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money, and conserve scarce water resources, thereby saving  
in water supply construction.

# Fire

MAY 16 1979

FOR'S OFFICE  
OF FIRE PREVENTION  
STORAGE, ALA



# management review

A QUARTERLY NEWSLETTER FOR LOCAL GOVERNMENT OFFICIALS

WINTER 1979

## Reducing Manning Costs For Fire Suppression

"Manning policy for fire suppression personnel is a very controversial issue. At a time when taxpayers are demanding budget stringency, fire department manning practices require further examination and evaluation. To date, no significant research has been done on the fundamental question of how many fire fighters are optimally required for fire suppression duty. As a priority issue, the U.S. Fire Administration is planning to initiate a manning study this year. In this issue of Fire Management Review, Dr. Harry Hickey makes some important observations on how built-in fire protection can affect ISO water flow requirements and therefore, fire suppression manning levels."

Gordon Vickory, Administrator, U.S. Fire Administration

### Built-In Fire Protection And Fire Department Manning

by  
Harry E. Hickey  
Associate Professor  
University of Maryland



The number of companies required and the manning levels for each company are directly related to the number of hazards in a community. Any community has a range of hazards. Therefore, the geographical location and the nature of these hazards are prime factors in determining the location of engine and ladder companies.

#### Property Hazard Level Reduction

Generally, property hazard levels should be used to determine the number and type of fire companies required and the manning levels for each.

One method of measuring property hazard levels is to determine the amount of water required to control and extinguish a fire in a building or group of buildings. Required fire flow will vary according to a building's ground floor area,

height, construction, occupancy, internal fire protection and alarm systems (automatic sprinklers and alarm transmission to an emergency response service) and exposure conditions.

The Guide for the Determination of Required Fire Flow, which is published by the Insurance Services Office (ISO), can help to determine fire flow requirements for specific hazards (there is some question on the validity of the final computations). It is also helpful in assessing fire flow requirements according to a community's hazard variables. The guide states that by using these computations, fire flow requirements "may be reduced by up to 50 percent for complete

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International  
City  
Management  
Association



automatic sprinkler protection. Where buildings are either fire resistive or non-combustible construction, the reduction may be up to 75 percent." Thus, established fire flow values can be cut drastically by requiring the installation of automatic sprinkler protection.

Regardless of the method used to compute required fire flow, there is general agreement that the public protection equipment requirement increases with the fire flow requirement. Conversely, as the property hazard is reduced, so is the required fire flow and thus, the level of fire department response.

A community policy to control and reduce property hazard levels by requiring automatic sprinklers can have a significant impact on holding the line with fire department manning requirements. In addition to improved life safety and property protection, automatic sprinklers may reduce property insurance premiums and the demand on the community's fire suppression delivery system. This may open new service delivery options, such as improvement of emergency medical services with existing personnel.

### Hypothetical Case Study

The community of Newtown, which covers approximately 12.75 square miles, has 5 primary hazards characterized by: ordinary construction four stories; ground floor areas from 43,000 to 50,000 sq. ft.; occupancies at the moderate hazard level and normal exposure conditions. It is assumed that these buildings are the worst fire hazards in the community, and that the level of fire protection required for them will be equal or better for the rest of the community.

#### FIRE MANAGEMENT REVIEW VOLUME ONE, NUMBER THREE

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FIRE MANAGEMENT REVIEW is published to share research with emphasis on utilization to build management skills of local government administrators and fire service managers, and to create a climate for change. Points of view or opinions stated in this publication do not necessarily represent the official position of the National Science Foundation or ICMA.

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Project Director: Gerald Brubaker  
 Administration Assistant: Susan Brown  
 Project Secretary: Joan M. Brown

Without automatic sprinkler protection the ISO guide sets a required fire flow of 8,000 gallons per minute for each fire. However, using the water supply section of the ISO Grading Schedule, the basic fire flow for Newtown is 7,500 gallons per minute. The guide makes a clear distinction between required fire flow and basic fire flow.

If each of the primary hazards were retrofitted with a hydraulic automatic sprinkler system, the peak required fire flow for each fire demand zone would be reduced from 8,000 gallons per minute to 4,000 gallons per minute. This would reduce the basic fire flow for Newtown to 3,500 gallons per minute.

The reduction in fire flow requirements has a dramatic effect on manning levels. Fire suppression manning requirements were calculated on the following assumptions:

- a 48 hour work week;
- average vacation and sick leave of 4 hours per week for each individual;
- 3.8 persons are required to staff a suppression position 24 hours a day, and
- engine and ladder companies each require one officer on duty at all times.

The ISO Grading Schedule was used to determine the number of engine and ladder companies required, based upon the response distance and the established required fire flows, and the manning requirements for each company.

Company and manning requirements were calculated with and without automatic sprinklers.

|               | Without Automatic Sprinklers | With Automatic Sprinklers |
|---------------|------------------------------|---------------------------|
| Stations      | 5                            | 3                         |
| Engines       | 7                            | 4                         |
| Ladders       | 3                            | 1                         |
| Officers      | 42                           | 15                        |
| Fire fighters | 209                          | 76                        |

Annual personnel costs (including fringe benefits) were estimated on the basis of \$24,000 for each officer and \$18,000 for each fire fighter.

|               | Without Automatic Sprinklers | With Automatic Sprinklers |
|---------------|------------------------------|---------------------------|
| Officers      | \$1,008,000                  | \$360,000                 |
| Fire fighters | 3,762,000                    | 1,368,000                 |
| TOTAL         | 4,770,000                    | 1,728,000                 |

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deficiency point rating had been implemented as a solution to the fire defense strategy.

Real losses (measured in replacement cost of buildings destroyed) were reduced by 22 percent. While most cities in the United States are operating with fewer fire stations, fewer pumpers and ladders, fewer fire fighters, and less equipment than they had 20 years ago (and many are protecting more land area), Fresno chose to do

so out of an intelligent master concept. Its results: a more efficient municipal government, more fire protection for its citizens at less cost, lower insurance rates, and a smaller, more efficient, higher paid, and well-trained fire department, plus a planning and inspection department with the proven capability to develop and execute a "cost-effective" master plan for municipal fire defense.  $\Delta$

Light-Wall and Special Light-Weight Pipe in Automatic Sprinkler Systems (continued from page 61)

Table 1.

| Pipe Trade Size | Internal Diameter (Inches) |                          | % of Reduction in Friction Loss |
|-----------------|----------------------------|--------------------------|---------------------------------|
|                 | Schedule 40                | Schedule 10 <sup>1</sup> |                                 |
| 1"              | 1.049                      | 1.007                    | 20%                             |
| 1½"             | 1.380                      | 1.442                    | 19%                             |
| 1½"             | 1.616                      | 1.682                    | 19%                             |
| 2"              | 2.069                      | 2.157                    | 19%                             |
| 2½"             | 2.469                      | 2.635                    | 27%                             |
| 3"              | 3.058                      | 3.260                    | 26%                             |
| 4"              | 4.026                      | 4.260                    | 24%                             |
| 5"              | 5.047                      | 5.295                    | 21%                             |
| 6"              | 6.065                      | 6.357 <sup>2</sup>       | 20%                             |
| 8"              | 8.071 <sup>3</sup>         | 8.249 <sup>4</sup>       | 10%                             |

<sup>1</sup> Schedule 30.

<sup>2</sup> 0.134" wall thickness — light-wall pipe.

<sup>3</sup> 0.158" wall thickness — light-wall pipe.

<sup>4</sup> ASTM A-135 light-wall steel pipe.

An illustration of the effect of specifying light-wall pipe as a substitute for standard-weight pipe in an automatic sprinkler system follows. A warehouse with high-piled storage of a type requiring 0.38 gpm per square foot over 2,000 square feet of floor area uses 1½-inch orifice automatic sprinklers. The pressures required for this automatic sprinkler system are illustrated in Table 2 for both standard-weight and light-wall pipe.

Fire pump power demand in this example can be reduced by as much as 13 percent, depending on pump efficiency. Table 2 illustrates that this water supply will be required to deliver 16.7 psi less pressure at 760 gpm.

Smooth Interior Pipe Walls

Friction loss is a function of interior wall roughness. Light-wall pipe, manufactured in accordance with ASTM A-135 specifications, is made by the electric-

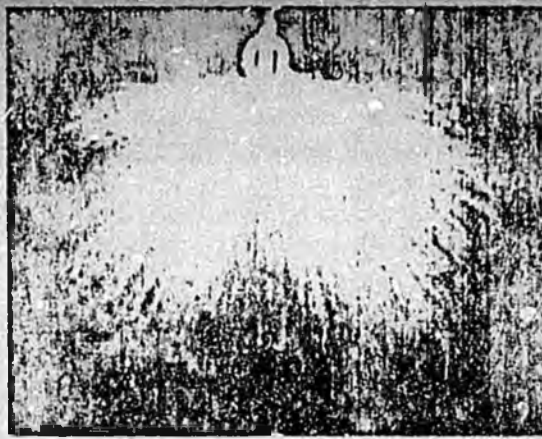
resistance weld process. The steel used to form this pipe is rolled, either cold or hot, and has a smooth surface. The pipe is generally formed cold, and thus has little opportunity for scale formation and roughening of the surfaces. Standard-weight pipe is often formed hot, and may include scale and other imperfections on its surfaces. Ten percent improvement in surface finish can result in a 16 percent reduction in friction loss.

Table 2

| Pressure Required             | Standard-Weight | Light-Weight <sup>1</sup> or 20 |
|-------------------------------|-----------------|---------------------------------|
| To obtain sprinkler discharge | 22.6            | 22.6                            |
| Friction Loss                 |                 |                                 |
| Branch Line                   | 32.0            | 26.1                            |
| Mains                         | 45.0            | 34.2                            |
| Underground                   | 15.0            | 15.0                            |
| Elevation                     | 10.5            | 10.5                            |
| TOTAL                         | 125.1           | 108.7                           |

SUMMARY

1. Sprinkler system designers have an added option of using Schedule 10 light-wall pipe.
2. Substitution of Schedule 10 light-wall pipe for Schedule 40 pipe will significantly reduce the total pressure and power demand on the water supply.
3. Reduction in pressure requirements can save installed and operating costs as follows:
  - Less horsepower required to deliver water;
  - Smaller pumps or the ability to supply sprinkler systems from existing water supplies;
  - Smaller pipe sizes — lower pipe cost — less weight — less labor and freight costs.  $\Delta$



## Sprinklers Cut Fresno's Fire Losses and Budget

EDWARD J. REILLY and JOHN A. VINIBELLO

IN THE 1960s, the city of Fresno, California began the process of basing its municipal firesafety program on the installation of automatic sprinklers. As a result, the city decreased its fire losses, decreased the percentage of the municipal budget allocated to its fire department, and improved its insurance rating.

Many of the details of the Fresno program were explained in a March 1975 FIRE JOURNAL article entitled "How the City of Fresno Achieved Better Fire Protection." A major element of the program was the enactment by the Fresno City Council in 1961 of the Dangerous Building Ordinance, which focused on the central business district and gave city officials the power to remedy the hazards resulting from unsafe buildings or structures. City officials were empowered to condemn those buildings or order their repair, renovation, or restoration so that they would meet the requirements of the *Fresno Building Code*.

Under the provisions of the Dangerous Building Ordinance, buildings owners could choose among several alternatives to bring their buildings up to the requirements of the *Building Code*. Most owners found that the most economical way to comply with the *Code* was to install automatic sprinklers.

The city coupled the Dangerous Building Ordinance with a funding plan that city officials arranged with the local agency that administered the federal urban renewal program in Fresno. Federal funds were provided to the

city by the U.S. Department of Housing and Urban Development for the acquisition of property and the demolition of buildings not worth saving. The city's agreement with the urban renewal agency specified that any new construction in the city's urban renewal area would be sprinklered in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*. Finally, the urban renewal agency agreed to help interested owners find loans for building renovation. The agency did not, however, provide funds to owners or guarantee the loans made to owners.

As a result of these two actions by the city -- enactment of the Dangerous Building Ordinance and the agreement with the federal urban renewal agency -- sprinkler protection became almost universal in the 18-block central business district and a separate 22-block area once considered a slum. More than 95 percent of all the buildings in both areas ultimately were protected by automatic sprinklers.

Representatives of the National Automatic Sprinkler and Fire Control Association (NAS), which was involved in the initial discussions that resulted in the Fresno program, revisited the city in 1977 to study the results produced by the program. What follows is a recounting of the effects that the organization found the program had made on the fire department and fire losses.

### Fire Department Results

In 1955, Fresno's population stood at 115,000. By 1977, 69,500 people had been added to its population, a

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Mr. Reilly is President of the National Automatic Sprinkler and Fire Control Association, Inc. Mr. Vinibello is that organization's Vice-President of Field Operations.

65 percent increase. In 1955, Fresno covered only 21 square miles. By 1977, through a process of annexation, its area had jumped to 58 square miles. During the same period, the number of Fresno's engine companies increased from 9 to 11, a 22 percent increase. Total paid fire-fighting personnel increased from 218 men in 1955 to 276 men in 1977, a 26 percent increase. The number of fire fighters on duty around the clock remained unchanged: 68 men on duty during any 24-hour period in 1955, and 68 men on duty around the clock in 1977.

The burden per fire fighter had increased enormously between 1955 and 1977. In 1955, there were 3.2 fire fighters per square mile of area to protect. By 1977, the number of fire fighters per square mile was reduced to 1.2 men per square mile. Therefore, each fire fighter was required to protect more than 2½ times the number of square miles of area in 1977 than he was required to protect in 1955.

The number of fire fighters on duty during any 24-hour period decreased from 6.04 men per 10,000 in 1955 to 3.64 men per 10,000 in 1977. So the fire department was protecting almost twice as many people and property in 1977 as it had predicted in 1955, and had to cover over 2½ times the geographical area with only 20 percent more equipment, and virtually no increase in manpower.

In 1955, Fresno's fire department received so few deficiency points that it was rated as a Class 1 department. If the fire department were to maintain its Class 1 rating, 14 new fire stations would have to have been added between 1955 and 1976. Assuming a cost of \$1 million per station, including land and construction costs, this \$14 million acquisition would have cost the taxpayers about \$2.2 million per year, assuming a 6 percent municipal bond issue floated over a 20-year period.

Fourteen pumpers would have to have been added to maintain a zero deficiency point rating. At \$65,000 per truck, this additional cost would add about \$145,600 per year to the fire department budget with the same 6 percent municipal bond float for the same 20-year period.

It is difficult to calculate with precision the impact of additional manpower required to maintain a zero increment in deficiency points resulting from a manpower shortfall. However, in 1955, the Fresno Fire Department was up to full complement: six men per company, on duty 24 hours a day. By 1976, only four men could roll on a call during any hour of the day or night.

If the three-platoon system (three men working 56-hour shifts around the clock) had been in existence in 1955, 84 new fire fighters would have been required to meet full manpower needs of the department. To say it another way, Fresno's 1977 department of 276 men would have to have been increased to 360 men if the department were to maintain its Class 1 rating. This would have added about \$1.26 million per year to Fresno's fire department budget. This would have increased the 1977 fire department budget from about \$9 million

per year to about \$12.6 million. About a 40 percent increase. If the fire department budget came to 13 percent of the total in 1977, it would have come to about 11 percent in 1955 if manpower, fire stations, and equipment were to be maintained at zero deficiency point levels.

#### Fire Losses

Between 1956 and 1966, per capita fire losses averaged \$1.71. In the decade immediately following, per capita fire losses averaged \$8.11. However, construction cost more than doubles every decade. NAS wanted to measure the cost of replacing buildings destroyed by fire, so it adjusted per capita fire losses to the Building Construction figures published by *Engineering News Record*. Adjusting per capita fire losses to the Building Code Index, "real losses" dropped 22.4 percent in that decade.

Of even greater significance is the fact that nonresidential losses averaged 62.1 percent at the beginning of the 20-year period. By 1976, nonresidential losses had plunged to 43.5 percent of the total, and it was these buildings that became the object of the intensive automatic sprinkler master plan.

#### Conclusions

The Fresno program is a comprehensive fire defense master plan.

In the decade that followed its implementation, the city's fire losses (adjusted for inflation) were cut by 22 percent.

The fact that 95 percent of two urban renewal areas covering 40 square blocks were protected throughout by automatic sprinklers under a combination of ordinances made it possible for the fire department to take full advantage of the 50 percent reductions permitted under the "fire flow" standards of the Insurance Services Office (ISO) grading schedule and the additional 25 percent credit given by ISO for superior construction. This resulted in the imposition of almost zero deficiency points against the water department.

Intelligent planning based upon a thorough understanding of the ISO grading schedule enabled the building and fire departments to take the steps needed to upgrade the city from an ISO Class 3 to Class 2 city.

The implementation of the plan resulted in economies in fire department operations of up to 40 percent of the total operating budget for that department. The 1977 fire department budget of \$9 million would probably range up to about \$12.6 million if the 84 added fire fighters, 14 pumpers, and 14 fire stations required to maintain a zero

(Continued on page 91)

A M E N D M E N T

By the Community and  
Regional Affairs Committee

Offered in the SENATE

TO: SENATE BILL NO. 370

Page 1, lines 8 - 17, delete all material and insert the following in its place:

"\* Section 1. AS 29.53.020(a) is amended by adding a new paragraph to read:

(7) real property to the extent and subject to the conditions provided in (j) of this section.

\*Sec. 2. AS 29.53.020 is amended by adding a new subsection to read:

(j) Two percent of the assessed value of a structure is exempt from taxation if the structure contains fire protection systems in operating condition incorporated as a fixture or part of the structure. The exemption granted by this subsection is limited to

(1) an amount equal to two percent of the value of the structure based on the assessment for 1981, if fire protection systems are a fixture of the real property on January 1, 1981; or

(2) an amount equal to two percent of the value of structure as of January 1 following the installation of the fire protection systems as fixtures of the structure after January 1, 1981."

Renumber following sections accordingly.

For purposes of this Act, definition of approved types of fire protection systems and fire alarm systems shall be made available through the State Fire Marshall's Office. On or before the end of October 1980 the State Fire Marshall's Office shall submit a list of approved types of systems to the State Assessor's Office, Department of Community and Regional Affairs and Division of Business Loans, Department of Commerce and Economic Development. This information will also be available to the public.

# Cordova Chamber of Commerce

BOX 99

"The Friendly City"

CORDOVA, ALASKA 99574



MT. ECCLES

January 30, 1980

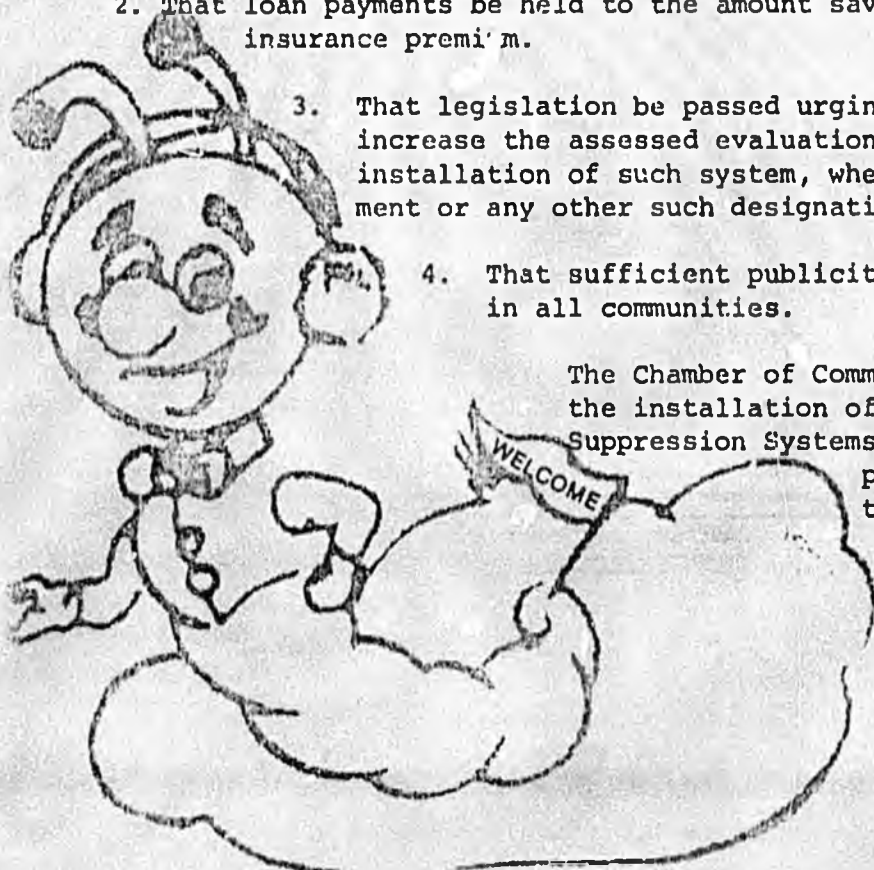
Mr. Robert Shirnberg  
Post Office Box 1167  
Kenai, Alaska 99611

Dear Mr. Shirnberg,

This is to inform you that on January 29, 1980, the Cordova Chamber of Commerce took action supporting proposed legislation for the installation of Private Fire Protection Systems.

The following are specific concepts supported by this Chamber:

1. Low interest or no interest loans with a minimum of paperwork to be made available to businesses for the purpose of installing Private Fire Protection and Suppression Systems.
2. That loan payments be held to the amount saved on the establishment's fire insurance premium.
3. That legislation be passed urging local municipalities to not increase the assessed evaluation of the property because of the installation of such system, whether it be named as an improvement or any other such designation.
4. That sufficient publicity be given to business people in all communities.



The Chamber of Commerce feels that incentives for the installation of Private Fire Protection and Suppression Systems will reduce the loss of lives, property, and lost man-hours due to destruction of business property.

Sincerely,

*Robert L. Varnam*

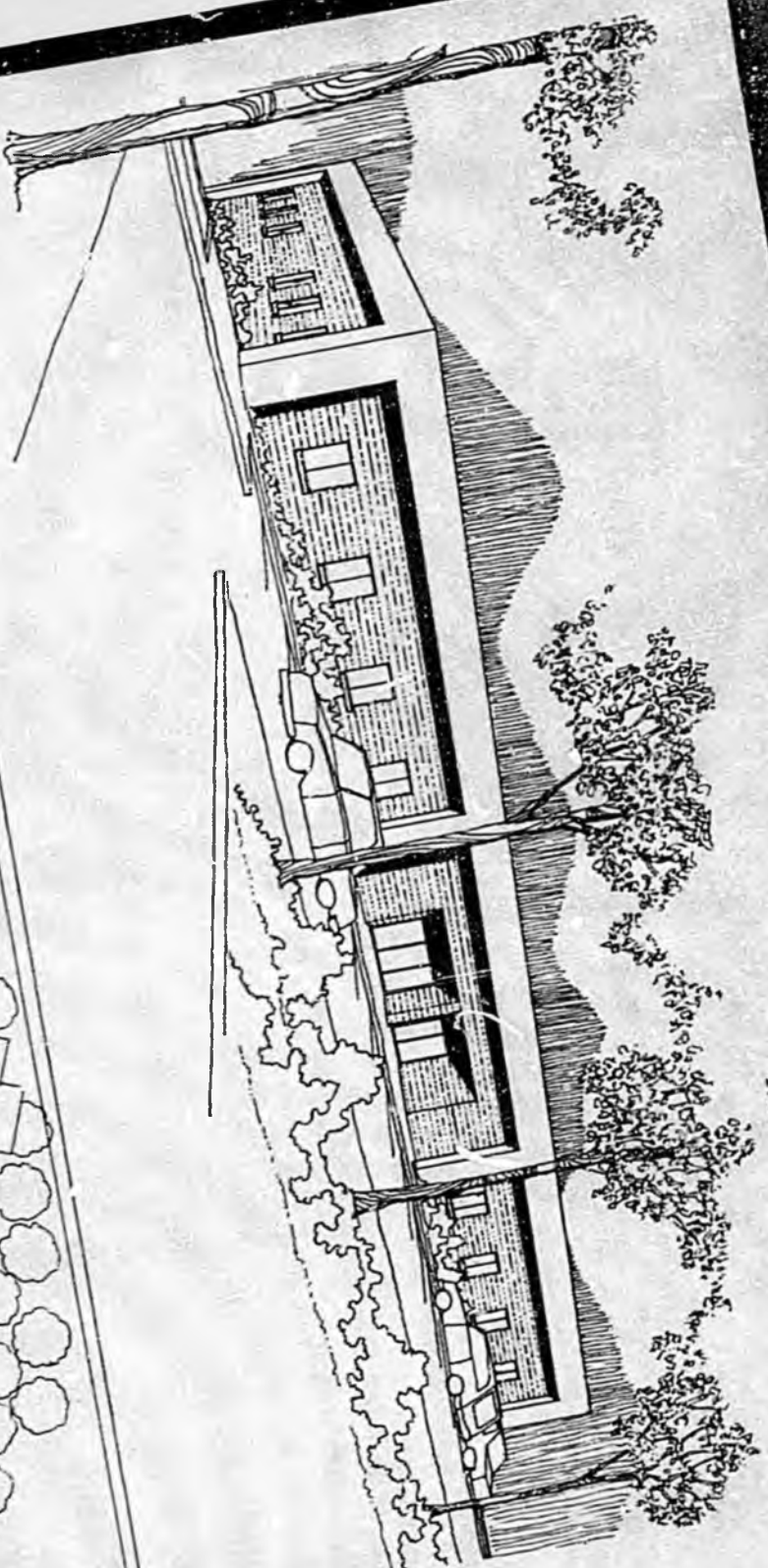
Robert L. Varnam

cc: Alaska Fire Chief's Association, Alaska State Fire Fighter's Association, Cordova City Council

# SPRINKLING OF NEWS

NATIONAL AUTOMATIC SPRINKLER AND FIRE CONTROL ASSOCIATION, INC.

WINTER 1979-1980  
Number 33

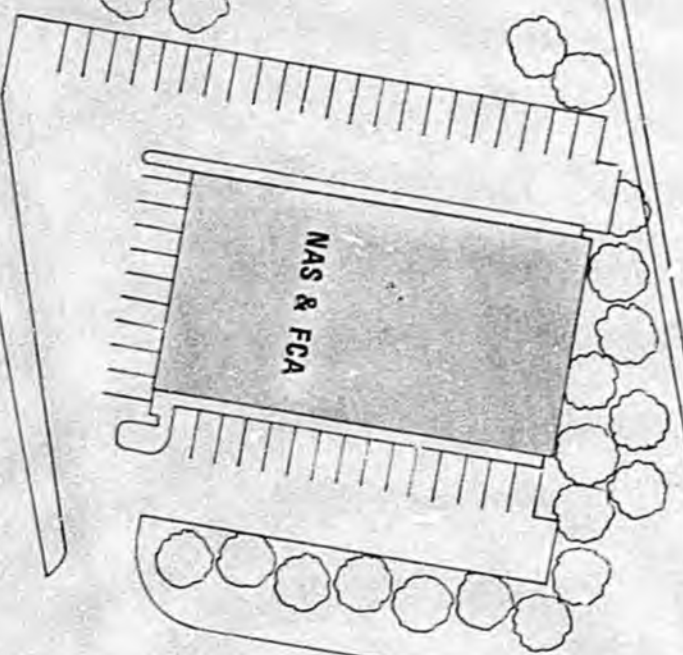


ROUTE 22  
PATTERSON, N. Y.

Future Home  
of  
NAS & FCA

ROBIN HILL  
EXECUTIVE PARK

ACCESS ROAD



# Fire Protection Water Standby Charges: Not in the Public Interest

by BRIAN R. SHUTE

A high fire death rate is peculiarly an American problem. No other industrialized nation comes close to the American fire death rate. Fire deaths and injuries per million population in the United States are nearly three times that of Sweden, which has the next highest death and injury rate by fire.

In 1978 over 3 million fires caused over \$4 billion worth of fire losses. The dollar value of the damage and destruction by fire does not even begin to approximate the actual losses because serious fires create indirect business and community losses such as:

- (a) Loss of customers
- (b) Loss of profits
- (c) Cost of retaining key personnel during shutdown
- (d) Loss of taxes on destroyed property

Finally, there are indirect losses of a personal nature. These may be even more difficult to estimate, yet their importance should not be neglected. In addition to financial losses incurred through temporary unemployment and expenses incurred in finding and moving to new housing, there is the destruction of irreplaceable personal belongings.

Water is an indispensable commodity when it comes to fighting fire. Fires cause billions of gallons of water to be consumed putting them out. Consequently, given the compelling social goal of avoiding the catastrophic fire losses, together with the absolute necessity of water for basic human existence, a municipality should develop policies which maximize its ability to provide both fire protection and adequate water supplies.

According to the National Fire Protection Association, private fire protection systems (of which automatic sprinkler systems are the backbone) are the most effective means of controlling fires in buildings. Not only do private fire protection systems put out fires, they do not require nearly as much water to extinguish fires on the average as is required by the Fire Department. The expenses of the Fire Department incurred fighting sprinklered fires are much less, and the chance for injury to firemen as a result of fire is almost negligible in sprinklered buildings.

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Brian R. Shute is an Anchorage, Alaska attorney. He represents the Water Conservation Association of Anchorage.

In Anchorage, Alaska, in 1977, the Public Utilities Commission approved a new tariff for the Anchorage Water Utility. As a result, the utility required owners of private fire protection systems to make a monthly payment for merely having an automatic sprinkler system connected to the utility water supply. The owner was required to pay even when he did not use any water at all.

It came to the attention of the Water Conservation Association that the monthly charges in some cases were so high that they were in excess of insurance savings realized through installation of the system. Consequently, some owners were deciding to turn off their fire protection system because it had become uneconomical to maintain. The Water Association was also aware of some new construction for which plans for installation of private fire protection systems had been cancelled because the stiff water standby charge was too high in relation to the savings which could be realized by having the systems installed.

The Water Conservation Association took the position that the standby charge which owners of private fire protection systems were being required to pay was not in the interest of conservative water usage, was not in the interest of increasing the fire worthiness of the general Anchorage municipal area, and did not further cooperative planning to solve the interrelated problems of providing adequate fire protection and water supply to the City.

The Water Conservation Association prepared a memorandum to more fully explore whether the standby charge fire protection owners were being required to pay was in the public interest. A detailed fact digest was compiled. As a result of its study, the Water Conservation Association concluded that the standby charges were not in the public interest and, consequently, should either be eliminated or alternative methods found to restore the economic incentives for installing private fire protection systems so the water conserving and fire loss reducing characteristics can be promoted.

As a result of its efforts, the Water Conservation Association has apparently succeeded in getting the Municipality of Anchorage to agree to a potential of a reduction in standby charge of as much as 75 percent or more. However, the Association would like to see the charge eliminated completely for the following reasons:

## PRIVATE FIRE PROTECTION SYSTEMS BOTH CONSERVE AVAILABLE WATER SUPPLIES AND GREATLY REDUCE LOSSES CAUSED BY FIRES.

### 1. Private fire protection systems conserve water supplies.

Statistics showing the effectiveness of automatic sprinkler protection are phenomenal. Only in rare instances do automatic sprinkler systems fail to control fires in sprinklered buildings. The failures are seldom due to the sprinklers, but rather the lack of water, often because the system has been turned off either intentionally or by vandals. A complete record of fires in sprinklered buildings would show that their efficiency probably approaches 100%. Of all the fires controlled by sprinklers more than 90% of them are controlled by three or less sprinkler heads.

The effectiveness of automatic sprinklers stems from their presence at the potential scene of a fire before the fire starts. They can apply water immediately where it is needed because there are no problems of access to the seat of the fire or interference with visibility for fire fighting due to smoke. Sprinklers can extinguish fires much earlier than a Fire Department could ever respond to an alarm. The amount of water necessary to put out a fire in its beginning stages is nowhere near the amount required for the Fire Department to put it out after it gets going.

Performance characteristics of sprinklers indicate that standard automatic sprinklers discharge anywhere from 15 to 55 gallons of water per minute, depending on the pressure at the sprinkler head. In comparison, a heavy-attack two and one-half inch mobile hose line in operation can consume more than two hundred gallons per minute. If the fire is not put out in its infant stages (as occurs over 90% of the time when automatic sprinklers are deployed), it may take a number of heavy-attack lines hours to control the fire, if the water supply holds out that long.

### 2. The total required fire flow for a municipality is reduced with the widespread installation of private fire protection systems.

The traditional method for estimating the water supply required to serve a municipality's fire protection needs is by computing fire flow requirements. The latest developments in estimating fire flow requirements are found in the Guide for Determination of Required Fire Flow published by the Insurance Services Office (ISO) in 1972. The fire flow formula reflects significant water conservation propensities of private fire protection. Depending upon the flamability of a given building, the fire flow required is reduced by twenty-five to fifty percent when a sprinkler system is present in a building.

The guide for determining required fire flow just referred to is a determination made for specific buildings. The ISO utilizes this formula for determining fire flow requirements for Anchorage as a City. The procedure for making a city-wide fire flow determination more fully described in the ISO Municipal Grading Schedule.

The last analysis of Anchorage fire flow requirements was performed and summarized by ISO in a 1969 report.

ISO is presently in Anchorage reevaluating the fire flow requirements. The 1972 fire flow guide has been revised since the last fire flow study was done for Anchorage in 1969. ISO engineers indicated that the reduction in fire flow requirements for a building can be even greater than 50%, to as much as 75%, given the right kind of building construction.

It was the opinion of the ISO engineers that although the ISO methodology did not enable a precise computation of the reduction in Anchorage fire flow requirements caused by the private sprinkler protection, it was significant. ISO indicated that the sprinkler installation in the central business district alone made Anchorage's central business district a much better fire risk.

Finally, ISO engineers indicated that with all of the factors of the Municipal grading schedule taken into account, they were hopeful that the required fire flows for Anchorage would be less than the 1969 studies indicated. However, the investigation work for the study has not been completed, and consequently the fire flow requirement is still to be determined.

In 1969, ISO engineers completed a report on Anchorage. It is significant that one of the improvements recommended by ISO was installation of automatic sprinkler equipment in all basements exceeding 2,500 square feet.

Examination of the respective quantities of water needed by the Fire Department versus sprinkler systems to extinguish fires, the 25% to 75% discount for fire flow required for a given building, and a study of the Municipal Grading Schedule all indicate that the amounts of water demanded to maximize Anchorage's fire protection efforts are reduced by widespread installation of private fire protection systems. The conservation aspects of private fire protection are significant and should be encouraged.

## PRIVATE FIRE PROTECTION REDUCES THE COST OF OTHER PUBLIC SERVICES.

In addition to the water conservation aspects of automatic sprinkler systems, and the significant savings in life and property, there are other public benefits from widespread installation of private fire protection systems. Among these are:

1. Both the economic and physical burden of the fire department are decreased since private fire protection generally puts out the fire before the fire department even arrives. This also decreases the hazards of fighting fire.

2. The cost of manpower and time fighting fire is reduced and therefore the money necessary to operate the Fire Department itself is also lessened.

3. Private fire protection decreases fire insurance cost for the entire city.

4. Private fire protection increases municipal tax revenues by encouraging property improvement.

5. Private fire protection increases a community's total fire protection security, preventing conflagrations and exposure fires.

6. Private fire protection results in lessening the cost of capital improvements to the water utility since widespread installation of private fire protection decreases

the required fire flow necessary for adequate municipal fire protection.

7. Private fire protection saves billions of gallons of water which is in chronic short supply in most cities.

8. The encouragement of private fire protection systems is consistent with the State policy of encouraging fire protection devices (smoke alarms). Since private fire protection reduces the cost of the fire department for fighting fires in sprinklered buildings, State revenue sharing money can be used for other fire department purposes, making more efficient use of the State money.

9. The omission of automatic sprinklers imposes upon the architect more stringent rules governing compartmentalization, fire proofing, exit distance spacing, travel distance, and exterior design requirements. It costs more to construct without sprinklers.

**BECAUSE WIDESPREAD INSTALLATION OF PRIVATE FIRE PROTECTION CONSERVES SCARCE WATER RESOURCES AS WELL AS SIGNIFICANTLY DECREASING LOSS OF LIFE AND PROPERTY FROM FIRE, THE MUNICIPALITY SHOULD ENCOURAGE WIDESPREAD INSTALLATION OF THE SYSTEMS BY PROVIDING NEW INCENTIVES FOR OWNERS TO INSTALL PRIVATE FIRE PROTECTION, AND BY CONTINUING EXISTING INCENTIVES.**

The primary incentive for voluntary installation of private fire protection systems is the reduced insurance rates to the owner which enable him to amortize the cost of installation over a period of a few years.

Because of the safety factors accompanying installation of automatic sprinklers and the reduced fire flow characteristics, an owner installing private fire protection can reduce his insurance premiums when the installation has been approved by ISO. This incentive for voluntary installation of private fire protection had been largely eradicated by the implementation of a flat monthly charge by the Anchorage Water Utility of anywhere between \$7.10 to \$254.10 per month, depending upon the size of pipe delivering water to the building. The most prevalent sizes of pipe are four, six and eight inch pipe for which charges were \$28.45 per month, \$63.55 per month and \$112.85 per month, respectively. These rates nearly eat up, and in some cases entirely eliminate, the savings on insurance an owner achieves by installing private fire protection. Even when the rates do not entirely eat up the insurance savings, they eat up so much of the insurance savings that it takes too long to amortize the cost of installation, and it is uneconomical to install private fire protection.

But when fire protection needs and water supply requirements are examined in the total picture, it appears that the widespread installation of private fire protection will alleviate rather than create additional fire protection demands upon the water supply; the water saving capacities of automatic sprinklers will reduce the total quantity of water required to fight any given number of fires. To levy a standby charge, whether water is used or not, which eliminates the insurance cost advantage is to create a disincentive and discourage voluntary installation of private fire protection systems. Obviously, this will result in a corresponding reduction

in water conservation and increase in total potential demand for water for fire protection.

Largely through the work and application of ISO's Municipal grading schedule, the Municipality of Anchorage receives a fire risk rating which determines fire insurance rates for the City. As has already been discussed, widespread installation of private fire protection systems contribute significantly to reducing fire flow requirements for Anchorage, and, therefore, play a part in reducing fire insurance premiums to property owners in the city generally. It is those owners who do not have private protection systems who raise insurance rates, not owners who have installed such systems. To penalize owners for installing private fire protection systems by requiring them to pay this standby charge is to penalize the wrong people. It is the person who fails to install the sprinkler system who contributes to increased insurance rates, who requires immeasurably greater quantities of water to be consumed in putting out fires, and who creates a public hazard, since a fire in a non-sprinklered building is much more likely to rage out of control and burn property of others nearby.

As owners and citizens of the Anchorage municipal area, private fire protection owners have a vested interest in the continuing viability of both the fire protection effort and the adequacy of the water supply. The members of the Water Conservation Association feel that since widespread installation of private fire protection systems not only makes Anchorage a safer place to live, but also reduces Fire Department costs and conserves precious water resources, that the incentive for voluntary installation of sprinklers should be restored. There are a number of options which can be looked at to achieve this purpose.

#### **METHODS TO OPTIMIZE THE FIRE PROTECTION EFFORT AND PROVIDE ADEQUATE WATER SERVICE.**

The Anchorage Area Borough Assembly is empowered by the Municipal Charter to prescribe rules and procedures for the operation and management of municipal utilities. Municipal Charter, Article XVI (C) (1975). The Water Conservation Association offers the following alternatives to the water standby charge as being more productive solutions to the total municipal problem of providing adequate fire protection and sufficient water supply.

1. Grant a tax credit to owners who install private fire protection systems. This will indirectly make those who do not voluntarily install private fire protection systems pay for their counter productive and wasteful practice of depending upon the resources of the Fire Department to fight fires. This will also restore the incentive for owners to voluntarily install private fire protection systems, which is lost when insurance savings are eaten up by the standby charge.

2. Simply stop the standby charge for private fire protection. The Water Utility will not have the benefit of the alternative source of revenue from the ad valorem property tax, but this lack of revenue will be more than made up by the savings which result from the public benefits created by the incentive to install private fire protection systems.

## TAX INCENTIVE PROGRAM

What are we talking about when we speak of a tax incentive program for fire protection? In looking back over the years, and in particular to the fire protection systems that are provided by private property owners, business and industry, we find that through Fire Codes, Uniform Building Codes and ordinances we have insisted that these same property owners provide private fire protection systems.

In effect, what we are telling the property owner is that we in the fire service cannot provide or meet the fire protection requirements for their particular property, that we insist that they install a system that will provide for fire detection and extinguishment, and supplemented by our fire department, we can then possibly handle the fire problem in his building or property.

When the property owner provides for this private fire protection, we often overlook the fact that he is not only providing protection for his property, but in effect is providing a part of the overall fire protection system of the community. His system does provide for fire protection to nearby properties in that the chances of the fire extending beyond his property is practically eliminated through his built-in fire protection system.

With the installation of a sprinkler system or other fire protection system within the property, the value of the property increases. Up to now the increased value of the fire protection system has been added or included in the tax assessment bill on the property.

I strongly feel that to require a property owner to provide for private fire protection systems on his property and then increase his tax bill because he has installed such a system is again self-defeating. We must be able to encourage the property owner to install such systems. We well know that such a system adds directly to the over-all fire protection system of the community.

To encourage the installation of private fire protection systems in our communities throughout the state, with the direct long-range effect of reducing or at least being able to maintain the current level of public fire protection we should consider the following:

Inact legislation at the State level that will remove from the tax rolls the assessment against private fire protection systems. The net effect to the property owner will be that his property tax rate will be reduced by the value of the private fire protection system.

Presently, the property owner that provides private fire protection systems for his property receives the following benefits:

1. Protection for his building
2. Protection for the contents
3. Protection for the occupants
4. Protection for his business
5. A reduction in the insurance premiums

The public receives the following benefits when a private property provides fire protection systems:

1. The public that enters or resides within the building is protected.
2. The nearby property owners are protected from fire extending from the property in question.
3. The community's tax base is protected in the property
4. The community has assurance that this business will not be destroyed by fire
5. The jobs provided within this property are secure from fire.
6. There is a lesser demand or requirement on the community's public fire department because this property has a built-in fire protection system.
7. The overall fire insurance rating will be enhanced by those properties protected by fire protection systems.

It is apparent that those property owners that install private fire protection systems not only receive certain benefits directly, but in respect to the community as a whole, that through their private efforts, provide a larger degree of benefits to the community in general.

Up until the present time, the property owner that provided private fire protection systems has received no direct benefits or credit from the community or local government for his efforts. The community has in general not recognized what the private fire protection systems mean to a community.

It is apparent that if all private property owners could or would provide private fire protection systems, it will have a dramatic long-term effect on the total community fire protection system. It will certainly affect the costs of providing community fire protection in the future.

CA 11

*Private Fire Protection*

*Series A*

*Public Purpose*

*Stand-By Charges*

*Meter Requirements*

*and*

*Houston Shows 'Em How!*

By Edward J. Reilly *Director of Information*  
National Automatic Sprinkler and Fire Control Association, Inc.  
277 PARK AVENUE NEW YORK N.Y.

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## Part One

Water shortage. It is one of the major domestic problems now facing this nation. Its dimensions are long term and nationwide.

What impact does this fact have on your municipality's capacity for fire defense?

Somewhere in the United States a fire breaks out every 12 seconds. Over \$1.5 billion in property and contents are ravaged by flames annually.

On an average of once a day a "large loss" fire makes headlines. (A "large loss" fire is one that exceeds \$250,000.00.)

All this adds up to one conclusion:

Billions of gallons of water are needed daily to safeguard lives and property from fire.

A few years ago a "large loss" fire was sustained in downtown Saratoga Springs, New York. Population: 16,000. At the time of the fire the public water supply for this city was about five million gallons per day. The fire which occurred in the business district placed a demand of six million gallons of water a day to prevent conflagration.

Result: Demand exceeded supply. It was necessary to by-pass the filter beds to meet the total demand for ten million gallons of water needed to fight this fire. For several days, residents had to boil all water used to drink and cook as a health precaution.

THE JOURNAL OF AMERICAN INSURANCE, a monthly publication of the American Mutual Insurance Alliance, spotlighted the problem of inadequate public water in a feature story titled "OUR THIRSTY CITIES" in its December 1962 issue. It is a story of a serious national problem of which all too few Americans are aware. Carefully documenting its sources, the JOURNAL pointed out that in 1961 inadequate water supplies were largely responsible for 52 out of the 358 "large loss" fires that occurred in the United States and Canada. Water shortage "is at least partly responsible for the fact that the nation's annual fire loss has risen from \$5.50 per person in 1951 to \$8.60 per person in 1960. Even more shocking:

- One out of five water utilities was (according to a 1955 survey made by the U.S. Public Health Service) deficient in basic water supply.
  - Two out of five were deficient in transmission capacity.
  - One out of three lacked adequate pumping facilities to meet fire fighting needs.
  - Two out of five needed additional treatment plants to avoid having to pull untreated water into the system in fire emergencies.
-

- Ground storage facilities were inadequate in 29 per cent of the cities; elevated storage was insufficient in 13 per cent.
- Distribution system improvements, such as eliminating dead-end mains, were needed in 57 per cent of the systems to assure adequate pressure and supply to all locations.

Poor water supplies seriously jeopardize the growth of our cities. From a municipal viewpoint, inadequate water prevents industries from locating in a city. Fire insurance rates are too high when water needed for important industrial progress is not available. For example: Springfield, Ohio had not attracted a new industry for 50 years. By improving its water supply facilities, its fire insurance rates dropped by 10 per cent and 11 new industrial plants moved in to provide needed employment.

The fact that water supply facilities must be improved is obvious. Many communities, using federal and state matching grants have already taken steps to alleviate this problem.

*But meanwhile it seems essential that water used for fire protection purposes be conserved.*

#### MORE MILES PER GALLON WITH WATER — FOR FIRE FIGHTING PURPOSES

Ironically many American communities are actually working against themselves. All available information indicates that a pernicious tax, known as the "stand-by charge" is gaining wider acceptance in American cities. The Stand-by Charge is a tax or charge, based on the size of a city water connection, the number of sprinklers, a flat rate, floor area, or a combination of any of these for the purpose of raising revenue to provide adequate water for private fire protection systems.

#### WHAT IS THE PRACTICE IN NORTH AMERICAN MUNICIPALITIES?

The Factory Mutual Engineering Division is part of the National Association of Mutual Fire Insurance Underwriters. Its decennial publication, PRIVATE FIRE SERVICE CONNECTIONS -- SURVEY OF STAND-BY CHARGES AND METER REQUIREMENTS -- 1955-1960, summarizes a survey based on 1,250 public and private water companies serving approximately 3,100 communities in the United States and Canada. Here are the results of that survey:

|                             | UNITED STATES           |                  | CANADA                 |
|-----------------------------|-------------------------|------------------|------------------------|
|                             | (1) Municipal<br>(1000) | Private<br>(145) | (2) Municipal<br>(105) |
| <b>(3) METERS</b>           |                         |                  |                        |
| Required                    | 28%                     | 38%              | 18%                    |
| Not Required                | 72                      | 62               | 82                     |
| Total                       | 100%                    | 100%             | 100%                   |
| <b>(4) STAND-BY CHARGES</b> |                         |                  |                        |
| Yes                         | 51%                     | 88%              | 39%                    |
| No                          | 49                      | 12               | 61                     |
|                             | 100%                    | 100%             | 100%                   |
| <b>BASIS OF CHARGE</b>      |                         |                  |                        |
| Connection size             | 21%                     | 27%              | 8%                     |
| Hydrants                    | 3                       | 3                | 5                      |
| Sprinklers                  | 1                       | 1                | 5                      |
| (5) Combination             | 21                      | 57               | 17                     |
| Flat Rate                   | 4                       | —                | 1                      |
| Floor Area                  | 1/2                     | —                | 2                      |
| Other Basis                 | 1/2                     | —                | 1                      |
| Total                       | 51%                     | 88%              | 39%                    |

Let's examine the pros and cons of stand-by charges:

**PRO** *To provide adequate public water to supply private fire protection facilities, it is necessary to raise additional revenue by taxing owners of buildings protected by private fire protection facilities. Therefore, the cost of such expanded or improved facilities should be borne by owners of buildings protected by private fire protection systems.*

**CON** Fire Protection is a total municipal problem. The Fire Department and Fire Prevention Bureau (Fire Marshal), the Police Department, the Water Department and the fire insurance underwriters each have a part to play in the total fire security efforts of a community.

No single department operates in a vacuum. They must be viewed as an integral unit mutually concerned with the overall fire protection-prevention effort of a municipality.

However, the major burden of municipal fire defense falls upon the shoulders of the Fire Department.

BUT...

1. Shorter work weeks result in the fact that fewer firemen are able to respond to a given alarm than at any previous time. This condition promises to worsen.
2. The ratio of firemen to population has dwindled steadily since World War II.
3. Firemen are charged with the responsibility of protecting higher valued properties, more buildings, more volatile and flammable contents each year. Because of the plight of the public fire services, the need for private fire protection is increasing. The backbone of private fire protection is the *automatic sprinkler system*.

Fire officials' associations have unanimously endorsed basement sprinkler ordinances and associations of fire chiefs have been extremely effective in obtaining automatic sprinkler ordinances in Fire Prevention Codes across the nation.

Most rank and file fire fighters know that no firemen has ever been killed in line of duty in a building protected by an approved automatic sprinkler system.

Building officials, too, acting through their large building code congresses, have recognized the important roll of automatic sprinklers, and have adopted provisions into building codes to strengthen automatic sprinkler requirements *for new construction*.

#### PRIVATE FIRE PROTECTION SERVES A PUBLIC PURPOSE

An owner who elects to install an automatic sprinkler system is serving a *public purpose*:

1. He precludes the possibility of exposure fires and conflagrations.
2. He secures greater personal safety to firemen and offers the best possible safety to life to his employees and to the general public.
3. He safeguards continuity of business in his own plant.
4. He is generally a major taxpayer in a community. By installing automatic sprinklers, he insures a steady flow of taxes needed to support the various municipal departments which work together to protect his property and the property and lives of his neighbors.

In cities that have meter and stand-by requirements, he pays for water used to extinguish a fire in his property three times:

*First:* He pays for private water measured through his meter.

*Second:* He pays an annual stand-by charge whether he has a fire or not.

*Third:* He pays for public water should it be needed.

If his neighbor, the owner of an unsprinklered building, has a fire, both he and his neighbor pay for that water.

Water used to fight fires in unsprinklered buildings vs. sprinklered buildings is often consumed in the ratio of *ten thousand* to *one* gallons per minute. The consumption of two, three or four million gallons of water is not uncommon in the suppression of fires in unprotected properties.

## CHARGES AGAINST PRIVATE FIRE PROTECTION — REDUCE MUNICIPAL REVENUES

The installation of automatic sprinklers is clearly a property improvement. To the extent that buildings are improved, a direct taxable value is added to the total value of property effected and increased revenue to a municipality results.

Therefore, when private fire protection is discouraged, public revenue diminishes in direct proportion.

## COST — PRIVATE VERSUS PUBLIC WATER

It is argued by some water departments that owners of private fire protection systems should pay above and beyond public water rates to expand and improve water facilities.

In view of the fact that private fire protection serves a public purpose by reducing the cost of public fire protection and because it spares the community tens of millions of gallons of water, he should be given water at the lower rate charged to the municipality for municipal fire protection.

It is further argued by some water department officials that the addition of a sprinklered plant to a community required adds expenditure to provide public water mains to the property.

Industry and population follow public water supplies. No water main laid to one sprinklered property in a municipality will remain unshared for long. Other industries, housing developments, shopping centers will invariably move near public water mains; thus, dividing the cost of public water among many users.

5

## FIRE INSURANCE REDUCTIONS

**PRO** *Owners of sprinklered properties enjoy reduced fire insurance premiums which reduce the owner's operational cost and amortize the cost of private fire protection in a few years. Therefore, because of reduced overhead, owners of sprinklered properties are better able to carry the financial burden of providing adequate water supplies.*

**CON** This is a *non sequiter*.

To impose a tax or charge against an owner of property protected by a private fire protection system because he has made a good business judgment, is discriminatory.

By installing sprinklers, he has diminished the demand placed upon the public fire services, the water supply system, police and traffic control.

Private fire protection must be viewed as a public aid. It should not be penalized.

## OTHER UTILITIES HAVE STAND-BY CHARGES

**PRO** *Some public water officials justify stand-by charges because electric power and gas utilities have them.*

**CON** This comparison is misleading. Everyone uses electric power. Virtually every taxpayer uses gas or electricity for heating and cooking. Therefore, everyone pays his fair share and there is no inequity in raising revenue when all citizens enjoy equal benefits. In the case of stand-by charges against owners of sprinklered properties, we are discussing a tiny minority of the general population. Not more than a few hundred taxpayers out of a half million are required to pay these charges. Therefore, the stand-by charge against private fire protection is discriminatory.

## METER REQUIREMENTS

Some cities require the use of full flow fire meters.

These meters are intended to measure the flow of water when a fire occurs.

Other communities require so-called detector check meters which are designed to detect leakage, waste or theft of water.

The requirement for full flow fire meters can be compared to a requirement for a speedometer on your automobile which costs nearly as much as the automobile itself.

Obviously full flow fire meter requirements discourage private fire protection installations. Fire and building officials who envision automatic sprinklers as an integral part of their city's fire fighting capabilities are hard put to justify fire protection and building codes which make sprinklers mandatory when they are confronted with mandatory requirements for full flow fire meters.

The cost of purchasing and installing such a meter could conceivably be equal to the cost of sprinklering a 4,000 square foot basement.

### WHAT'S BEHIND THESE METER REQUIREMENTS?

Some public officials believe that water used to fight fires with private fire protection facilities should be measured and that owners should be charged. The reason is that the owner has benefited from reduced fire insurance premiums and can well afford to pay for the metering devices.

Nevertheless, public water used to extinguish a fire in an unsprinklered building is not metered and public fire protection water in the order of millions of gallons is frequently necessary to effect good fire control. But the water bill for this purpose is shared by everyone, including owners of sprinklered and unsprinklered buildings. Therefore, the requirement for full flow fire meters is *discriminatory* and ultimately results in reduced fire fighting capacity within a community when sprinklers are discouraged or eliminated.

From a fire fighting standpoint such meters result in needless "friction loss" which reduces water pressure and volume needed to fight fires.

"Friction loss" is the result of an impediment (within the metering device itself) which reduced the velocity and volume of water needed to fight fires.

One of the components found in sprinkler systems is a water flow alarm device. In effect it detects the flow of water and prevents waste and leakage within a system. It is a kind of built-in metering device.

Many sprinkler systems are connected to central station supervisory services which transmit an alarm indicating flow of water. The requirement for a meter in such cases is a duplication of cost without concomitant benefit.

SUMMARY:

It has been said that "the power to tax is the power to destroy". Any economic sanction levied against private fire protection is, in effect, a tax which results in a diminishment of the total fire security effort of a community and increases the burden of public fire protection in direct proportion.

Conversely to strengthen private fire protection by encouraging its expansion:

1. Decreases both the economic and physical burden of the Fire Department and concomitantly decreases the hazards of fighting fire.
2. Decreases total fire insurance costs because anyone's fire is everyone's loss.
3. Increases tax revenues by encouraging property improvement.
4. Encourages cost conscious industries to move into new communities.
5. Increases a community's total fire protection security, preventing conflagrations and exposure fires.
6. Saves billions of gallons of water which is in chronic short supply in most cities.

## Part Two

# Houston Shows 'Em How!

## THE DEMISE OF A "STAND-BY CHARGE"

A scrappy little band of Houston businessmen known as the ASSOCIATION FOR ENCOURAGING FIRE PROTECTION has succeeded in showing us all how to deal with that pernicious phenomenon known as the "Stand-By Charge".

On February 21, 1961, the Houston City Council enacted an ordinance that prevailed in part for a *monthly charge* of \$1.00 per inch on all city water connections to automatic sprinkler systems. For example, the owner of a sprinklered building, served by an eight (8") inch city connection to his sprinkler system was required to pay \$8.00 per month or \$96.00 per year.

Then it all began. Mr. Russell Cummings, owner and manager of the leading storage and moving business in Houston asked, Why? Seriously. When the city mailed him a bill for a "stand-by charge", he was puzzled. "What am I getting for my money?" he asked. A chain of phone calls and correspondence led him up and down a labyrinth of municipal offices and he came up with an assortment of answers that didn't make sense to him. He knew he was being asked to pay for something, and he couldn't find out what he was getting for his money.

He began to think about some of the answers he had gotten back when he inquired of various public officials.

He had been told that it was necessary to tax his sprinkler system, a privately owned fire protection system, to raise revenue to expand or maintain public water supplies. But he also knew that the amount of water that could be used by a sprinkler system in case of a fire could only reduce the amount of water needed. If his neighbor who had an unsprinklered building had a fire, millions of gallons of water might be needed, and it would be paid for out of public taxes. But the immeasurably small amount of water that his sprinkler system could conceivably use had to be paid for by means of a "stand-by charge".

He also learned that there were probably in the order of 1,000 or more sprinkler systems in Houston and their very existence greatly reduced the burden of public fire protection. Without these sprinkler systems, far more Fire Department personnel and fire fighting equipment would be needed to cope with the hazards which would exist.

He had invested in a sprinkler system. He reasoned that by doing so he was safeguarding the future of his own business, protecting the lives of his employees and could amortize the cost of the sprinkler system in fire insurance rate reductions. It annoyed him to learn that his good business judgment was being penalized and it could take him

or other owners of sprinklered buildings as much as 200 years to amortize the cost of the system after paying his monthly and annual charge on his water connection.

Further, he had increased the value of his property by installing sprinklers, was paying a tax on the increased evaluation of his building and was now being double taxed for a property improvement which actually worked against the whole fire protection effort of the City of Houston.

## THE ASSOCIATION TO ENCOURAGE FIRE PROTECTION

Russell Cummings was a realist. He had some experience in politics. He was a businessman, and he knew that alone he could do nothing.

He wrote a letter to Mayor Louie Welsh, to each City Councilman and to other public officials in the City. A telephone campaign followed and he invited representatives of the Insurance Agents Association (The Insurance Exchange of Houston), the Retail Grocers Association, the Chamber of Commerce Fire Prevention Committee, and the Junior Chamber of Commerce Safety Committee. He invited leading fire protection contractors in Houston and a meeting was called. Attendance was unanimous and an organization known as the Association to Encourage Fire Protection was formed. Russell Cummings was elected President.

An organization was formed, with letterhead, telephone number, officers and some of the leading businessmen of Houston as members.

It turned out that Mayor Louie Welsh; Councilmen A. I. "Curley" Miller, Frank Mann, Lee McLemore, Bill Elliott, Homer Ford, Bob Webb, Johnny Goyan and Frank Mancuso were also interested in fair play and, once the case for "encouraging good fire protection" was layed before them, they were in unanimous agreement: the "stand-by charge" was repealed, as any Texan would say, "pronto".

Less than 20 months after the law had been enacted, it was repealed.

AS WE SEE IT . . . The Houston story could be repeated anywhere. And it should be. Most city officials are fair minded men. But the business of financing a modern municipal government with its myriad of departments and bureaus is a complex business. A single voice, speaking alone at City Hall, would go unheeded. Not because public officials are calloused or indifferent or unresponsive to the wishes of the electorate, but because, by the nature of politics, public officials must tune their ears to organizations; not to individuals.

A lot of work went into the repeal of this Houston "stand-by charge". It took leadership and hard work. But an injustice had been imposed, and that small band of willful men made their voices heard.

To Mayor Louie Welsh, the members of his City Council and other Houston officials, and to the Association to Encourage Fire Protection — *Well Done!*

February 20, 1980

Senator Brad Bradley  
Pouch V  
State Capital  
Juneau, Alaska 99811

Dear Senator Bradley:

I have been informed by the Fire Chief's Association that you are in support of a bill similar to House Bill No. 648 which would exclude the value of fire protection systems from the tax assessments of the full and true value of a building. I believe you will find the following information of interest and useful to you.

On February 15, 1980 I went by the Fairbanks North Star Borough Assessors office and pulled the file on my residence at 3292 Jefferson Drive in Fairbanks, (Executive Park Subdivision, Block 2 Lot 24), and was very surprised to learn that my appraisal had recently increased from \$76,725 to \$93,325, and increase of \$16,600. Inquiring as to the reason for the increase I found out that they had reassessed me \$2.25/foot for my 2,393 square foot house (a total of \$5,384.00) for the simple residential sprinkler system that I installed last summer. Yet the materials for the complete system, which conforms to NFPA Pamphlet 19D, cost me in the neighborhood of only \$600 and the labor amounted to less than thirty (30) hours (about \$1,200.00). This is barely more than 1/3 what I have been assessed.

In comparison it is interesting to note that the recently completed finishing work on the basement of this same house caused a reassessment of \$4,858.00 an amount less than the 1" pipe residential sprinkler system that I had installed.

Hopefully you might be able to use this information as an example to assist you in your effort to get a bill similar to House Bill #648 passed this year. Such a bill will certainly encourage Alaska residents to install residential sprinkler systems within their homes and help reduce the Alaska life and property loss due to fire, without it, it is obvious from my experience that there is certainly strong financial disincentive.

Senator Brad Bradley  
Page 2

It is of interest to also note, that the Insurance Companies serving Alaska will not give the home owner a reduction in his fire insurance cost for installing a residential sprinkler system but it is possible for a business to get up to a 75% reduction in his fire insurance cost if he installs a commercial sprinkler system.

Sincerely,



Warren B. Cummings  
3292 Jefferson Drive  
Fairbanks, Alaska 99701

WBC:jcs

P.S. After I made an inquiry with the Borough Assessor he has indicated he may reconsider, however this initial assessment is causing me considerable consternation.

xc: Tom Monk, A.F.C.T.A.  
Andre' Schalk, A.F.C.A.  
Senator Don Bennett  
Senator Betty Fahrenkamp  
Senator Glenn Hackney  
Representative Robert Bettisworth  
Representative Fred Brown  
✓ Representative Charlie Parr  
Representative Richard Randolph  
Representative Bryon Rogers  
Representative Sally Smith  
Representative Malone  
Representative Duncan

# Alaska State Legislature

SENATOR MIKE COLLETTA



SENATE FLOOR LEADER

Senate

MEMORANDUM

FEBRUARY 27, 1980

TO: REPRESENTATIVE BILL PARKER, CHAIRMAN  
HOUSE COMMUNITY & REGIONAL AFFAIRS

FROM: SENATOR MIKE COLLETTA *R*

RE: SB 370/HB 648 Fire Prevention

The attached letter from James A. Van Altvorst, City Manager of Ketchikan is forwarded for your review.

Your attention to this matter is appreciated.



CITY OF KETCHIKAN

334 FRONT STREET

P. O. BOX 7300

TELEPHONE 907 225-3111

SD  
full price  
FEB 26 1980

February 22, 1980

Senator Mike Colletta  
Pouch V  
Juneau, Alaska 99811

Dear Senator Colletta:

On behalf of the City of Ketchikan, I wish to add support to passage of Senate Bill 370, an act relating to fire prevention.

Approved automatic fire protection systems are obviously and definitely advantageous to the building in which they are installed. However, the benefits of those systems go far beyond the individual structures. They also benefit the entire community.

Essentially, installation of such systems decreases a community's "fire flow requirement" which is the community's ability to deliver water to control fires. A decrease in the "fire flow requirement", in effect, reduces the need for fire fighting equipment, facilities to house that equipment and staff to operate and maintain that equipment and facilities without reducing the level of fire protection in the community. Therefore, the entire community can benefit because of a reduction in the cost necessary to provide a given level of fire protection.

Because the entire community can benefit from the installation of approved fire protection systems in individual building, building owners should be given an incentive to install such systems rather than suffer additional fees or taxes because they installed those systems. Therefore, the City of Ketchikan supports Senate Bill 370.

If you have questions about the City's position on this issue, please contact me.

Sincerely,

  
James A. Van Altvorst  
City Manager

JAVA:gw