



FIRE UNDERWRITERS SURVEY

A SERVICE TO INSURERS AND MUNICIPALITIES

c/o CGI Risk Management Services

Organization

Fire Underwriters Survey™ is a national organization directed by CGI Insurance Business Services (formerly Insurers' Advisory Organization), an independent private company. Subscribers of Fire Underwriters Survey municipal grading data represent approximately 90 percent of the private sector property and casualty insurers in Canada.

Utilizing the technical staff of CGI Insurance Business Services, the organization provides data on public fire protection for fire insurance statistical work and underwriting by most of the member companies of the Insurance Bureau of Canada. It also advises municipalities on deficiencies in their fire defences and recommends improvements to enable them to better deal with fire protection problems.

Qualified surveyors conduct full field surveys of the fire risks and defences in municipalities and built-up communities across Canada and the results of these surveys are used to establish the Public Fire Protection Classification (PFPC) of all communities. While the Survey is not involved in rate-making matters, the information is one of several factors used in the development of property insurance rates, particularly those applying to commercial, industrial, multi-family residential and institutional occupancies (Commercial Lines Insurance).

The PFPC is also used by underwriters to determine the amount of risk they are willing to assume (capacity) in a given community, or section thereof.

The Fire Underwriters Survey also uses PFPC information to develop the IBC Dwelling Protection Grade, which applies to single-family residential building structures (Personal Lines Insurance).

The overall intent of the grading systems is to provide a measure of the ability of the protective facilities of a community to prevent and control the major fires that may be expected to occur, by evaluating in detail the adequacy, reliability, strength and efficiency of the protective facilities. The schedule used does not consider past fire loss records but rather, fire potential based on the risks present in the community.

In the application of the schedule, the fire defence conditions in a municipality are measured against a recognized standard of fire protection. The essential features of a community's fire defences are assessed, including water supply, the fire department, fire prevention, emergency communications, building construction controls and hazards.



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Public Fire Protection Classification System

Also known as the Commercial Classification, the Public Fire Protection Classification System is used for all properties that are not single-family dwellings or duplexes. This 10-class system categorizes communities according to a variety of criteria applied to the local fire protection service area fire risk, and fire protection facilities. Properties in a municipality (or fire protection service area) with a better classification generally benefit from reduced insurance rates.

Fire Underwriters Survey goes through a comprehensive process to arrive at its conclusions, following a standardized methodology:

1. Risk and Hazard Assessment

The “Risk And Hazard Assessment” is an evaluation of the life safety risks, fire loading and risk of fire that is present in a given area. Historical call volumes are also utilized in the evaluation process, along with a response distance review, community growth assessment and assessment of trends of emergency responses. This assessment lays the groundwork to determine fire protection needs within a community and is important in determining organizational structure, personnel requirements, training requirements, fire apparatus and fire equipment needs, response time requirements and adequacy of fire fighting resource distribution.

The “Risk And Hazard Assessment” includes calculations of Required Fire Flows for structures and zones throughout the community and the calculation of the final Basic Fire Flow which is utilized as the benchmark that the community’s fire defences will be measured against.

2. Water Supply for Public Fire Protection Assessment

This assessment includes conducting a survey of the municipality, examining the water supply facilities, storage facilities and distribution system, and performing hydrant flow testing throughout the community.

3. Fire Defense Assessment

The Fire Defense assessment consists of surveying the fire department to assess its administration, training programs and facilities, fire stations equipment (including testing and maintenance programs), personal communications, and fire prevention programs.

4. Fire Insurance Grading Evaluation

The final step in the process includes comparing the required fire fighting resources (based on the calculated benchmarks) to the resources that are available. The final grades are calculated and published in the fire insurance grading index (Public Fire Protection Classifications and Dwelling Protection Grades).



Items reviewed during a typical survey include the following:

Fire Department Operations	Emergency Water Supplies	Fire Safety Control	Emergency Communication Systems
Pumpers in Service	Normal Adequacy of Supply Works	General Program	Communication Centre
Ladder Truck Service	Reliability of Sources of Supply	Codes & Enforcement	Means of Transmitting Alarms by Public
Distribution of Companies & types of Apparatus	Reliability of Pumping Capacity	Building Code & Enforcement	Fire Department Telephone Service
Design, Maintenance & Condition of Apparatus	Reliability of Power Supply	Electrical Code & Inspections	Means of Alarm Dispatch
Number of Line Officers – Fire Suppression	Reliability, Condition, Arrangement, Operation and Maintenance of System Components		Dispatching Services
Total Fire Force Available	Fire Flow Delivery by Mains		Operations Radio
Engine and Ladder Company Unit Manning	Reliability of Principal Mains		Miscellaneous Factors
Master & Special Streams	Installation of Pipes		
Equipment for Pumpers and Ladders	Arrangement of the Distribution System		
Hose	Additional Factors and Conditions Related to Supply and Distribution		
Condition of Hose	Distribution of Hydrants		
Training and Qualifications	Hydrants – Size, Type and Installation		
Response to Alarms	Hydrants – Condition and Inspection		
Fire Ground Operations	Other Conditions Affecting Adequacy & Reliability		
Special Protection Required	Management		
Miscellaneous Factors & Conditions			
Pre-fire Planning			
Administration			



The resulting Public Fire Protection Classifications and Dwelling Protection Grades are developed by Fire Underwriters Survey and funded by their subscribers (insurance industry). To summarize the categories:

- A Class 1 rating indicates the best possible protection and Class 10 rating means no Recognized protection.
- Class 2 represents a very strong and reliable degree of protection and prevention that only a few cities with well-staffed and well-organized fire departments and very good water supply systems possess. Vancouver and Toronto and a few other large centers fall into this category.
- Class 3 is a level of superior protection which large cities should be expected to achieve. Municipalities in Class 3 should be able to control most threatening fires and prevent the worst ones from becoming conflagrations.
- Smaller cities with fewer resources are more likely to be in Class 4. These are rated as having less ability to handle potential fires, with less competence in rapid fire suppression.
- Class 5 represents a lesser level of protection for a municipality with a full-time fire department, but is very respectable for a volunteer department.
- Small towns find it too costly to provide the same level of capability to control potential large fires, particularly if they have hazardous occupancies or large blocks of old buildings. Primarily for this reason, the great majority of smaller communities fall into Classes 6 to 8.
- Class 9 represents protection rated at little or no value in controlling serious fire in commercial buildings. Class 10 indicates, technically, no protection.

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