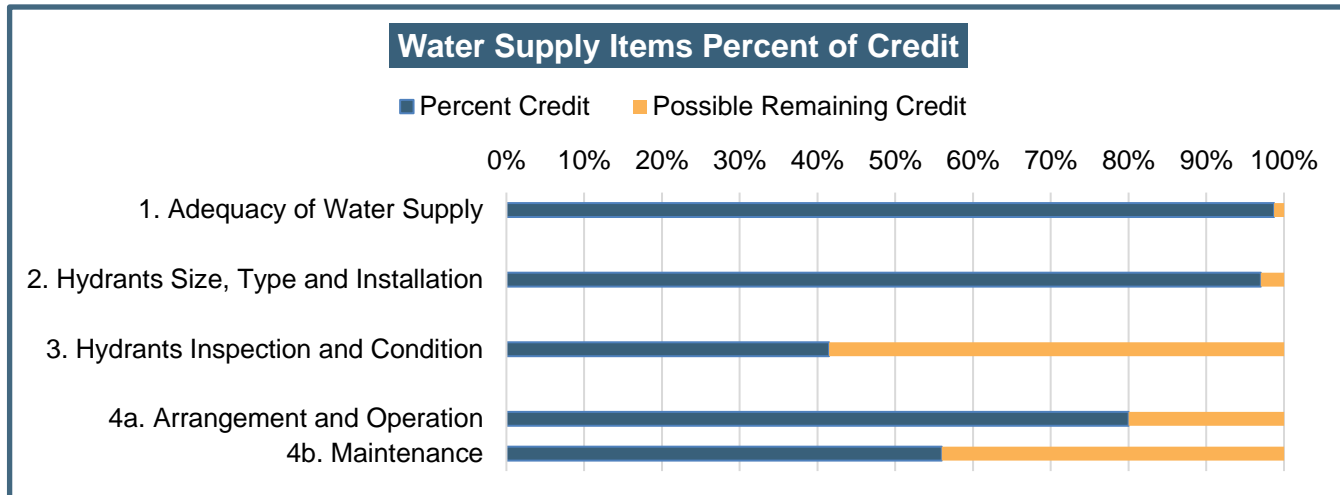
Fire Safety Control or fire prevention activities provided in the community are evaluated in this section. These activities may be provided by local, county or state authorities, all of which will be included in the evaluation. Fire Safety Control Items 1 through 4 make up the total score for this section.

Divergence Score 0.04

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. Divergence between Water Supply and Fire Department of 2 classes or more shall be applied to the final score of the community.

Community Protection Class (PC) Class: 3

The Protection Class produced by this schedule is the overall class of the community, not the classification of specific properties located in the community. Distance to fire station and fire hydrant criteria along with the other rules of the applicable protection class manual must be applied to the Community Protection Class to determine the Protection Class of an individual property located within the community.



1. Adequacy of Water Supply

Percent of Credit

99%

This item evaluates the water system's ability to deliver the required fire flow for 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 as indicated in the Protection Class Schedule 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.

2. Hydrants - Size, Type and Installation

97%

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 and be connected to at least a 6-inch water main. Hydrants should also have a quick-connect fitting on the pumper port.

3. Hydrants - Inspection and Condition

42%

Hydrants must be inspected annually, including operating the hydrant with a flow or pressure check. Flow tests of hydrants must be conducted at least every five years. Fire hydrants shall be marked for available water flow, free of obstructions and kept in good condition.

4. Arrangement, Operation and Maintenance of Water System Components

4a. Arrangement and Operation

80%

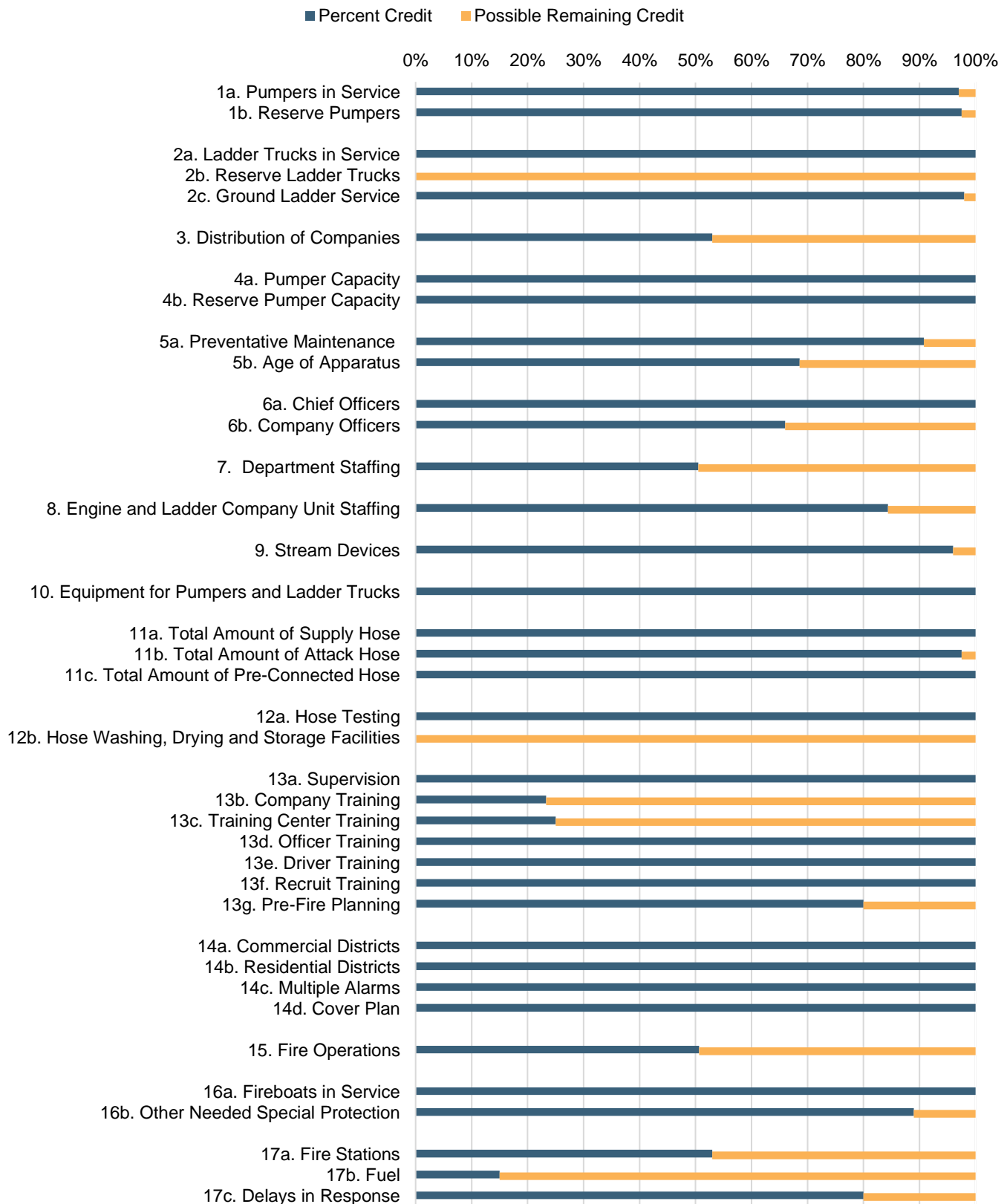
"Arrangement" of the water system components evaluates the location and number of water sources and water storage units. Multiple water sources and water storage locations provide redundancy in order to reduce the impact of failure of one part of the system. "Operation" considers how the system is monitored 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.

4b. Maintenance

56%

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-regulating, altitude, float control and isolation valves shall be regularly inspected.

Fire Department Items Percent of Credit



Fire Department

1. Pumpers

Percent of Credit

1a. Pumpers in Service

97%

The number of pumpers in service and regularly responding to incidents must be sufficient to properly protect the community. The number of pumpers required is determined by evaluating the fire flow requirements for the community, response of engines outside the community and frequency of incidents. 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

98%

To maintain the required number of pumpers in service, one reserve pumper is required for every eight pumpers required to be in service, but no fewer than one. Reserve pumpers shall be fully equipped, tested and maintained for service.

2. Ladder Trucks/Ladder Service

2a. Ladder Trucks in Service

100%

The number of ladder trucks in service and regularly responding to incidents must be sufficient to properly protect the community. A ladder truck is required when a community has at least five buildings with a required fire flow of 4,000 gpm or greater and/or three 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. Reserve Ladder Trucks

0%

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

98%

Sufficient ground ladders to reach the roofs of buildings must be carried on apparatus. The number, type, height and testing of ground ladders will be evaluated in this item.

3. Distribution of Companies

53%

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. As an alternative to using the above road-mile analysis, the results for a performance evaluation may be used. This type of evaluation would analyze computer-aided dispatch records of fire incidents to determine the percentage of time an initial engine company arrives within 320 seconds and an initial ladder company arrives within 480 seconds. Pumper-ladders and automatic aid will be considered in this item.

4. Pumper Capacity

4a. Pumper Capacity

100%

Adequate pumper capacity must be provided on the first alarm to meet or exceed the basic fire flow of the community. All fire pumps must be tested annually to receive full credit. Automatic aid will be considered in this item.

4b. Reserve Pumper Capacity

100%

The total pumper capacity, including reserve pumpers, with one for each eight required pumpers (but no fewer than one) and including the largest out of service, must be sufficient to maintain the total pumper capacity required.

Fire Department (Cont.)

5. Maintenance and Condition of Apparatus

Percent of Credit

5a. Preventative Maintenance

91%

A suitable preventive maintenance program must be in effect. This item evaluates how often apparatus are checked, inspected and who conducts the inspection. The testing frequency of pumps, aerial ladders, foam systems, CAFS, breathing air systems, apparatus road test and weight verification are also evaluated.

5b. Age of Apparatus

69%

The number of pumpers, ladders and support vehicles older than 15 years, older than 25 years and the number of reserve apparatus will be considered in determining condition of apparatus.

6. Number of Officers

6a. Chief Officers

100%

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 incidents. Departments with more than eight 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 eight companies required. Two active volunteer officers may be considered equivalent to one full on-duty officer, up to half the number of officers required.

6b. Company Officers

66%

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

51%

There must be six 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 one on-duty firefighter. Call or volunteer firefighters may not exceed half the required staffing of required companies. If adequate records of response are not kept, credit may be limited to one on-duty for each six 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 will also be considered in this item.

8. Engine and Ladder Company Unit Staffing

84%

Unit staffing for engine and ladder companies only considers companies with apparatus in service credited in Items 1 and 2. The amount by which the required six 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 member deficiency per company.

9. Stream Devices

96%

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.

Fire Department (Cont.)

10. Equipment for Pumpers and Ladder Trucks

Percent of Credit

100%

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 Supply Hose

100%

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 800 feet on the apparatus and 400 feet in reserve for every three pumpers in service.

11b. Total Amount of Attack Hose

98%

The requirement for 2.5-inch+ hose is 600 feet on the apparatus and 300 feet in reserve for every three pumpers in service. The requirement for 1.5-inch+ hose on each pumping apparatus is 400 feet with 300 feet in reserve for every three pumpers in service.

11c. Total Amount of Pre-Connected Hose

100%

The requirement for pre-connected, 1.5-inch+ hose on each pumping apparatus is 300 feet.

12. Condition of Hose

12a. Hose Testing

100%

All hose, in service and reserve, must be maintained in good condition and tested annually in accordance with NFPA Standard 1962: Standard for the Care, Use, Inspection, Service Testing and Replacement of Fire Hose, Couplings, Nozzles and Fire Hose Appliances.

12b. Hose Washing, Drying and Storage Facilities

0%

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.

13. Training

13a. Supervision

100%

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 and certification as a Fire Instructor II. Personnel in charge of training sessions must be certified as fire instructors.

13b. Company Training

23%

Firefighters are required to have a minimum of 20 hours of structural fire fighting 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

25%

This item evaluates the quantity of training at a training center and the features of the training center. A minimum of six half-day (3-hour) drills per year, including two drills at night and two multiple-company drills, shall be provided for all firefighters. Training centers shall be provided with a drill tower that is three stories in height, a structure to support live fire simulation, including a smoke room, training aids and props and an area of at least two acres and equipped with fire hydrants.

13d. Officer Training

100%

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.

Fire Department (Cont.)

Percent of Credit

13e. Driver Training

100%

Personnel who drive and/or operate apparatus shall participate in a minimum of one 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%

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

80%

An annual update of all commercial or similar type buildings' pre-fire plans 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

14a. Commercial Districts

100%

Adequate response to commercial fires must be established. At least one chief officer and the required number of engines and ladder trucks or ladder service companies based on the community basic fire flow in Table 3 are required.

14b. Residential Districts

100%

Adequate response to residential fires must be established. At least one chief officer, two engine companies, and adequate ladder equipment are required to respond to residential districts.

14c. Multiple Alarms

100%

Engine and ladder company response to each additional alarm for the same fire should be the same as the number of engine and ladder companies required for the first alarm.

14d. Cover Plan

100%

Response areas in the community must have a cover plan for when the first-due companies are out of service.

15. Fire Operations

51%

Consideration will be given to the ability of the department to operate effectively at fires. Effectiveness is dependent on staffing and training; however, others factors can also affect fire operations. Percentage for this item will be determined by taking the average of the percentages from Items 3, 7, 8 and 13 and adjusting as conditions warrant. As an alternative to using the above analysis, the results for a performance evaluation may be used. This type of evaluation would analyze computer-aided dispatch records of fire incidents to determine the percentage of time an initial full alarm assignment arrives at a fire incident within 560 seconds (690 seconds for a high-rise building).

Fire Department (Cont.)

16. Special Protection

Percent of Credit

16a. Fireboats in Service

100%

A suitably staffed, equipped and maintained fireboat will be required where at least one mile of wharf frontage necessitates firefighting operations from the water side. Such frontage must be within 1.5 miles of a fireboat.

16b. Other Needed Special Protection

89%

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 include but are not limited to: waterfront properties needing some special protection but not requiring a conventional fireboat, wildland urban interface areas, extensive bulk oil and other hazardous storage.

17. Fire Stations and Community Conditions

17a Fire Stations

53%

This item considers the suitability of fire stations, including construction, if the station is provided with a secondary power source and communication equipment. Communication equipment should be provided at fire stations and include two-way radios, spare portable radios 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 fire stations are not staffed with on-duty personnel, firefighters must be equipped with the means to receive dispatching calls.

17b. Fuel

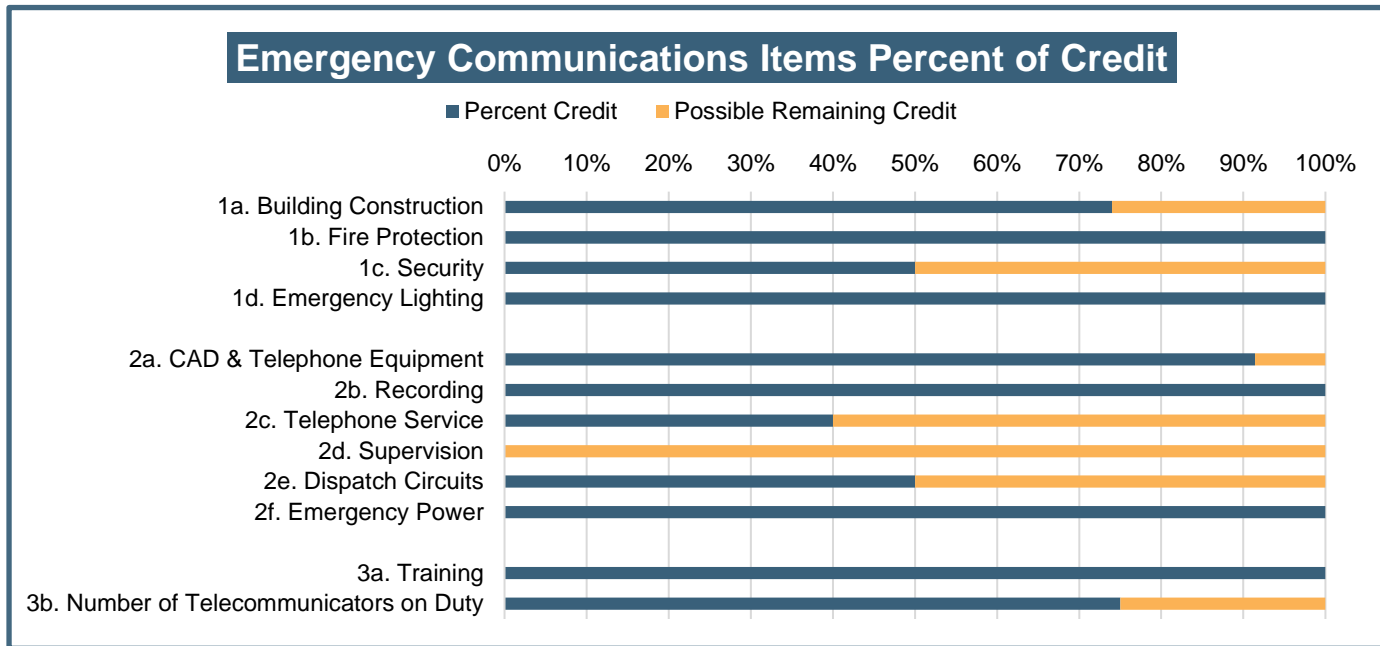
15%

Fuel must be available in sufficient quantities. Suitable arrangements must be made for delivery of fuel to apparatus at fires of long duration.

17c. Delays in Response

80%

The possibility of delays due to poor condition of roads, including snow and ice, steep grades, vehicle parking, traffic, railroad crossings and similar features are considered in this item.



1. Communication Center

Percent of Credit

1a. Building Construction

74%

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

100%

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

50%

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

100%

Communication centers must be provided with emergency lighting that will be placed in service immediately after a power loss so operations can continue uninterrupted.

2. Communications Center Equipment

2a. Computer-Aided Dispatch (CAD) and Telephone Equipment

91%

Features and capabilities of the Computer-Aided Dispatch (CAD) system and telephone equipment are evaluated. Maximum credit is achieved when the following features are provided: enhanced 911; wireless and VoIP capabilities; redundant backup system with automatic switchover to backup; can transmit caller information to fire departments and other communication centers; selects and recommends units to be dispatched; automatic vehicle locating; GIS capabilities and management information system.

Emergency Communications (Cont.)

Percent of Credit

2b. Recording

100%

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

40%

The number of required telephone lines for emergency and business calls is determined by the population served by the communication center. Additional lines may be required if emergency calls other than fire are received or if central station alarms are received. One outgoing-only line must also be provided.

2d. Supervision

0%

All components of the alarm dispatch circuits shall be monitored for integrity, including dispatch circuits, transmitters, repeaters and primary and secondary power. Fault conditions detected shall actuate an audible and visual trouble signal to the telecommunicators on duty.

2e. Dispatch Circuits

50%

The communication center must have separate primary and secondary circuits for dispatching. 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

100%

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

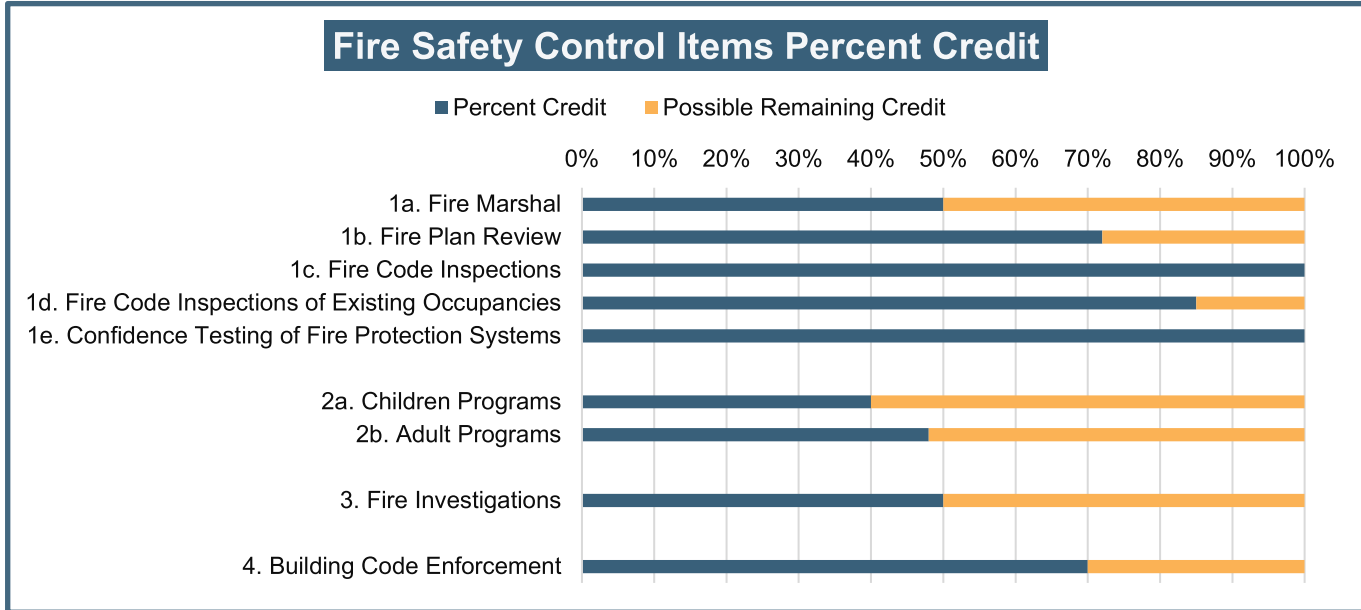
100%

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

75%

The number of required telecommunicators on duty is based on the total number of calls received per year at the communication center. If the communication center is meeting the call-answering and dispatching times set forth by NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems, then full credit will be applied in this item.



1. Fire Code Enforcement

Percent of Credit

1a. Fire Marshal

50%

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

72%

Review of plans for fire code compliance must be done by experienced, certified personnel. The plan reviewer shall have five or more years of plan review experience, be a registered design professional 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. Fire Code Inspections

100%

New and renovated occupancies must be inspected prior to issuing a Certificate of Occupancy. Fire inspectors shall be certified with five 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

85%

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 five or more years of experience and receive at least 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

100%

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.

FIRE SAFETY CONTROL (Cont.)

2. Public Fire Education

Percent of Credit

Fire safety education must be provided to the general public. Fire educators should be Certified Public Educator, have five or more years of experience, and receive at least 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. Children's Programs

40%

Children programs should include age appropriate subjects for all students, preschool to the 12th grade.

2b. Adult Programs

48%

Adult education should include programs for all segments of the adult population in the community.

3. Fire Investigations

50%

Fire investigations must be done to determine the cause and origin of all fires. Fire investigator shall have five 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 NFIRS.

4. Building Code Enforcement

Commercial Class:

4

Dwelling Class:

4

70%

Current building codes must be adopted and effectively enforced. The community is evaluated on the administration of codes, plan review and field inspection activities in relation to building code enforcement. The score for this item is based on the Building Code Classifications of the community. The classifications for commercial and dwelling properties in the community are shown above.