

THE ISO PUBLIC PROTECTION CLASSIFICATION (PPC) PROGRAM

ISO's PPC program evaluates communities according to a uniform set of criteria defined in the Fire Suppression Rating Schedule (FSRS). This criteria incorporates nationally recognized standards developed by the National Fire Protection Association and the American Water Works Association.

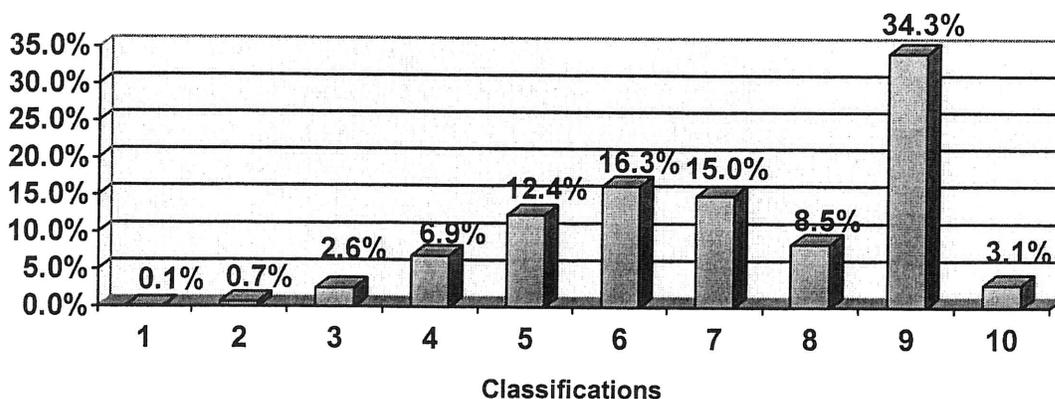
Using the FSRS, ISO objectively reviews the fire suppression capabilities of a community and assigns a Public Protection Classification – a number from 1 to 10. Class 1 represents exemplary fire protection, and Class 10 indicates that the area's fire suppression program does not meet minimum recognition criteria.

The FSRS allocates credit by evaluating the following three major features:

- Fire alarm and communication system. This review accounts for 10% of the total classification which centers upon a community's facilities and support for handling and dispatching fire alarms.
- Fire department. This review accounts for 50% of the total classification which focuses upon items such as engine companies, ladder or service companies, distribution of fire stations and fire companies, equipment carried on apparatus, pumping capacity, reserve apparatus, department manning, and training.
- Water supply system. This review accounts for 40% of the total classification highlighting the water supply a community uses for fire suppression, including hydrant size, type, and installation, as well as the inspection frequency and condition of fire hydrants.

When ISO develops a single classification for a community, all of the community's properties receive that classification. In many communities, ISO develops a split classification (for example, 5/9). Generally, the first class, (Class 5 in the example) applies to properties within a defined distance (5-road miles in most states) of a fire station and within 1000 feet of a fire hydrant. The second class (Class 9 in the example) applies to properties beyond 1000 feet of a hydrant but within the defined distance of a fire station. ISO generally assigns Class 10 to properties beyond the defined distance of a fire station.

Countrywide Public Protection Classification Summary



Grading Sheet For: Middletown, MD
 Frederick County

Public Protection Class: 5

Surveyed: October, 2004

<u>Feature</u>	<u>Credit Assigned</u>	<u>Maximum Credit</u>
Receiving and Handling Fire Alarms	6.22%	10.00%
Fire Department	23.50%	50.00%
Water Supply	30.78%	40.00%
*Divergence	-5.99%	
Total Credit	54.51%	100.00%

The Public Protection Class is based on the total percentage credit as follows:

<u>Class</u>	<u>%</u>
1	90.00 or more
2	80.00 to 89.99
3	70.00 to 79.99
4	60.00 to 69.99
5	50.00 to 59.99
6	40.00 to 49.99
7	30.00 to 39.99
8	20.00 to 29.99
9	10.00 to 19.99
10	0 to 9.99

*Divergence is a reduction in credit to reflect a difference in the relative credits for Fire Department and Water Supply.

The above classification has been developed for use in property insurance premium calculations.

INSURANCE SERVICES OFFICE, INC.

CLASSIFICATION DETAILS

Graded Area: Middletown
County: Frederick State: MD
Date Surveyed: October, 2004 Total Credit: 54.51 Class: 5 Pop.: 3069

RECEIVING AND HANDLING FIRE ALARMS

This section of the Fire Suppression Rating Schedule reviews the facilities provided for the general public to report fires, and for the operator on duty at the communication center to dispatch fire department companies to the fires.

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
1. Credit for Telephone Service (Item 414)		
This item reviews the facilities provided for the public to report fires, including the listing of fire and business numbers in the telephone directory.	1.46	2.00
2. Credit for Operators (Item 422)		
This item reviews the number of operators on-duty at the communication center to handle fire calls.	2.61	3.00
3. Credit for Dispatch Circuits (Item 432)		
This item reviews the dispatch circuit facilities used to transmit alarms to fire department members.	2.15	5.00
4. Total Credit for Receiving and Handling Fire Alarms:	6.22	10.00
Relative Classification for Receiving and Handling Fire Alarms:	4	

CLASSIFICATION DETAILS

Graded Area: Middletown
 County: Frederick
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 Pop.: 3069

FIRE DEPARTMENT

This section of the Fire Suppression Rating Schedule reviews the engine and ladder-service companies, equipment carried, response to fires, training and available fire fighters.

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
1. Credit for Engine Companies (Item 513)		
This item reviews the number of engine companies and the hose equipment carried.	8.18	10.00
2. Credit for Reserve Pumpers (Item 523)		
This item reviews the number of reserve pumpers, their pump capacity and the hose equipment carried on each.	0.54	1.00
3. Credit for Pump Capacity (Item 532)		
This item reviews the total available pump capacity.	5.00	5.00
4. Credit for Ladder-Service Companies (Item 549)		
This item reviews the number of ladder and service companies and the equipment carried.	0.92	5.00
5. Credit for Reserve Ladder-Service Companies (Item 553)		
This item reviews the number of reserve ladder and service trucks, and the equipment carried.	0.14	1.00

CLASSIFICATION DETAILS

Graded Area: Middletown

County: Frederick

State: MD

Date Surveyed: October, 2004

Total Credit: 54.51 Class: 5

Pop.: 3069

FIRE DEPARTMENT

(continued)

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
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6. Credit for Distribution (Item 561)

This item reviews the percent of the built-upon area of the city which has an adequately-equipped, responding first-due engine company within 1.5 miles and an adequately-equipped, responding ladder-service company within 2.5 miles.

	2.17	4.00
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7. Credit for Company Personnel (Item 571)

This item reviews the average number of equivalent fire fighters and company officers on duty with existing companies.

	5.38	15.00+
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8. Credit for Training (Item 581)

This item reviews the training facilities and their use.

	1.17	9.00
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9. Total Credit for Fire Department:

	23.50	50.00+
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Relative Classification for Fire Department:

6

+ This indicates that credit for company personnel is open-ended, with no maximum credit for this item.

CLASSIFICATION DETAILS

Graded Area: Middletown

County: Frederick

State: MD

Date Surveyed: October, 2004

Total Credit: 54.51 Class: 5

Pop.: 3069

WATER SUPPLY

This section of the Fire Suppression Rating Schedule reviews the water supply system that is available for fire suppression in the city.

	<u>Actual</u>	<u>Credit</u> <u>Maximum</u>
1. Credit for the Water System (Item 616)		
This item reviews the supply works, the main capacity and hydrant distribution.	26.82	35.00
2. Credit for Hydrants (Item 621)		
This item reviews the type of hydrants, and method of installation.	1.92	2.00
3. Credit for Inspection and Condition of Hydrants (Item 631)		
This item reviews the frequency of inspections of hydrants and their condition.	2.04	3.00
4. Total Credit for Water Supply:	30.78	40.00
Relative Classification for Water Supply:	3	

PUBLIC PROTECTION CLASSIFICATION

IMPROVEMENT STATEMENTS

FOR

Middletown

Frederick County, MD

Prepared by

INSURANCE SERVICES OFFICE, INC.

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The following statements are based upon the criteria contained in our Fire Suppression Rating Schedule and upon conditions in Middletown, MD during October, 2004. They indicate the performance needed to receive full credit for the specific item in the Schedule, and the quantity you have provided. Partial improvement will result in receiving a partial increase in the credit. These statements relate only to the fire insurance classification of your town. They are not for property loss prevention or life safety purposes and no life safety or property loss prevention recommendations are made.

RECEIVING AND HANDLING FIRE ALARMS

Credit For Telephone Service (Item 414).

Actual = 1.46%; Maximum = 2.00%

For maximum credit in the Schedule, there should be 6 incoming telephone lines reserved for receiving notification of fires (and other emergency calls). You have 5 lines reserved.

For maximum credit in the Schedule, there should be 6 incoming lines reserved for notification of fires (and other emergency calls) plus 3 additional lines for conducting other fire department business. Since only the emergency number is listed in the telephone directory, 1(one) line has been deducted from the number of creditable reserved emergency lines.

For maximum credit in the Schedule, emergency calls should progress to the business number.

For maximum credit in the Schedule, both the number to report a fire and the fire department business number should be listed under "Fire Department" in the white pages directory (or government section of the white pages). Your fire number is listed but your business number is not listed under "Fire Department".

For maximum credit in the Schedule, both the number to report a fire and the fire department business number should be listed under the name of the town in the white pages directory (or government section of the white pages). Your fire number is not listed and your business number is not listed under the name of the town.

Credit For Operators (Item 422).

Actual = 2.61%; Maximum = 3.00%

For maximum credit in the Schedule, 6 operators are needed on duty at all times. You have an average of 5.24 operators on duty.

Credit For Dispatch Circuits (Item 432).

Actual = 2.15%; Maximum = 5.00%

For maximum credit in the Schedule, the primary alarm dispatch circuit should be monitored for integrity in accordance with National Fire Protection Association Standard, 1221.

For maximum credit in the Schedule, the alarm dispatch circuits should have recording facilities at the communication center.

For maximum credit in the Schedule, both alarm dispatch circuits should have an emergency power supply in accordance with National Fire Protection Association Standard, 1221.

Total credit for Receiving and Handling Fire Alarms (Item 440)

Actual = 6.22%; Maximum = 10.00%

FIRE DEPARTMENT

Credit For Engine Companies (Item 513).

Actual = 8.18%; Maximum = 10.00%

For maximum credit in the Schedule, 3 engine companies are needed in your town.
These are calculated as follows:

3 for the Basic Fire Flow of 3000 gpm.

You have 3 engine companies in service.
These are calculated as follows:

87 percent for Engine E72 because of insufficient equipment.
Additionally Engine E72 is lacking: an adequate hose testing program.

84 percent for Engine RE74 because of insufficient equipment.
Additionally Engine RE74 is lacking: an adequate hose testing program.

73 percent for Engine E123 because of insufficient equipment.

Credit For Reserve Pumpers (Item 523).

Actual = 0.54%; Maximum = 1.00%

For maximum credit in the Schedule, 1 fully-equipped reserve pumper is needed. You have 1 reserve pumper.
This is calculated as follows:

4 percent for Engine TA7 because of insufficient equipment.
Additionally Engine TA7 is lacking: minimum of 500 gpm pump capacity, a minimum of 1200' of hose carried (of which 800' needs to be 2½ in. or larger), an adequate hose testing program, an adequate pump testing program.

Credit For Ladder And Service Companies (Item 549).

Actual = 0.92%; Maximum = 5.00%

For maximum credit in the Schedule, 1 ladder company is needed in your town.
This is calculated as follows:

1 ladder company due to method of operation.

You have 1 ladder company.
This is calculated as follows:

18 percent for Ladder E72 & RE74 because of insufficient equipment, insufficient aerial device testing and insufficient aerial device length.

Credit For Reserve Ladder And Service Companies (Item 553).

Actual = 0.14%; Maximum = 1.00%

For maximum credit in the Schedule, 1 fully-equipped reserve ladder truck is needed.
You have 1 reserve ladder truck.
This is calculated as follows:

13 percent for Ladder EL72 because of insufficient equipment, insufficient aerial device testing and insufficient aerial device length.

Credit For Distribution (Item 561).

Actual = 2.17%; Maximum = 4.00%

For maximum credit in the Schedule, all sections of the town with hydrant protection should be within 1½ miles of a fully-equipped engine company and 2½ miles of a fully-equipped ladder, service, engine-ladder or engine-service company. The distance to be measured along all-weather roads.

Credit For Company Personnel (Item 571).

Actual = 5.38%; Maximum = 15.00%

An increase in the on-duty company personnel by one person will increase the fire department credit by 0.71 and an increase in the average response by other fire department members by one person will increase the fire department credit by 0.24.

Credit For Training (Item 581).

Actual = 1.17%; Maximum = 9.00%

For maximum credit in the Schedule, the training program should be improved. You received 13 percent credit for the current training program and the use of facilities.

For maximum credit in the Schedule, pre-fire planning inspections of each commercial, industrial, institutional and other similar-type building should be made twice a year by company members. Records of the inspections should include complete and up-to-date notes and sketches.

For maximum credit in the Schedule, complete records should be kept of all training.

Total credit for Fire Department (Item 590)

Actual = 23.50%; Maximum = 50.00%

WATER SUPPLY

Credit For Supply System (Item 616).

Actual = 26.82%; Maximum = 35.00%

For maximum credit in the Schedule, the needed fire flows should be available at each location in your town. Needed fire flows of 2500 gpm and less should be available for 2 hours, 3000 and 3500 gpm for 3 hours and all others for 4 hours. See the attached table for an evaluation of fire flow tests made at representative locations in your town.

All AWWA standard hydrants within 1000 feet of a building, measured as hose can be laid by apparatus, are credited; 1000 gpm for hydrants within 300 feet; 670 gpm for 301 to 600 feet; and 250 gpm for 601 to 1000 feet. Credit is reduced when hydrants lack a pumper outlet, and is further reduced when they have only a single 2½-inch outlet.

Credit For Hydrants (Item 621).

Actual = 1.92%; Maximum = 2.00%

For maximum credit in the Schedule, all hydrants should have a pumper outlet.

Credit For Inspection and Condition of Hydrants (Item 631).

Actual = 2.04%; Maximum = 3.00%

For maximum credit in the Schedule, all hydrants should be inspected twice a year, the inspection should include operation and a test at domestic pressure. Records should be kept of the inspections. Hydrants should be conspicuous, well located for use by a pumper, and in good condition.

Total credit for Water Supply (Item 640)

Actual = 30.78%; Maximum = 40.00%

FIRE FLOW TESTS

Middletown , MD

Tests witnessed on April 11, 2003

Test No.	Needed Fire Flow† gpm	Limited By Supply Works, gpm	Limited by Distribution Mains (flow tests), gpm	Limited By Hydrant Spacing, gpm
2	2500		2000	
3	2500		1900	
4	3000	2896		
5	1750		650	
6	2250		1700	
7	3000	2896	2000	

†Needed fire flows exceeding 3500 gpm are not considered in Item 616 (CSS) Credit for System Supply

