

CITIZENS LEAGUE REPORT

No. 39

**Minneapolis City Council  
Insurance Practices**

**March 1955**

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NOT FOR RELEASE

A STUDY OF MINNEAPOLIS  
CITY COUNCIL PRACTICES  
IN INSURING BUILDINGS  
AGAINST LOSS BY FIRE  
AND RELATED HAZARDS

Prepared by

INSURANCE SUB COMMITTEE

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a sub committee of the

CITY AND METROPOLITAN GOVERNMENT COMMITTEE

Charles T. Silverson, Chairman

November 22, 1954

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## INTRODUCTION

A study of the insurance practices of the Minneapolis City government was one of the first projects suggested to the City and Metropolitan Government Committee. The suggestion was based to a considerable extent upon a memorandum on insurance practices prepared for a committee of the City Council by the City Research Engineer. This memorandum, and other information submitted by members of the City and Metropolitan Government Committee, gave evidence of a real need for an independent review of municipal insurance practices. As a result, in August 1952 the committee voted to make such a review.

A Sub-Committee on City Insurance Practices was appointed, consisting of the following members, who made this study:

William E. Brandow, Chairman  
George W. Nelson  
George T. Pennock  
Simon A. Weisman

Albert J. Richter, the League's Research Director, assisted the sub-committee in its work.

Early in the Sub-Committee's work it was learned that there is no central insurance purchasing agency for the City. Rather, the various subdivisions -- the City Council, Board of Education, Board of Public Welfare, the Board of Park Commissioners and the Library Board -- each purchases its own insurance without reference to the insurance practices of the other subdivisions.

A brief study of the insurance practices of the several governing bodies disclosed that the City Council appeared to be the least advanced in the way of establishing a consistent insurance policy and program. For this reason, and without intending to indicate approval or disapproval of the insurance practices of the Park Board, School Board, Library Board and Board of Public Welfare, the sub-committee decided to concentrate its study on insurance practices in the agencies under the City Council.

The City Council purchases the following types of insurance policies: fire, windstorm, public liability, robbery, burglary and messenger and camera. In terms of adequacy and consistency of coverage, the insurance against risk of property loss through fire and related hazards (windstorm and hail, for example) appeared to be most in need of examination. The Sub-Committee therefore limited this report to the program of fire and extended coverage on buildings and contents under the jurisdiction of the City Council.

In doing this, the committee was still aware of the need for integrated insurance policy and administration throughout the City departments. This need was well stated in a recommendation of the Public Administration Service in its 1947 administrative survey:

"The determination of the nature and extent of insurance coverage is a matter of public policy, which must necessarily be made by the City Council and other governing boards concerned. It is recommended, however, that each of

the governing boards completely review its policies regarding insurance coverage, and that some attempt to achieve integration of policies and procedures with respect to insurance coverage be initiated to the end that these matters be handled on a city-wide basis."

In the submission of this report on insurance practices in departments under jurisdiction of the City Council, therefore, the committee wishes to call attention to the ultimate need for study of the possibility of an integrated insurance program, as recommended in the Public Administration Service survey.

SUMMARY

The Sub-Committee's main conclusion is that the basic need in the City Council's handling of fire insurance on buildings and contents is the establishment of a clear-cut policy providing answers to such questions as: Which properties shall be covered by purchased insurance? To what extent shall they be covered? If insurance is to be purchased, how shall it be done? Should reserves be set up to pay uninsured losses? If so, how much should the reserves amount to and how should they be financed?

The Sub-Committee found, however, that determination of such a clear-cut policy could not be made because of the lack of data on insurable values of buildings and contents. The Sub-Committee therefore undertook to develop such data, on buildings only.

Using these data the Sub-Committee has prepared figures bearing on the cost of four general alternative programs of insurance on buildings. The four alternatives are summarized in full on pages 14 to 16 and pertinent statistics are summarized in Table 5 following page 14.

No cost estimates are made on two of the alternatives -- self-insurance with a reserve fund and self-insurance without a reserve fund -- because of the variables involved. These are the estimated costs of the present insurance program and the other two alternatives:

1. Present program	about	\$1,000
2. Full company insurance to 80% of value		12,666
3. Partial self-insurance plan		
a. Variation I -- insurance to 80% of value less \$25,000		8,785
b. Variation II -- insurance to 80% of value less \$100,000		6,348

The four alternatives are submitted to the Board of Directors without recommendation by the Sub-Committee.

This report, therefore, presents information which it is hoped will be helpful in setting a City Council policy on insuring buildings against loss by fire and related hazards.

## I. THE NATURE OF RISK AND INSURANCE

There are a number of definitions and principles which it is basic to understand in considering the problems of insurance and in weighing the alternative methods of insuring. The following statement is based on State and Municipal Self-Insurance by George S. Hanson, a publication of the National Association of Insurance Agents (1953).

Property is subject to loss, through fire, windstorm or other hazard. The chance of such loss is "risk".

On any single piece of property the risk is uncertain, because of the inability to predict the time, nature and extent of the potential loss. But with a large group of similar properties, statistical experience makes it possible to predict with reasonable certainty the chance of loss among the properties as a group. This is because incidents which appear to be the result of pure chance when only isolated cases are considered tend to occur with a high degree of regularity over a large number of cases. Thus we have the combined operation of the mathematical theory of probabilities and the law of large numbers.

Statistics show that the irregularity of loss occurrence tends to be less:

--As the number of similar cases under observation is increased.

--When a great number of individual risks are independent of each other, that is, when a loss on one piece of property is not likely to affect the chance of loss in other properties.

--When the properties in a group are selected so that loss can be reasonably expected to be small in relation to the value of the property involved.

Webster says "to insure" means, in non-technical language, "to make certain". The above mentioned mathematical rules point the way to bringing certainty out of uncertainty in the management of property. The rules apply no matter which one of the alternative methods of insurance described in the following pages is used. They can be ignored only at the risk of greater property loss.

## II. ALTERNATIVE METHODS OF INSURANCE

### A. Insurance of All Properties with Private Carrier

Purchase of insurance from private insurance companies permits the shifting of the risk of unknown loss to a professional risk bearer for a relatively small known charge - the premium.

#### Advantages

1. The cost of protection is known and can be definitely budgeted.
2. When a loss occurs, recovery is certain, providing sufficient insurance is carried.
3. Insurance companies provide important loss prevention services. Regular inspections stimulate good housekeeping and very often bring to light needed repairs which, if delayed, would cost more. Engineers are available for consultation on fire prevention measures.
4. Most private insurers provide appraisal services. The property owner needs to know the current value of his property particularly in time of rising or falling costs and changing market conditions.

### B. Full Self-Insurance with Fund

This plan involves the cancellation of present policies, or the dropping of policies as their terms expire, and the setting up of an insurance fund from which losses are paid.

The fund is usually built up by the council by paying a regular premium charge into the fund or by appropriating a certain amount each year. Some cities decrease the amount of insurance carried in private companies as the amount in the reserve fund increases. Care must be taken in the early years to keep large risks properly covered by insurance until the amount in reserve is large enough to safely assume full coverage.

#### Advantages

1. The city is able to save the 30% - 50% of the insurance premiums which go to defray the expense of operation of private insurance companies.
2. If there is a low loss experience on municipal property, the city makes additional savings which can be paid into the insurance fund and there can earn interest.

#### Principles

A noted authority on insurance, Dr. S.S. Huebner of the University of Pennsylvania's Wharton School of Finance and Commerce, lists the eight conditions of sound self-insurance as follows: (1)

"(1) The number of units of property covered must be sufficiently large to make the application of averages possible.

(2) Even where the advantage of numerous risks presents itself, the amount of coverage per unit should be reasonably small and uniform. In



some instances careful owners will self-insure only the less valuable items and use outside insurance for those units which are so valuable as to make a single loss sufficient to materially deplete or exhaust the insurance fund, or to otherwise cripple the financial standing of the insured. In other instances, and this is becoming quite common, the owner as self-insurer will assume a stipulated amount of loss on each item, like \$2,000 or \$5,000, irrespective of the value of the unit involved in the fire, outside insurers assuming the balance of any loss in excess of the stipulated minimum. In still other cases, the owner first assumes a limited stated amount of loss, like \$5,000 on any unit, then becomes co-insurer, say on a 50-50 basis, with outside insurers for any excess loss up to another \$10,000, while any further loss on any unit in excess of \$15,000 must be borne entirely by outside insurers. Many other arrangements have been effected, but all have for their purpose the assumption as far as the self-insurance fund is concerned, of a reasonably small risk per unit.

(3) Again, even where properties are sufficiently numerous and of approximately equal value, certain units may be many times as hazardous from a fire insurance standpoint as are other units. Such hazardous units may be segregated for insurance with outside underwriters, the self insurance fund assuming only the reasonable non-hazardous ones.

(4) Even where the aforementioned three conditions are complied with, it is highly important that the risks should be independent of one another, i.e., a fire occurring in one should not be capable of spreading to another. Just as fire insurance companies are anxious to avoid a conflagration loss, and thus refuse to carry more than a reasonably safe amount of risk within a conflagration area so self-insurers should be equally careful to avoid loss to several or many units as the result of a single fire. It is for this reason that municipalities, school boards, etc., so often resorting to self-insurance, are not really in position at all to follow the practice, since the great mass of their properties happen to be located within areas subject possibly to a sweeping fire.

(5) The self-insurance fund should be created gradually, and there should be an avoidance of a sudden transfer from outside insurance to self-insurance. The method pursued should consist of a gradual decrease in the liability assumed by outside agencies and a corresponding increase in the self-assumed liability. To make a sudden transfer from 100 percent outside insurance to 100 per cent self-insurance is very unscientific in that a loss of large proportions in the early stages will much more than wipe out the self-insurance fund. It takes time to build up such a fund, and successful accumulation is dependent chiefly upon good fortune in not meeting with a staggering loss in the early stages. Even where a fund has been gradually built up to an adequate total, it is the policy of some corporations to continue adding thereto. The fund is regarded as an invested asset, to be used for the payment of extraordinary losses should they occur.

(6) In considering the advisability of self-insurance, too much emphasis should not be placed upon a favorable loss experience over the preceding ten or even twenty years. Too often property owners compare their loss record over a ten or twenty-year period with the premiums paid during the same time to insurance companies, and conclude that much money might be saved under a self-insurance plan. Following adoption of the plan unusual losses during the first year or two might greatly exceed the premiums which

(1) From Property Insurance, pp92-95 quoted in the appendix of State and Municipal Self-Insurance by George S. Hanson, National Association of Insurance Agents.

would otherwise have been paid to outside insurers. Cases are on record, especially in connection with municipalities and other public units, where losses during a very short period have much more than exhausted a self-insurance fund accumulated over a very considerable number of years.

(7) Where the financial affairs of the property owner are near the borderline of insolvency, the assumption of a self-insurance program seems a very questionable practice, especially where creditors or other interested parties are involved. Premium payments to a company furnish a definite guarantee for a definitely known outlay. On the contrary, a substantial variation in the normal loss experience, under a self-insurance plan, may actually convert the slender financial standing of the owner into actual bankruptcy.

(8) The self-insurance fund should be kept inviolate, and the user of the plan must not be tempted to tamper with the accumulated fund for other purposes. So frequently a favorable loss experience over a considerable number of years has led to the accumulation of a substantial insurance fund. Then, owing to a period of business adversity, great pressure is brought to bear in the interest of continuing dividends or interest payments. In the search for available means to accomplish this purpose, it is decided to dip heavily into the apparently idle self-insurance fund. And just when the fund has been depleted the bad luck strikes in the form of an unusually heavy fire loss. If scientific self-insurance is to accomplish its mission, it is highly essential that the fund guaranteeing the solvency of the plan should be kept inviolate for the special purpose for which it was created.

In the overwhelming mass of instances, where the aforementioned conditions can be complied with, self-insurance is resorted to because of the belief that saving might be effected as compared with the cost of insurance with outsiders. It is felt that through self-insurance there may be an avoidance of the cost of acquisition (commissions), premium taxes and other taxes levied upon insurance when placed with outside concerns, and the profit which outside insurers expect to make. Whether this is really the case can only be determined after the lapse of considerable period of time."

Detroit, Michigan is an example of a large city operating under this plan. The self-insurance plan was established by ordinance in 1940. Up to 1953 appropriations to the fund were made at the rate of \$50,000 annually. Because of increased repair and replacement costs, annual appropriations were increased to \$75,000 in 1953. The size of the fund is limited to \$500,000 and had reached \$335,000 on October 31, 1953. Losses paid to that date were \$342,000 with an additional \$101,000 in claims outstanding.

#### C. Full Self-Insurance without Fund

This is in effect a no insurance plan under which normal losses in a single year are met through regular budget procedures or by a special appropriation. Abnormal losses or losses arising from conflagration are met by resorting to bond-issuing powers.

The International City Managers Association publication, Municipal Finance Administration (1948) comments in part: "The practice of carrying no insurance is similar to the self-insurance fund plan in that the city in both instances undertakes to pay all losses. In the case of no insurance there is eliminated whatever risks and expenses are incident to a self-insurance fund administration.

The insurance fund plan, however, provides a better means of budget control for most cities and a more flexible means of paying losses promptly."

The same publication states somewhat the same conditions as listed above for self-insurance with a fund as being necessary for a no insurance plan:

- "1. Public buildings should be scattered over a wide area as a safeguard against conflagration.
2. In order to have a safe distribution of fire losses the city should have a number of risks. Smaller cities are more likely to suffer a financial disaster under a plan of no insurance than larger cities.
3. The debt margin should be large enough, at all times, to cover the total loss of the largest single risk.
4. The most expensive risks should be of fireproof construction.
5. The local fire department should concentrate on an improved fire prevention and inspection program."

"New York City, which has for many years carried no fire insurance on municipal property, has a credit which is as great as the resources of any of the more reputable insurance companies. The public buildings in New York City are so widely scattered that the danger of conflagration is remote. The City's practice of carrying no insurance over a period of years has proved to be extremely economical. Some other cities that have experienced substantial savings by carrying no insurance are as follows:

Albany, New York  
Boston, Mass.  
Birmingham, Alabama  
Cambridge, Mass.  
Cincinnati, Ohio  
Des Moines, Iowa

Grand Rapids, Michigan  
San Francisco, California  
Rochester, New York  
Seattle, Washington  
Troy, New York  
Washington, D. C."

#### D. Partial Self-Insurance

This is a plan whereby the city establishes a fund from which it pays normal losses and purchases insurance for abnormal catastrophe or conflagration losses. If for example a city were to establish a fund of \$100,000 it would then purchase from private insurers a policy insuring each loss to the extent the loss exceeded \$100,000.

Such a plan makes unnecessary the creation of a self-insurance fund equal to the value of the largest building. The establishment of a modest fund of, for example, \$100,000, becomes relatively simpler.

The disadvantage inherent in any self-insurance fund plan remains: i.e., the possibility of several losses in a single year which would exhaust the fund.

Denver, Colorado, has operated under a variation of this plan since 1947. Properties valued under \$100,000 are not insured and no fund exists. Losses to this group of properties are paid through general appropriations. Properties valued in excess of \$100,000 are insured fully.

Kansas City, Missouri, has operated under this plan for several years. Its insurance needs are served by the Public Insurance Committee of the Insurance Agents Association. From 1947 to 1953 the city self-insured all buildings under \$100,000 and also the first \$100,000 of losses on larger buildings.

Beginning in 1953 the city has self-insured \$200,000 of losses. The savings in premiums are credited to a self-insurance fund from which the first \$100,000 and now \$200,000 are paid.

### III. CURRENT STATUS OF CITY COUNCIL FIRE AND EXTENDED COVERAGE INSURANCE ON BUILDINGS

On December 18, 1951, the City Research Engineer submitted to the Public Grounds and Buildings Committee of the City Council a report on fire insurance on properties under the jurisdiction of the City Council. A recent check indicates that little basic change has occurred in the Council's insurance program since that time. This study, therefore, has been based upon the data contained in the Research Engineer's report of December 18, 1951.

#### A. Coverage Against Loss by Fire

##### 1. Buildings

One hundred buildings were listed as under the jurisdiction of the City Council on December 18, 1951.

Insured buildings. The City carried fire insurance policies on 45 of the buildings. Table 1 is a listing of the 45 buildings, showing the amount of insurance carried. Total insurance was \$166,500, ranging from \$25 to \$25,000 for a single building.

In 1951, insurance engineers from Marsh and McLennan, Inc. made estimates of the insurable values (replacement cost less depreciation) of a number of City Council buildings. Of the 31 insured buildings surveyed, total estimated insurance value was \$1,232,882, ranging from \$1,413 to \$149,525.

Table 2 summarizes a comparison of insurance carried with the estimated insurable value of the 31 buildings. Total insurance was 10.6% of insurable value, ranging from 3% to 70% on any one building. Twenty-three of these 31 buildings were covered by no more than \$1,000 insurance each.

Uninsured buildings. Table 3 is a listing of the buildings which were not insured. Showing assessed valuations and, where available, the estimated insurable values. Insurance valuations are made on the basis of replacement cost with proper allowance for depreciation and obsolescence. Those shown in Table 3 were ascertained through the assistance of a local fire insurance engineer.

It will be noted that assessed valuations are considerably smaller than insurable valuations. Thus it is likely that the actual insurable values of the 46 buildings are much in excess of the total assessed valuations. A conservative estimate would probably be at least \$25,000,000. This figure is used in the tabulation below, which summarizes insurance coverage on City Council buildings as described in this section.

Table I

## BUILDINGS UNDER CITY COUNCIL JURISDICTION INSURED AGAINST LOSS BY FIRE

December 18, 1951

Property insured	Location	Amount of insurance	
1. Auditorium warehouse	211 E. Grant St.	\$25,000	
2. Auditorium addition	211 E. Grant St.	10,000	
3. Riverside baths	2128-30 South 6th St.	6,000	
4. John Ryan baths	26-2nd St. N.E.	5,000	
5. Bridge yard bldg. #18401	27th & Longfellow	4,200	
6. #18402	" "	500	
7. #18403	" "	250	
8. #18404	" "	500	
9. #18405	" "	150	
10. #18406	" "	150	
11. #4A	" "	50	
12. 4B	" "	50	
13. #4C	" "	200	
14. #4D	" "	50	
15. #4E	" "	25	
16. #4F	" "	25	
17. #4G	" "	150	
18. #4H	" "	200	
19. #4I	" "	100	
20. #4J	" "	200	
21. River Terminal building	225 2nd Ave. So.	20,000	
22. Sewer Building #18201	1911 E. 26th St.	7,500	
23. " " #18202	" " " "	1,000	
24. " " #18301	1937-45 E. 26th St.	2,000	
25. Lands and Bldg. #18701	700 8th St. S.E.	1,000	
26. #16001-5th ward toolhouse	520-4 So. 5th St.	5,000	
27. #16404-heating plant bldg.	2900 Pleasant Ave.	800	
28. #16401-garage, storage, office	" "	2,000	
29. #16402-storage, repairing	2901 Grand Ave.	1,500	
30. #16403-equipment storage	2901 Grand Ave.	700	
31. #16801-office, warehouse, repair	4444 Snelling	4,500	
32. #16804-garage & warehouse	4444 Snelling	500	
33. #16805-garage	4450 Snelling	500	
34. #16806-tractor garage-rear	4450-53 Snelling	500	
35. #17001-13th ward toolhouse	4301-05 Pillsbury	5,000	
36. #16201-Traffic Dept. Shop & warehse.	1300 Curriel	10,000	
37. #15205-No. side equipment bldg.	2710 Pacific	10,000	
38. -E. side equipment bldg.	1809 Washington	15,000	
39. Water works #65503-warehouse & shop	421 9th St. S.E.	1,000	
40. " " #65502-E. side warehouse	905 5th Ave. S.E.	1,500	
41. " " car barn	Col. Hts. filter plt.	1,700	
42. Police station	5th precinct	2917-19 Bryant So.	10,000
43. " "		1901 No. 3rd St.	5,000
44. " " repair shop		2917-19 Bryant So.	2,000
45. " "		2904 27th Ave. So.	5,000
Total		\$156,500	

Source: Memorandum on fire insurance from

Research Engineer to Council Comm. on Public Grounds and Buildings, 12/18/51

Table 2

RATIO OF INSURANCE CARRIED TO INSURABLE VALUES ON 31 INSURED BUILDINGS SURVEYED BY  
MARSH AND MCLENNAN, INC.

Percent, insurance carried to insurable value	number of buildings	Total insurable value
0 - 10	12	\$591,405
11 - 20	12	598,027
21 - 30	3	34,789
31 - 40	2	2,942
41 - 50	1	3,548
51 - 60	0	0
61 - 70	0	0
71 - 80	1	2,171
81 - 90	0	0
91 - 100	0	0
	<u>31</u>	<u>\$1,232,882</u>

Table 3

## BUILDINGS UNDER CITY COUNCIL JURISDICTION NOT INSURED AGAINST LOSS BY FIRE

December 18, 1951

Property	Location	Assessed Valuation	Estimated Insurable Value
1. East Side police station & Garage	945 19th Ave. N.E.	\$46,200	\$146,000
2. Police Radio Station & radio equipment	2220 Locust St.	30,600	32,600
3. Fire Station # 1	530 So. 3rd St.	21,600	70,000
4. " " # 2	151-13th Ave. N.E.	7,400	
5. " " # 4	1106-No. 6th St.	82,030	164,000
6. " " # 5	1501-4th St. So.	7,400	
7. " " # 6	30 So. 13th St.	52,800	204,000
8. " " # 7 (and garage)	2011-21st Ave. So.	8,300	110,000
9. " " # 8	2749 Blaisdell	82,030	165,000
10. " " #10	19 No. 4th St.	24,500	
11. " " #11 (drill School)	229 6th St. S.E.	50,950	154,000
12. " " #13	4201 Cedar Ave.	19,160	68,000
13. " " #14	1704-33rd Ave. N.	66,425	162,000
14. " " #16	429 James Ave. N.	5,100	
15. " " #17	821 E. 25th St.	57,700	133,000
16. " " #19	2001 University Ave.	8,100	
17. " " #20	4100 Lyndale Ave N.	6,150	
18. " " #21	3008 Minnehaha Ave	6,950	
19. " " #27	4554 Nicollet Ave.	13,500	89,000
20. " " #28	2724 W. 43rd St.	13,700	56,500
21. " " #29	2701 Johnson St.	17,450	60,000
22. North Side destructor	28th Ave. N. & Pacific)		
23. " " " materials storage shed	28th Ave. N. & Pacific)	102,750	436,450
24. South Side destructor	20th Ave. S. & 29th St.	223,980	603,000
25. Oil Plant # 10 incl. tanks, equipt.	31st Ave. N. & Soo RR.	10,200	
26. " " #12 " tanks, equipt.	4444 Snelling Ave.	7,500	
27. " " #13 " tanks, equipt.	6100 Pleasant Ave.	7,000	
28. " " #14 (plant just completed)	18th & Jeff. N.E.		80,000
29. New equipment storage shed (just completed)	18th & Washington N.E.	78,000	78,000
30. Layman Cemetery bldg.	Cedar & Lake St.	1,225	
31. Market bldg. (incl 9 sheds)	65 Lakeside Drive	115,000	307,841



Table 3-con't

Property	Location	Assessed Valuation	Estimated Insurable Value
32. Auditorium proper	Grant St. & 2nd Ave.	2,346,900	9,157,000
33. Pump station # 4	37th Ave. N.E. & River	133,000	
34. Kenwood Tower	1712 Kenwood Blvd.	110,000	
35. Columbia Hts. filtration plant		4,980,111	
36. Prospect Park Tower & pump	house Univ. S.E. between Clarence and Highview	10,100	
37. Washburn Park Tower	Blk. 11 Washburn Pk. and Highview Ave.	63,500	
38. Fridley filtration plant	Marshall Ave. beyond City Limits	8,367,981	
39. Meter service building	217 So. 3rd St.	45,540	
40. Fillmore St. pump station	In Columbia Park	2,400	
41. Washburn Pk. pump station	44th st. & Aldrich Ave	14,800	
42. Calhoun-Harriet pump sta.	36th & Calhoun Blvd.	3,400	
43. Water Works Bldg.	27th & Longfellow	24,150	
44. Kenwood Park pump station	Kenwood Blvd & Waverly Pl	3,400	
45. Fire Dept. Repair Shop	24-26-28 Univ. N.E.		170,000
46. Old Fire Station	3524 Hennépin Ave.		19,574
SOURCE: Same as Table I			
		<u>\$17,383,182</u>	

SOURCE: Same as Table I

Classification	Buildings		Estimated Insurable Value		Insurance Carried	
	No.	% of total	Amount	% of total	Amount	% of insurable value
Insured	45	45%	\$ 1,571,000	5.9%	\$166,500	10.6%
Not Insured	55	55%	25,000,000	94.1	--	0.0%
	100	100%	\$26,571,000	100.0%	\$166,500	00.6%

Contents of buildings. Table 4 is a listing of the 26 buildings whose contents were insured against loss by fire. Insurance totaled \$172,800 ranging from \$50 to \$76,000 on the contents within any single building.

Records of materials, supplies and stationary equipment are maintained through an annual physical inventory and valuation by each department. Schedule G of the General Balance Sheet of the City of Minneapolis showed the total value of such property to be \$2,200,950 on December 31, 1961. The amount of insurance is about 8% of this.

#### B. Extended Coverage

Extended coverage insurance on a piece of property insures it against other hazards in addition to fire, such as windstorm, explosion and hail.

Thirteen buildings were covered with extended coverage or windstorm insurance as follows:

Sewer building	1911 E. 26th St.
North Side equipment bldg.	2710 Pacific St.
East Side equipment bldg.	1809 Washington St. N.E.
Water Works car barn	Columbia Heights
9 Municipal Market sheds	65 Lakeside Avenue N.

#### C. Co-Insurance

A co-insurance clause permits the insured to obtain a reduced rate by agreeing to keep the property insured to a specified percentage of its insurable value.

The Water Works car barn was co-insured at 100%; the Fire Department repair shop at 80%; and the Municipal Market sheds at 50%.

There is no evidence that the insurable values of buildings or contents insured with a co-insurance clause are periodically reviewed during the policy term so that the city maintains the specified ratio of insurance to insurable value. In fact, there is evidence that the windstorm insurance on the market buildings never has approached the amount required by the 50% co-insurance clause.

#### D. Cost and Recovery of Losses

For the 31 year period 1920 - 1950, fire insurance premiums on buildings totaled \$67,620.17. Loss recoveries were \$19,856.92, leaving a net cost of insurance of \$47,763.25. Loss recoveries were 29.37% of net premiums paid. Excluding the largest loss -- \$10,000 in 1949 -- the loss ratio was 14.58%.

It is important to note that the data on loss recoveries apply only to properties on which insurance was carried. No figures are available on losses to non-

Table 4

## FIRE INSURANCE ON CONTENTS OF BUILDINGS UNDER CITY COUNCIL JURISDICTION

December 18, 1951

Property		Location	Amount of insurance
1. Auditorium organ		Grant St. & 3rd Ave. So.	\$20,000
2. Auditorium warehouse		211 E. Grant St.	12,500
3. Auditorium addition		211 E. Grant St.	5,000
4. Riverside Baths		2128-30 South 6th St.	1,500
5. John Ryan baths		26-2nd Street N.E.	1,500
6. Bridge yard bldg.	#18401	27th and Longfellow	6,000
7. " " "	#18402	" "	300
8. " " "	#18403	" "	300
9. " " "	#18404	" "	990
10. " " "	#18405	" "	50
11. " " "	#18406	" "	100
12. " " "	#18408	" "	300
13. " " "	#4C	" "	600
14. " " "	#4E	" "	50
15. " " "	#4G	" "	200
16. " " "	#4H	" "	100
17. " " "	#4I	" "	100
18. " " "	#4J	" "	500
19. Sewer building	#18201	1911 E. 26th St.	7,000
20. " " "	#18202	" " " "	3,000
21. Land & Building bldg.		1308 Currie Ave.	17,000
22. Water Works car barn		Columbis Heights filter plant	5,300
23. Water works bldg.	#65502	505 5th Ave. S.E.	5,000
24. " " "	#65503	421 9th St. S.E.	1,500
25. Fire Department repair shop		210-12 4th Ave. N.E.	76,000
26. Fire station		3524 Hennepin Ave.	8,000
Total			\$172,800

SOURCE: Same as Table 1.

insured buildings. When the committee inquired as to these losses, it was told that no losses have occurred on such buildings.

No data are available on the ratio of loss recoveries to premiums paid for contents of buildings. The total premiums paid on contents and buildings combined for the 10 year period 1941 - 1951 was \$22,496.64 -- an average annual premium of \$2,249.66.

#### E. Present Method of Buying Fire and Related Insurance

Each operating department decides to recommend or not to recommend that fire insurance be purchased on its properties. Decision is apparently based upon susceptibility to loss, the nature of the use of the building, type of contents, cost of insurance, etc.

The recommendation is passed through the City Engineer to the appropriate Council committee. If the committee approves, the Purchasing Agent advertises for bids. The bids are returned to the Council committee which usually accepts the lowest bid. The cost of the insurance is charged to the requesting department.

A review of the buildings under City Council and their insurance coverage fails to reveal any consistent policy which guides the City Council in its decision to buy or not to buy insurance on a specific property. About one-half of the buildings are covered by company insurance but there is no apparent basis differentiation between these and the uninsured buildings, and no clear-cut reason for the variation in insurance coverage on the buildings that are insured.

#### F. Conclusions on Present City Council Practices

The present status of Council fire insurance was succinctly set forth by the City Research Engineer in his December 18, 1951, report to a committee of the City Council:

"1. None of the larger valued properties of the City Council are insured against fire loss.

"2. The insurance now carried is an insignificant part of the total insurable values of property.

\* \* \* \*

"4. For all practical purposes the City Council is now self-insured, without, however, having any reserves established to cover losses on non-insured or under insured properties."

To these general conclusions the following may be added, based upon the facts gathered in this study:

There is no clear-cut policy set down by the City Council for determining when, and to what extent, insurance shall be purchased on City Council buildings and contents. The wide variation in amounts and types of insurance carried, and numbers, locations and types of buildings covered, are evidence of this.

The City Research Engineer points out that self-insurance without reserves means that the City Council actually is using the taxing and borrowing power of the City as reserves for fire loss coverage.

The above conclusions taken together indicate that while the City Council

may in fact be pursuing a course of self-insurance without reserves to cover losses, it does not appear to be doing so in full awareness of all the factors involved or on the basis of predetermined principles. As a result, there is no clear understanding among the departments that recommend insurance purchases as to what guides are to be followed in making their recommendations.

What appears to be needed is a clear-cut statement of policy on insurance matters, providing answers to such questions as: Which properties shall be covered by purchased insurance? To what extent shall they be covered? If insurance is to be purchased, how shall it be done? Should reserves be set up to pay uninsured losses? If so, how much should the reserves amount to and how should they be financed?

Before these questions can be answered, however, more complete data on the actual insurable value of buildings and contents are needed than are available in City records. The Sub-Committee chairman has undertaken to provide these data on buildings. He has obtained from the office of the City Engineer basic data relative to original cost and additions to the buildings for which reliable insurable figures have not been available. In consultation with a local fire insurance engineer he has been able to ascertain the approximate insurable values on these buildings. While the data are admittedly still not entirely complete, they appear sufficiently complete and accurate to permit making reasonably sound estimates as to the costs of various insurance plans.

In the following section the sub-committee submits some cost figures on City Council fire insurance on buildings under the four alternatives discussed in Section II. These are submitted without recommendation. It is suggested that they be considered in the framework of the advantages and disadvantages of each alternative discussed in Section II.

If information on alternative programs for the insurance of contents is to be presented, up to date figures on contents insurable valued by location must be obtained. Such data are not now available.

#### IV. City Council Policy on Insuring Buildings: Four Possible Alternatives.

In preparing cost figures on the four alternative here considered, the Sub-Committee first decided that it would not attempt to obtain insurable value figures for buildings of the water, fire and police departments. It was felt that these buildings are so well attended at all time that risk of fire loss is relatively small.

In Table 5 are listed all the buildings under City Council jurisdiction. First in order are shown the buildings which would be included under one or more of the four alternatives. At the end are listed the water, fire and police department buildings excluded from the four alternatives. In the last column is shown the present insurance coverage, which thus permits a general comparison of the cost and coverage under the present program and under variations I and II of alternative # 4, described below.

##### Alternative # 1 -- Full Company Insurance

A program of insuring all buildings with a private carrier has been calculated on an 80% co-insurance basis, and is thus shown in column 3 of Table 5. The total insurance coverage is estimated at \$9,526,200. With a five year policy the average annual premium cost is estimated at \$12,665.94.

It is important to note that the coverage on the auditorium alone would be \$7,325,000, or 72% of the total.

Perhaps an explanation of the 80% co-insurance clause is in order. Under this clause the insured agrees to keep his property insured up to 80% of its insurable value in exchange for a reduced rate. To the extent that his insurance coverage falls below the 80% figure he is required to bear a portion of any loss, and to that extent is a "co-insurer."

##### Alternative # 2 -- Full Self-Insurance with Fund

As noted in the discussion of alternatives in Section II, one distinct advantage of full company insurance is that the cost of protection is known and can be definitely budgeted. It is impossible to project the cost of any plan of self-insurance. It is possible here, therefore, only to indicate past experience and point out the factors which will be likely to influence actual cost in the future.

The costs of self-insurance with a reserve fund will consist of the payment for losses and the expense of administering the fund, including bookkeeping involved in purchasing company insurance, so this is not a net additional cost above the company insurance plan.

If the reserve fund is invested in part or full, there will be interest earned which will offset the costs to some extent.

City records show that in the 31 year period from 1920-1950, \$9,856.92 was recovered for losses on insured buildings other than fire, police and water department buildings. This is an average of \$318 per year. It is claimed that no losses occur on the uninsured properties.

The \$318 per year loss experience of the period 1920-1950 seems to be a remarkably good record. There is merit in assuming higher loss experience that might be reasonably expected, as a help in thinking about these alternative plans.

Table 5

Estimates of insurable values, 80% co-insurance values, and insurance coverage under \$25,000 and \$100,000 deductible plans for all buildings under City Council jurisdiction except for buildings in the Fire, Police and Water departments; also amount of insurance now carried.

<u>Building</u>	<u>Insurable value</u>	<u>80% of insurable value</u>	<u>VARIATION I Insurance to 80% of value less \$25,000</u>	<u>VARIATION II Insurance to 80% value less \$100,000</u>	<u>Amount of Insurance Now Carried</u>
1. Auditorium )					
2. Auditorium Whse. )	\$9,157,000	\$7,325,000	\$7,300,000	\$7,225,000	\$35,000
3. Auditorium Addition)					
4. River terminal	148,737	119,000	94,000	19,000	20,000
5. Municipal mkt. building	70,700	57,000	32,000	-	-
6-14. Municipal market sheds (9)	237,141	189,900	-	-	-
15-16. Riverside destructor & material Storage Shed	436,450	350,000	325,000	250,000	-
17. South side destructor	603,000	483,000	458,000	383,000	-
18. Riverside Baths	39,367	31,500	6,500	-	6,000
19. Ryan Baths	149,525	120,000	95,000	20,000	5,000
20. Oil Plant # 14	80,000	64,000	39,000	-	-
21. Fire Dept Repair Shop	170,000	136,000	111,000	36,000	-
22. Engineers Office & Whse # 18401	21,000	16,800	-	-	4,200
23. Sewer Dept. #18201	70,282	56,500	31,500	-	7,500
24. Sewer Dept. #18202	13,619	11,000	-	-	1,000
25. Paving Laboratory #18301	32,889	26,500	1,500	-	2,000
26. Street Dept #16001	79,914	64,000	39,000	-	5,000
27. Storage & Office Bldg.	10,832	9,000	-	-	500
28. Equipment Storage #16403	13,446	11,000	-	-	700
29. Office & Whse #16801	20,862	17,000	-	-	4,500
30. 13th Ward Toolhouse #17011	38,963	31,500	6,500	-	5,000
31. Equipment Shop #16201	125,373	100,500	75,500	500	10,000
32. North Side Equipment Bldg. #15205	91,020	73,000	48,000	-	10,000
33. East Side Equipment Shop #16101	113,738	91,000	66,000	-	15,000
34. 2nd Ward Toolhouse #18701	21,244	17,000	-	-	1,000
35. Old Fire Station 23 #4101	19,574	16,000	-	-	-
36. New Equip Storage Shed	78,000	62,500	37,500	-	-

<u>Buildings</u>	<u>Insurable Value</u>	<u>80% of insurable value</u>	<u>VARIATION I Insurance to 80% of value less \$25,000</u>	<u>VARIATION II Insurance to 80% value less \$100,000</u>	<u>Amount of Insurance Now Carried</u>
37-57. 21 Bldgs. under \$10,000 value	60,000	48,000	-	-	7,900
58. Water works #65503	-	-	-	-	1,000
59. Water works #65502	-	-	-	-	1,500
60. Water works car barn	-	-	-	-	1,700
61. Police station 5th precinct	-	-	-	-	10,000
62. Police station - 1901 N. 3rd St.	-	-	-	-	5,000
63. Police station repair shop	-	-	-	-	2,000
64. Police station - 2904 27th Ave S.	-	-	-	-	5,000
65. East side police station & garage	-	-	-	-	-
66. Police radio station	-	-	-	-	-
67-85. Fire stations #1,#2,#4,#5,#6,#7,#8, #10,#11,#13,#14,#16,#17,#19,#20,#21, #27,#28,#29	-	-	-	-	-
86-88. Oil plants #10,#12,#13, (Incl. Tanks and Equipment)	-	-	-	-	-
89. Pumping Station # 4	-	-	-	-	-
90. Kenwood water tower	-	-	-	-	-
91. Columbia Heights Filtration Plant	-	-	-	-	-
92. Prospect Park tower and pump house	-	-	-	-	-
93. Washburn Park Tower	-	-	-	-	-
94. Fridley filtration plant	-	-	-	-	-
95. Meter Service Building	-	-	-	-	-
96. Fillmore street pump station	-	-	-	-	-
97. Washburn Park pump station	-	-	-	-	-
98. Calhoun-Harriet pump station	-	-	-	-	-
99. Water works building	-	-	-	-	-
100. Kenwood park pump station	-	-	-	-	-
<b>Total</b>	<b>\$11,902,676</b>	<b>\$9,526,700</b>	<b>\$8,766,000</b>	<b>\$7,933,500</b>	<b>\$166,500</b>
Average annual cost of five year insurance policies		\$12,665.94	\$8,782.70	\$6,347.70	\$1,000 *

\* estimate



Considering the list of properties and values in Table 5, it seems conceivable that a \$100,000 loss could occur. There are seven properties with insurable values in excess of this amount, excluding the auditorium. The tabulation below shows the average annual cost to the City under a self-insurance plan of paying the principal amount of a \$50,000 and a \$100,000 loss occurring at various intervals of time.

<u>Annual average cost of total loss is:</u>		
<u>Loss occurring every:</u>	<u>\$50,000</u>	<u>\$100,000</u>
20 years	\$ 2,500	\$ 5,000
50 years	1,000	2,000
100 years	500	1,000

A substantial loss at the auditorium might easily exceed the losses assumed above. Below are similar figures on possible losses of \$500,000 and \$1,000,000. Also shown is a possible interest cost if the City had to borrow to replace the loss. It is assumed that 20 year bonds would be issued at 2% interest with equal annual principal payments.

<u>Annual average cost if total loss is:</u>						
<u>\$500,000</u>			<u>\$1,000,000</u>			
<u>Loss occurring every:</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>	<u>Principal</u>	<u>Int.</u>	<u>Total</u>
20 years	\$25,000	\$5,250	\$30,250	\$50,000	\$10,500	\$60,500
50 years	10,000	5,100	15,100	20,000	10,200	30,200
100 years	5,000	5,050	10,050	10,000	10,100	20,100

A practical financial problem for the City of Minneapolis in setting up an insurance reserve fund would be the appropriation of sufficient money to build up the fund. The size of the fund and the losses paid would be important factors. It is some times recommended that the fund should be equal in amount to the largest single risk to be covered by the fund. This would seem to be impracticable in this case since the auditorium bulks so large in the total risk.

#### Alternative # 3 -- Self-Insurance Without a Fund

This would differ from alternative # 2 in respect to the cost of administering a fund, and earnings on a fund. The lack of a fund would mean that a loss would need to be financed entirely out of current appropriations, miscellaneous balances or by borrowing. A large loss would particularly distinguish this alternative from alternative # 2 -- self-insurance with a fund -- since it would make borrowing more likely. Thus in the second tabulation above the interest charges are more likely to apply in the event of a loss under self-insurance without a fund.

#### Alternative # 4 -- A Partial Self-Insurance Plan

There can be an infinite number of variations of a combined self-insurance-company insurance plan. As pointed out in the City Research Engineer's report the City Council already has one combination, unplanned as it may be. Illustrated below is an application to Minneapolis of a plan which has proved successful in Kansas City, Missouri.

Under this plan the City undertakes to insure at 80% of insurable value, and thereby gets the advantage of reduced rates under the co-insurance clause. But then

the City actually carries company insurance at a dollar amount uniformly below 80% of value of each property, which means that it benefits from lower rate but stands to share in any losses that occur in proportion to the extent of under-insurance. Thus the city self-insures to the extent of its under-insurance below 80%.

From 1947 to 1953 Kansas City deliberately insured each of its buildings at \$100,000 below 80% of its insurable value. Since 1953 it has insured at \$200,000 below the 80% figure. Thus a building valued at \$250,000, would be insured at \$200,000 under an 80% co-insurance clause. In Kansas City, however, the city would carry no company insurance on this building, since  $\$200,000 - \$200,000 = 0$ . In effect the city thus self-insures all buildings with an insurable value of \$250,000 or less and self-insures the first \$200,000 of losses on buildings valued above \$250,000. This is known as a \$200,000 deductible system.

Columns 3 and 4 of Table 5 are an application of this plan to City Council buildings with self-insurance up to \$25,000 (Variation I) in the first case and up to \$100,000 (Variation II) in the second case.

Variation I with the \$25,000 deductible clause involves \$8,766,000 insurance on 17 buildings at an annual cost of \$8,782.70.

Variation II with the \$100,000 deductible clause involves \$7,933,500 insurance on eight buildings at an annual cost of \$6,347.70.

The largest single building is, of course, the auditorium which accounts for more than \$7,000,000 insurance in all variations of the plan.