

Presentations and Delegations

Study of Fire Department City of Greater Sudbury

A report prepared for
Chief Administrative Officer CGS

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Ganjavi and Associates
Management Consultants

September 2004

Introduction

A team of experts were assigned by the CAO of CGS to determine the most practical method of measuring and comparing the status of fire fighting performance of the fire services in the CGS. The team, in alphabetical order, included the following individuals:

Donaldson, Donald M. (Fire Chief, Fire Services)
Ganjavi, Ozhand (Consultant)
Gibbons, Mary Beth (Manager of Quality Service Review)
Jones, Bill (Consultant)
Khan, Kamran (Business Analyst)
Moulaison, Lynn (Special Project Assistance, Emergency Services)
Stephen, Alan (General Manager of Emergency Services)

The sources of information reviewed by the team included:

- [1] Comparative Performance Measurements, FY 2001 Data Report published by the International City/County Management Association (ICMA) center for performance measurement (ISBN:0-87326-133-X).
We shall refer to this source as US data
- [2] Ontario Fire Marshall.
We shall refer to this source as OFM
- [3] Statistics Canada Census Report of 2001.
We shall refer to this source as (Stats-Can 2001)
- [4] Municipal Performance Measurement Program (MPMP), Ontario
- [5] Comprehensive Risk Analysis for the
Winnipeg Emergency Response Service Department (WERSD)
(http://www.winnipeg.ca/fps/pdfs/emergency_response_risk_analysis.pdf)
- [6] Ministry of Municipal Affairs and Housing (2003). Municipal Performance Measurement Program (MPMP). Available at www.mah.gov.on.ca →
Municipal Performance Measurement Program.
- [7] Volpe, S. and J. Carbone (2002). An evaluation of the Municipal Performance Program. Sudbury, ON: Centre for Local Government.
- [8] Internal memo and documents of CGS.

One major difficulty in a study of this nature is obtaining of relevant data. The data gathered on the fire services in the CGS are not necessarily comparable to data gathered in similar communities. More over, in many cases, the data gathered in other communities are not shared with external bodies. As a result of this complication, the team decided to compare Sudbury data with similar data or the closest possible match from US data.

City of Greater Sudbury, a Snapshot

Prior to the amalgamation of the former city of Sudbury and the surrounding towns, the fire services of the city of Sudbury were delivered through 5 fire stations strategically located in the City. The process of amalgamation to create the City of Greater Sudbury (CGS) started in 1999 and was completed by 2001. After amalgamation the new agency that covers the fire and emergency services took over the assets and fire stations of the local towns and now operates from 25 fire stations scattered over the entire CGS. The following table provides a summary of the size of the current fire department. Career firefighters are paid \$16.98 per hour during their probationary period. A First class firefighter earns \$28.30 per hour and volunteers are paid at a rate of \$22 per hour.

Fire Services Personnel and Costs

| | |
|--|--------------|
| Fulltime staff (2004) | 120 |
| Volunteer On-Call Staff (2004) | 319 |
| Total Operating and Personnel Costs (2003) | \$13,755,287 |

The population, homes, and businesses covered by this service are indicated in the following table.

People and Properties in CGS

| | |
|---|--------|
| Population of Sudbury (MMAH Population 2001) | 157456 |
| Population in Career Covered Area (Stats Can 2001) | 107728 |
| Population in On-Call Covered Area (Stats Can 2001) | 47491 |
| Number of Residential Dwellings (OFM Summary) | 54092 |
| Number of Commercial and Industrial Structures | 6012 |

The following table indicates the extent of fire incidents in CGS in 2003. Take notice that there are a large number of false alarms that taxes the fire services.

Number of Fires in CGS

| | |
|--|------|
| Number of Residential Structure Fires | 98 |
| Number of Commercial and Industrial Structure Fires | 23 |
| Total Number of Structure Fires Including False Alarms | 1258 |
| Total Number of Non-Structure Fire Incidents | 505 |

The fires that results in estimated damage of more than one dollar are labeled fires with loss. There have been 247 such fires in the CGS in 2003. Information from the OFM on these fires is presented in the following table. Fortunately, there have been no fatalities in these fire incidents

Breakdown of Fire Losses in CGS

| Property Class | Fires | | Injuries | | Estimated Loss | |
|--|------------|----------------|----------|----------------|--------------------|----------------|
| | No | % [‡] | No | % [‡] | \$ | % [‡] |
| Residential | 98 | 39.7 | 2 | 50 | \$2,623,105 | 52.0 |
| Industrial Occupancies | 14 | 5.7 | 0 | 0 | \$1,030,300 | 20.4 |
| Assembly Occupancies | 8 | 3.2 | 0 | 0 | \$475,200 | 9.4 |
| Business and Personal Services Occupancies | 4 | 1.6 | 1 | 25 | \$42,600 | 0.8 |
| Mercantile | 3 | 1.2 | 0 | 0 | \$8,500 | 0.2 |
| Institutional Occupancies | 2 | 0.8 | 0 | 0 | \$3,000 | 0.1 |
| Structures/Properties not classified by O.B.C. | 36 | 14.6 | 1 | 25 | \$276,103 | 5.5 |
| Vehicles | 82 | 33.2 | 0 | 0 | \$584,600 | 11.6 |
| 2003 Total | 247 | 100.0 | 4 | 100 | \$5,043,408 | 100.0 |

‡ percentage is based on yearly total.

The Fire service responds to variety of settings where their assistance is needed. Situations are categorized through a coding system with 99 codes. The following table indicated the calls served by the service in 2003.

Breakdown of Calls Responded by Fire Services in CGS

| | |
|--|------|
| Total Number of Fire Incidents 2003 (OFM Codes 1, 2, 21, 22, 23, 31-39) | 1921 |
| Total Number of Non-Fire Incidents 2003 (OFM Codes 11, 12, 41-59, 61-69, 71 -89, 91-99) | 1882 |
| Total Number of Rescue Calls (OFM Codes 61 - 69) | 133 |
| Cardiac Arrest Calls (OFM Code 76) | 59 |

The data for various call types (by code) for the City of Sudbury, Valley, and other areas for 2003 is as follows. Discrepancies in totals is an indication of problems in data gathering.

Breakdown of Calls by Type and Geographical Area

| Call description | Codes | Sudbury | Valley | Others | Total | OFM Total |
|-----------------------------|-----------|---------|--------|--------|-------|-----------|
| Property Fires | 1-2 | 230 | 68 | 149 | 448 | 456 |
| Ruptures/explosions no fire | 11-12 | 1 | 0 | 0 | 1 | 1 |
| Pre Fire Conditions | 21-23 | 246 | 23 | 80 | 349 | 336 |
| False Fire Calls | 31-39 | 892 | 73 | 181 | 1151 | 1129 |
| Public Hazard | 41-52, 59 | 292 | 64 | 116 | 478 | 473 |
| Rescue | 61-69 | 69 | 13 | 46 | 129 | 133 |
| Medical/Resuscitation Calls | 71-89 | 727 | 0 | 75 | 802 | 803 |
| Other Responses | 91-99 | 384 | 21 | 79 | 490 | 472 |
| Total | — | 2841 | 262 | 726 | 3848 | 3803 |
| Missing Codes | — | 5 | 0 | 6 | 19 | — |

False alarms are a constant drain on the resources of the Fire Department. The number of false alarm are high and any efforts to reduce such incidents would be beneficial to all parties involved, that is the fire fighters, the citizens of CGS, and the city administration. The following table indicates the extent of false alarm problem in 2003. The following numbers are estimates based on the overall percentage of false fire alarms within the total number of fire service calls. Commercial / industrial ACTUAL false alarms is likely higher.

False Alarms

| | |
|--|------|
| Number of Residential False Alarms | 869 |
| Number of Commercial / Industrial False Alarms | 260 |
| Total Number of False Alarms (OFM Codes 31-39) | 1129 |

The following data has been collected from Municipal Performance Measurement Program (MPMP) 2003 publication .

**Operating cost for fire services
per \$1000 of assessment Some Ontario Cities (2002)**

| City | Cost |
|-----------------|------|
| Brant | 0.63 |
| Vaughan | 0.75 |
| Markham | 0.83 |
| Mississauga | 0.93 |
| Oakville | 0.94 |
| Richmond Hill | 0.94 |
| Brampton | 1.07 |
| Burlington | 1.12 |
| Barrie | 1.23 |
| Chatham-Kent | 1.26 |
| Pickering | 1.26 |
| Greater Sudbury | 1.37 |
| Toronto | 1.44 |
| Kingston | 1.48 |

| City | Cost |
|----------------|------|
| Hamilton | 1.55 |
| Loondon | 1.58 |
| Guelph | 1.63 |
| Brantford | 1.83 |
| St. Catherines | 1.86 |
| Cambridge | 1.91 |
| Oshawa | 1.93 |
| Kitchener | 1.99 |
| Sarnia | 2.26 |
| St. Thomas | 2.3 |
| Windsor | 2.32 |
| North Bay | 2.39 |
| Thunder Bay | 2.77 |
| | |

Source: MPMP 2003

What to Measure

As it was indicated in the introduction, finding data comparable to data on CGS is not an easy task. We should indicate that there are some measures that have been utilized by other fire services to assess the inputs and outputs of their service.

Statistics on fatalities is not a reliable source for comparison. This is due to the fact that fatalities are rather infrequent events and infrequent events by nature are not reliable.

Because number of injuries is not as infrequent as the fatalities are, one may want to consider number of fatalities per fire incident or per one thousand populations, or per 1000 kilometer square as a measure of performance. The logic is that the sooner the fire fighters reach the scene of a fire the less is the chance for injury.

The amount of loss, in dollars, per fire incident, per 1000 population, or per 1000 kilometer square of coverage may be considered as a measure of success. The difficulty with this measure is that most gathered data by fire officials are loss estimates. The insurance companies who pay for the damages have more accurate data but in majority of cases they do not share their information with the public. Another difficulty with this measure is the fact that a single case of industrial or commercial fire with large loss can skew the data for individual periods under study.

Response time is another measure of success. Response time is measured in variety of ways. Response time is the difference between the time of an "end incident" and the time of a "start incident." Problem is that both start and end incidents are defined in variety of ways. For example the start may be defined at the point when a call for assistance is logged, or the time when the order to send help is given to the fire station, or the time when the vehicle leaves the fire station. The end incident may be defined as the time when the first vehicle arrives to the scene, or the time when at least 4 fire fighters arrive on scene, or ten arrive at the scene or the time when the dispatched vehicle reports back, which may not necessarily be the time it had arrived. One recommended (not mandatory) standard is to have 10 firefighters attending home fires in 10 minutes.

As far as the input to the fire and emergency services is concerned one may consider the number full-time equivalent, the number of dollars spent or any other input per number homes, number businesses, 1000 population, and 1000 kilometer square of coverage.

Number of incidents of fire per 100 populations may be considered as a measure population's knowledge and training regarding fire prevention. Since information on fire prevention is often supplied by and through fire services, this can be considered as a measure of their success.

Having considered all the above measure, the big question is: do we have comparable data on other communities or do we compare our statistics with some managerially defined target levels?

Performance of CGS

The most recent publication of MPMP provides the following information regarding the fire services expenditure.

Fire Services Operating costs
per \$1000 Assessment

| | 2001 | 2002 | 2003 |
|--------------|--------|--------|--------|
| CGS | \$1.27 | \$1.37 | \$1.64 |
| OMBI average | | \$1.54 | \$1.61 |

The sharp increase in 2003 is worthy of some attention. Detailed computation of the above figures are presented in the following table.

Computing Fire Services Operating costs
per \$1000 Assessment

| | Total Operating Cost | \$1000 Assessment | |
|------|-----------------------------|--------------------------|-------|
| 2001 | \$10,894,865 | 8,554,860 | 1.274 |
| 2002 | \$11,765,343 | 8,576,008 | 1.372 |
| 2003 | \$13,755,287 | 8,395,597 | 1.638 |

The increase in operating cost per \$1000 assessment is 19.4% in 2003 over the corresponding figure for 2002. About 2.5% point of the increase is due to the fact that total assessment in 2003 was lower than in 2002 as reflected in the above table. Had the assessment in 2003 remained the same (8,576,008) as 2002 the figure would have been lowered from 1.638 to 1.604, which is still too high amounting to 16.9% increase in one year.

Analysis of cost components reveals that the major increase in costs were in materials purchased and in salaries, wages and benefits. Small variations were observed in other cost components as well.

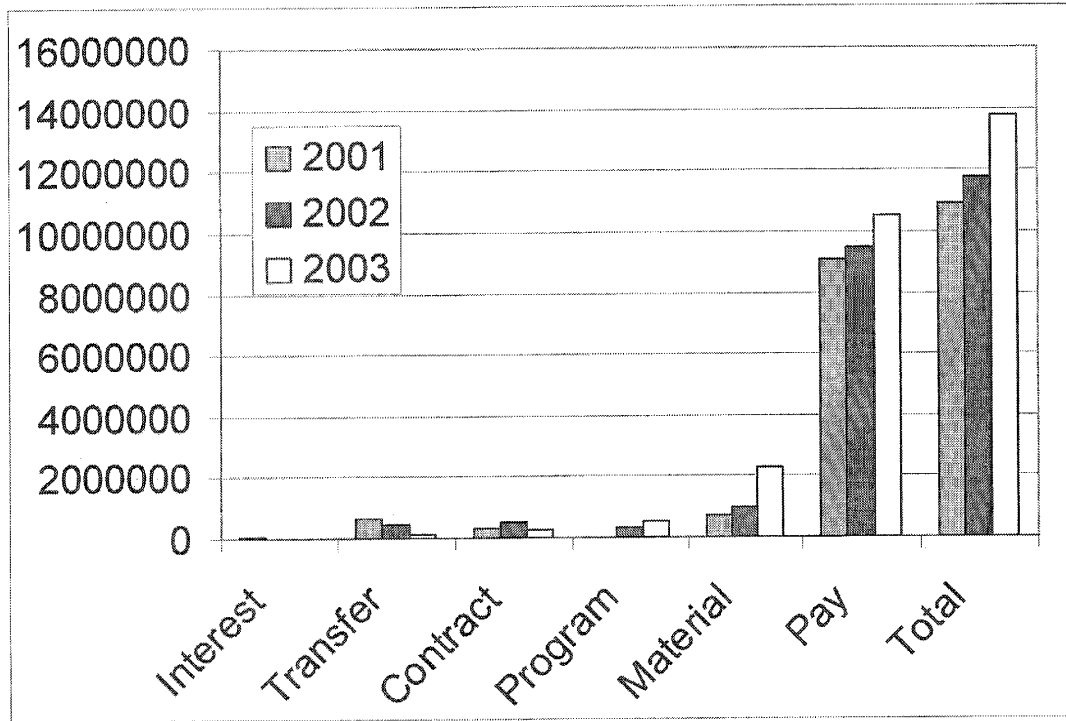
Details of cost comparison for the last three years are provided in the following table.

Breakdown of Fire Services Operating Costs

| | 2001 | 2002 | 2003 |
|-------------------------------|-------------------|-------------------|-------------------|
| Financial Expenses and Rent | 65,714 | 10,205 | 4,076 |
| Interfunctional Adjustments | 654,679 | 456,379 | 150,761 |
| Contracted Services | 334,279 | 505,226 | 276,646 |
| Allocation of Program Support | 0 | 331,729 | 516,491 |
| Materials | 733,288 | 1,008,980 | 2,317,620 |
| Salaries, wages, benefits | 9,106,905 | 9,452,824 | 10,489,693 |
| Total Operating Cost | 10,894,865 | 11,765,343 | 13,755,287 |

The graph of the above data clearly indicates that the major increases were in materials purchased (\$1,308,640 increase) and in salaries, wages and benefits (\$1,036,869 increase) for a total of \$2,345,509 increase.

Breakdown of Fire Services Operating Costs



The notation on the horizontal axis of the above chart is as follows:

| Notation | Description |
|----------|-------------------------------|
| Interest | Financial Expenses and Rent |
| Transfer | Interfunctional Adjustments |
| Contract | Contracted Services |
| Program | Allocation of Program Support |
| Material | Materials |
| Pay | Salaries, wages, benefits |
| Total | Total Operating Cost |

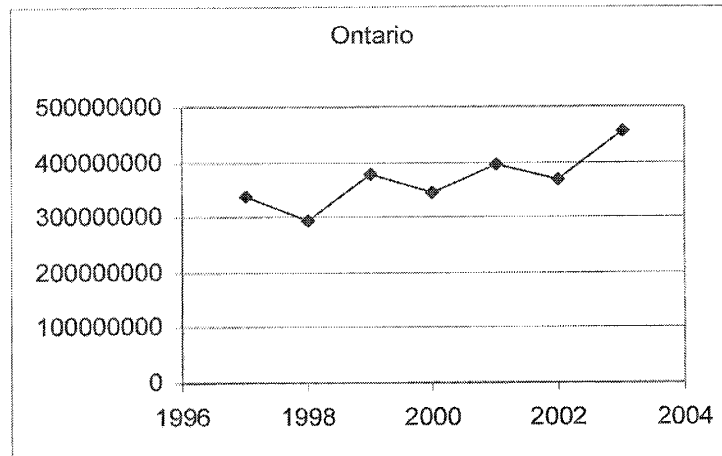
The following table provides the total dollar values of fire losses in the Province of Ontario and CGS for the period of 1997 to 2003.

The Amount of Fire Losses in Dollars

| Year | Ontario | Sudbury |
|------|-------------|-----------|
| 1997 | 336,335,758 | 6,750,666 |
| 1998 | 294,000,303 | 4,180,665 |
| 1999 | 378,856,519 | 3,466,588 |
| 2000 | 345,284,002 | 3,115,490 |
| 2001 | 396,007,391 | 5,015,440 |
| 2002 | 367,779,369 | 4,218,982 |
| 2003 | 457,373,026 | 5,043,408 |

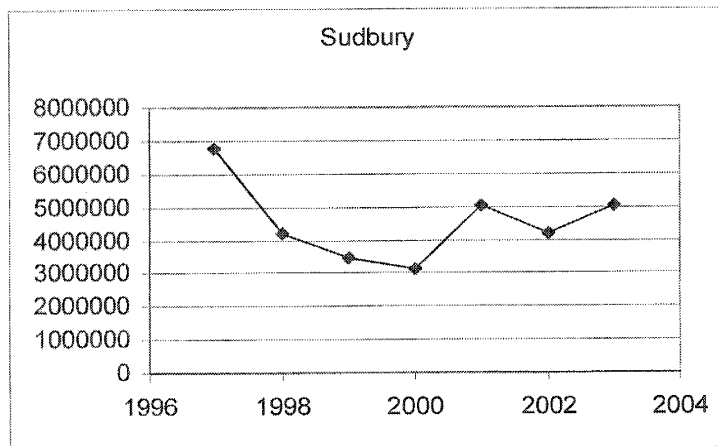
The graph of Ontario data indicates a steady increase in total losses over the seven year period. This increase amounts to a compound growth rate of 5.26% per year.

Annual Fire Losses in Ontario
Dollars



But CGS data does not indicate any particular pattern of change. Considering only the last five years, one does observe a pattern of steady growth in total losses.

Annual Fire Losses in Sudbury
Dollars



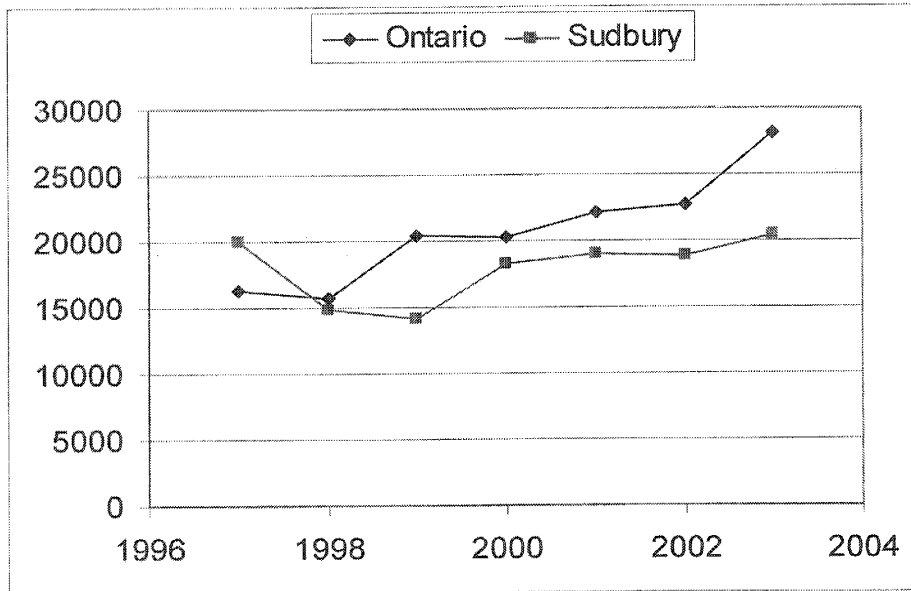
The following table indicates the average loss per fire incident for Ontario and CGS fires for the period of 1997 to 2003.

Average Loss per Fire

| Year | Ontario | Sudbury |
|------|---------|---------|
| 1997 | 16237 | 20032 |
| 1998 | 15708 | 14825 |
| 1999 | 20434 | 14207 |
| 2000 | 20229 | 18219 |
| 2001 | 22112 | 19070 |
| 2002 | 22763 | 18919 |
| 2003 | 28193 | 20419 |

Comparison of the data in graphical form indicates that average fire loss in Sudbury during the last six years, have been smaller than Ontario fire losses.

Average Loss per Fire



However, the average loss per fire has been increasing at a rate of \$1119 per year for Sudbury and \$2497 per year for Ontario over the past six years. These increases exceed the rate of inflation by a wide margin. The increase from 1988 to 2003 for Sudbury amounts to a compound growth rate of 6.61% per year.

Response time is a measure of performance. The 2003 number of calls with 5 minutes or less response time of (dispatch to on scene) has been 2,368 (62.27%) and the number calls with 8 minutes or less response time of (event created to on scene) has been 2,667 (70.13%). Some comparison with US data is provided in coming sections. The 90th percentile for first vehicle on scene in 2003 has been 9:15 minutes for Sudbury, 11:02 minutes for the former town of Valley East and 15:00 for other areas.

In the following set of tables, US data for 2001 are compared with Sudbury data of the same period. When including fire call data, information from 2003 is used for CGS. The US data are available for cities with population of more than 100,000 as well as those with less than 100,000.

**Paid Fire Staffing
per 1000 Population Served**

| | Population >100K | Population <100K |
|------|------------------|------------------|
| CGS* | Mean | Mean |
| 1.11 | 1.42 | 0.96 |

Reference: Page 104 Graph 5.4.A

*The areas covered by career firefighters include the former city of Sudbury plus part of Valley East.

Costs Per Capita (CAN \$)

| | | Population >100K | Population <100K |
|-----|---------|------------------|------------------|
| | CGS | Mean | Mean |
| (1) | \$75.07 | 124.99 | 100.49 |
| (2) | \$82.38 | 127.77 | 127.24 |

Reference: Page 104 Graph 5.4.A

(1) Operating and Personnel cost per capita (OFM 2001)

(2) Total Operating, personnel and capital cost per capita

Exchange Rate used for conversion is 1.324 as recorded in Aug 11, 2004

Total Residential Dwelling Structure Fires

| | Population >100K | Population <100K |
|-----|------------------|------------------|
| CGS | Mean | Mean |
| 98* | 337 | 50.9 |

Reference: Page 111

2001 Data for Dwelling/Structures

2003 for Fires (OFM 2003)

* There has been an estimated 869 false alarms in CGS in the same period

**Total Residential Structure Fire Incidents
per 1,000 Residential Structures**

| | Population >100K | Population <100K |
|------|------------------|------------------|
| CGS | Mean | Mean |
| 1.8* | 3.71 | 2.8 |

Reference: Page 115

2001 for Dwelling/Structures, 2003 for Fire Service Activity

* There has been an estimated 869 false alarms in CGS in the same period.

This additional load amounts to 16.1 calls per 1000 residential structure.

**Residential Structure Fires
per 1,000 Population Served**

| | Population >100K | Population <100K |
|------|------------------|------------------|
| CGS | Mean | Mean |
| 0.62 | 1.09 | 0.75 |

Reference: Page 117
2001 for Population, 2003 for Fire Service Activity

**Commercial and Industrial Structure Fire Incidents
per 1000 commercial/Industrial Structures**

| | Population >100K | Population <100K |
|-------|------------------|------------------|
| CGS | Mean | Mean |
| 3.38* | 11.1 | 13.3 |

Reference: Page 123
2001 for Structures, 2003 for Fire Service Activity
* There has been an estimated 260 false alarms in CGS in the same period.
This additional load amounts to 43.64 calls per 1000 commercial/Industrial structure.

Percentage of False Alarms

| | | Population >100K | Population <100K |
|---|-----|------------------|------------------|
| | CGS | Mean | Mean |
| 1 | 90% | 52% | 64% |
| 2 | 59% | 50% | 52% |

Reference: Page 126
(1) False Alarms as a percentage of Total Structure Fire Incidents
(2) False Alarms as a percentage of Total Fire Incidents
2003 Data for CGS

**Total Non-Fire Incidents
per 1,000 Population Served**

| | Population >100K | Population <100K |
|------|------------------|------------------|
| CGS | Mean | Mean |
| 12.0 | 58 | 5 |

Reference: Page 134
2001 for Population, 2003 for Non-Fire Incidents.
Many of the cities in the US documentation provided both EMS and Fire response. Therefore, their numbers for non-fire incidents are higher. Non-fire includes gas leaks, rescues, medical and assistance to other agencies.

**Number of Responses to Rescue and Recover
Per 100,000 Population Served**

| | Population >100K | Population <100K |
|-------------|------------------|------------------|
| CGS | Mean | Mean |
| 84.5 | 31.7 | 41.3 |

Reference: Page 147
 2001 for Population, 2003 for Rescue and Recovery Incidents
 This includes car accidents and extrication. Of the 133 "rescue" calls, 100 of them were car accidents / extrication. Very likely, this is due to the large geography and low population density that is unique when comparing the CGS to the US data set.

**Response Time of 5 minutes or less
Dispatched to Arrival On scene**

| | Population >100K | Population <100K |
|---------------|------------------|------------------|
| CGS | Mean | Mean |
| 62.27% | 65.90% | 74.70% |

Reference: Page 149
 2003 data for CGS assumed a two minute allowance for dispatching.

**Fire Calls - Response Time of 8 minutes or less
Call Entry to on scene**

| | Population >100K | Population <100K |
|---------------|------------------|------------------|
| CGS | Mean | Mean |
| 70.13% | 82.40% | 50.40% |

Reference: Page 153
 2003 data for CGS assumed a two minute allowance for dispatching.

The Cost of Fire Protection

Most individuals prefer to avoid a case of fire even if they are compensated for the damages through fire insurance arrangements. There are two components in the cost of protection against fire. They include an individual's share of fire services cost and the other component is the fire insurance premium. A rational and well informed individual prefers to minimize the sum of these two costs.

Determining the home protection premium is not an easy task for average homeowner. Each region of the Province has a special rating. Within each region there are subcategories, and within each of the subcategories, there are property-related

parameters. Being located in a region served by full-time firefighters and being close to a fire hydrant are two factors in reducing premiums. One assumes that with such a system, all insurance companies would arrive at the same price for a given property. Average consumers would be surprised to see the extent of variation in premiums across the insurance industry.

In the summer of 2001, a telephone survey of 7 insurance companies on premiums for two identical properties in Sudbury and Hanmer produced the following results.

Home Information:

- 10 year old, 1100 sq. ft. bungalow, with 3 bedrooms and 2 baths (one full and one two piece)
- Natural gas forced air heating with central air
- No fireplace, woodstove or air exchanger
- 16' x 24' wood deck
- Unfinished basement
- Fire Hydrant next door
- Within 5 km. of a fire station
- Brick front with siding (3 sides)

Insurance Information:

- Full coverage, including flood
- \$500 deductible
- \$1,000,000 liability
- \$110,000 replacement cost
- \$80,000 contents insurance
- No previous claims
- Insured for 5 years

Comparison of House Insurance Premiums

| Insurance Company | Sudbury south end | Hanmer | Difference |
|-------------------|-------------------|----------|---------------------|
| A | \$275.40 | \$523.44 | \$257.04 |
| B | \$406.00 | \$443.88 | \$38.00 |
| C | \$363.96 | \$473.04 | \$109.08 |
| D | \$375.84 | \$471.96 | \$96.12 |
| E | \$375.84 | \$446.00 | \$122.00 |
| F | \$442.80 | \$453.00 | \$11.00 |
| G | \$355.00 | \$355.00 | \$0 |
| | | | Avg. \$90.46 |

If "A" and "G" (the extreme high and extreme low) are removed the average difference is still a substantial **\$75.44**

It must be noted that home owners are not free to purchase "fire only" insurance protection. Insurance companies offer a package of protection where fire insurance is one component of the total protection. Experts believe that the fire component of home insurance is rather small any gains in regional ratings may translate to small gain for home owners. However, given that there are a large number of homes in Sudbury, the total gain may be substantial. The commercial premiums do have a large component of fire protection. Naturally, any gains in the regional ratings is expected in resulting large reductions in commercial premiums.

It would be very beneficial to find a reasonably accurate estimate of the savings by tax payers, in their premiums, as a result of any expenditure that would improve Sudbury's fire rating.



Study of Fire Department City of Greater Sudbury

A report prepared for
Chief Administrative Officer CGS

Ozhand Ganjavi Ph.D.

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Management Consultants

September 2004

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City of Greater Sudbury

| | |
|--|----------------|
| Population in Career Covered Area * | 107,728 |
| Population in On-Call Covered Area * | 47,491 |
| Total Population | 155,219 |
| Residential Dwellings * | 54,092 |
| Commercial and Industrial Structures * | 6,012 |
| Fulltime staff (2004) | 120 |
| On-Call Volunteers (2004) | 319 |
| Total Staff | 439 |
| Fire Loss (2003) | \$5,043,408 |
| Operating Cost (2003) | \$13,755,287 |

* Stats Can 2001

2

City of Greater Sudbury Number of Fires and False Alarms (2003)

| | |
|---|---------------|
| Residential Structure Fires | 98 |
| Commercial and Industrial Structure Fires | 23 |
| False Alarms | 1137 * |
| Non-Structure Fires | 505 |
| Total | 1763 |
| | |
| Residential False Alarms | 869 |
| Commercial / Industrial False Alarms | 260 |
| Total | 1129 * |

* Discrepancies exist between data from different sources

3

Operating cost of fire services for Ontario Cities Dollars per \$1000 of Assessment (2002)

| City | Cost |
|---------------|------|
| Brant | 0.63 |
| Vaughan | 0.75 |
| Markham | 0.83 |
| Mississauga | 0.93 |
| Oakville | 0.94 |
| Richmond Hill | 0.94 |
| Brampton | 1.07 |
| Burlington | 1.12 |
| Barrie | 1.23 |

Source: MPMP 2003

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Operating cost of fire services for Ontario Cities
Dollars per \$1000 of Assessment (2002)

(Continued)

| City | Cost |
|------------------------|-------------|
| Chatham-Kent | 1.26 |
| Pickering | 1.26 |
| Greater Sudbury | 1.37 |
| Toronto | 1.44 |
| Kingston | 1.48 |
| Hamilton | 1.55 |
| London | 1.58 |
| Guelph | 1.63 |
| Brantford | 1.83 |

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Operating cost of fire services for Ontario Cities
Dollars per \$1000 of Assessment (2002)

(Continued)

| City | Cost |
|--------------------|-------------|
| St. Catherines | 1.86 |
| Cambridge | 1.91 |
| Oshawa | 1.93 |
| Kitchener | 1.99 |
| Sarnia | 2.26 |
| St. Thomas | 2.3 |
| Windsor | 2.32 |
| North Bay | 2.39 |
| Thunder Bay | 2.77 |

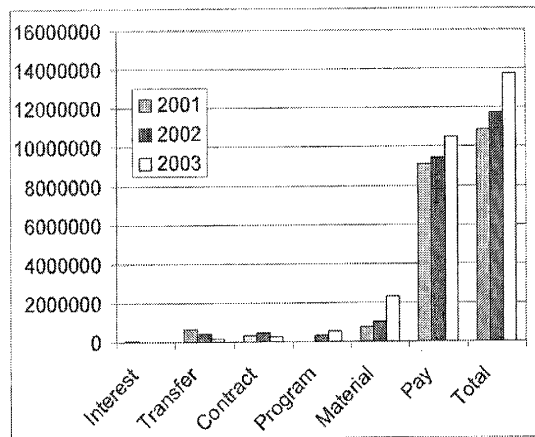
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City of Greater Sudbury Breakdown of Fire Services Operating Costs

| | 2001 | 2002 | 2003 |
|-------------------------------|-------------------|-------------------|-------------------|
| Financial Expenses and Rent | 65,714 | 10,205 | 4,076 |
| Inter-functional Adjustments | 654,679 | 456,379 | 150,761 |
| Contracted Services | 334,279 | 505,226 | 276,646 |
| Allocation of Program Support | 0 | 331,729 | 516,491 |
| Materials | 733,288 | 1,008,980 | 2,317,620 |
| Salaries, wages, benefits | 9,106,905 | 9,452,824 | 10,489,693 |
| Total Operating Cost | 10,894,865 | 11,765,343 | 13,755,287 |

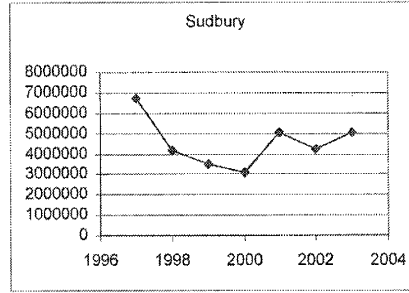
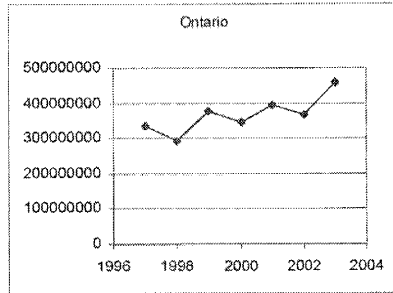
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City of Greater Sudbury Breakdown of Fire Services Operating Costs



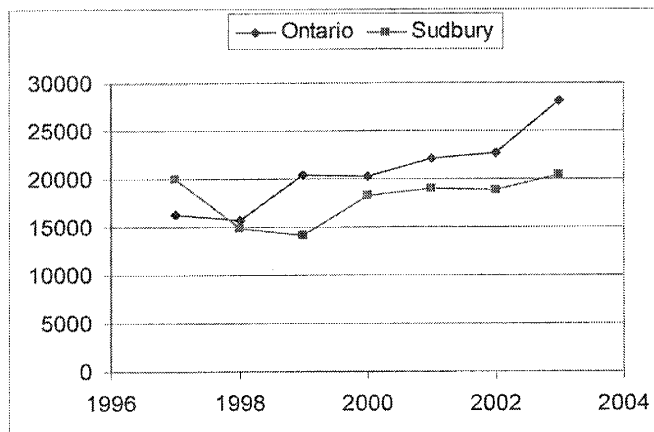
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Total Fire Losses (Dollars)



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Average Loss per Fire (Dollars)



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Performance Comparison of CGS with average of US cities

| Description | CGS | Large | Small |
|---|--------|--------|--------|
| Paid Fire Staffing per 1000 Population Served | 1.11 | 1.42 | 0.96 |
| Costs [Oper.] Per Capita (All in CAN \$) | 75.07 | 124.99 | 100.49 |
| Costs [Oper.+ Capital] Per Capita (All in CAN \$) | 82.38 | 127.77 | 127.24 |
| Total Residential Dwelling Structure Fires | 98 * | 337 | 50.9 |
| Residential Structure Fires per 1,000 Res. Str. | 1.8 * | 3.71 | 2.8 |
| Residential Structure Fires per 1,000 Population | 0.62 | 1.09 | 0.75 |
| Comm. & Indu. Str. Fires per 1000 comm. /Indu. str. | 3.38 * | 11.1 | 13.3 |
| False Alarms as Percentage of structural fires | 90% | 52% | 64% |
| False Alarms as Percentage of All fires | 59% | 50% | 52% |
| Non-Fire Incidents per 1,000 Population | 12.0 | 58 | 5 |
| Rescue and Recover Per 100,000 Population | 84.5 | 31.7 | 41.3 |
| 5 minutes or less: Dispatched to Arrival On scene | 62.3% | 65.9% | 74.7% |
| 8 minutes or less: Call Entry to Arrival on scene | 70.1% | 82.4% | 50.4% |

* Excluding false alarms

Large = Average performance in US cities with population of more than 100,000.

Small = Average performance in US cities with population of less than 100,000.

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Issues

- 1) The need for a more uniform system of data collection in Northern Ontario
- 2) The need to share data gathered by various municipalities in the North
- 3) The need to reduce the number of false alarms
 - Education
 - Penalty
- 4) The need to assess the impact of investment in fire services on residents' total cost
 - Portion of one's taxes going to fire services
 - Premiums paid for fire insurance

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Thank you
Ozhand Ganjavi

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**Study of Fire Department
City of Greater Sudbury**

A report prepared for
Chief Administrative Officer CGS

Ozhand Ganjavi Ph.D.

Ganjavi and Associates
Management Consultants

September 2004

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Request for Recommendation Priorities Committee




| Type of Decision | | | | | | | | | |
|------------------|-------------------------------------|-----|--------------------------|----|-----------------|-------------------------------------|------|--------------------------|--------|
| Meeting Date | September 29th, 2004 | | | | Report Date | September 13th, 2004 | | | |
| Recommendation | <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No | Priority | <input checked="" type="checkbox"/> | High | <input type="checkbox"/> | Low |
| | Direction Only | | | | Type of Meeting | <input checked="" type="checkbox"/> | Open | <input type="checkbox"/> | Closed |

| Report Title |
|--|
| City of Greater Sudbury Final Master Fire Plan |

| Policy Implications + Budget Impact | |
|--|---|
| <input checked="" type="checkbox"/> | This report and recommendation(s) have been reviewed by the Finance Division and the funding source has been identified |
| <p>Policy Implications:</p> <p>The City is legislated by the Province of Ontario to prepare and implement a Master Fire Plan.</p> <p>Budget Impact:</p> <p>Upon the adoption of Recommendation Number 3 of this Report, the General Manager Emergency Services will prepare a detailed funding estimate to implement the final MASTER FIRE PLAN.</p> | |
| <input checked="" type="checkbox"/> | Background attached |

| Recommendation |
|--|
| <p>It is recommended that:</p> <ol style="list-style-type: none"> Council approve, in principle, the initiatives identified in the Master Fire Plan OPTION 4 and subsequently forward a copy to the OFM; Council authorize the Emergency Services Department to carry on with the fire services system enhancements and investigations as described as OPTION 4, which they have commenced. All new initiatives will require Council approval as part of the 2005/2006 budget. |
| Recommendation attached |

| Recommended by the General Manager |
|---|
|  Alan Stephen General Manager Emergency Services |

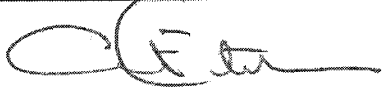
| Recommended by the C.A.O. |
|---|
|  Mark Mieta Chief Administrative Officer |

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Date: September 13th, 2004

Report Authored By



Alan Stephen
General Manager Emergency Services

Division Review

RECOMMENDATION CONTINUED:

3. The General Manager Emergency Services be directed to prepare detailed funding estimates to implement the final MASTER FIRE PLAN, dated September, 2004 as part of the 2005/2006 budget process.

In July 2002, the Emergency Services Department released a Business Plan in which a recommendation to develop a Master Fire Plan "based on an analysis of needs and risk" was included as a cornerstone activity. In October 2002, a provincial Coroner's Report on the 2001 Roy Street fire tragedy re-emphasized the City's need to develop a Master Fire Plan.

On February 27th, 2003, City Council authorized Emergency Services staff to proceed with the preparation of the Plan and to engage IBI Group to assist in its development. Work on the Plan commenced in early March 2003, and in February 2004 a Status Report prepared by IBI Group was presented to Council. The Status Report described economic circumstances and identified that a community fire risk and fire prevention risk assessment have been completed. It also described general emergency responses and broad initiatives that the group felt were necessary for improvement of the fire protection system for the City.

Following the municipal review model, Optimizing Public Fire Safety published by the Office of the Fire Marshal, all options for fire protection services identified in the draft report have now been assessed and the operational impacts of each evaluated.

The Master Fire Plan identifies new programs or projects and areas that can improve or enhance existing services. The plan also describes additional costs to implement those that are outside the normal operating budget.

During the Master Fire Plan process, areas were also identified that required immediate attention and these were presented and approved by Council as each were encountered. Some of these items included: an approval of a new organizational structure in June 2003; additional staff for the Fire Prevention and Training Sections in 2003/2004; Computer Aided Dispatch (CAD) in May 2004; a Records Management System in June 2004; and, an increase in career and volunteer staffing for Valley East in 2003/2004.

The final approved Master Fire Plan will provide clear direction to both Fire Division staff and the public regarding the fire protection services Council expects to be provided for the City of Greater Sudbury.

The Master Fire Plan will provide the direction for CGS Fire Services to follow over the next 5-year period. There are several options for Council to review and once approved, will allow for a enhanced level of service to be delivered to the citizens.

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There are several Reports attached setting out all of the relevant details, including an Executive Summary.

As identified in the Status Report, the findings of this review affirm that the City of Greater Sudbury's current fire service has improved over that which existed one year ago. The changes are attributed largely to the diligent efforts of the senior management of the Emergency Services Department and the Fire Services Division.

As described in the Master Fire Plan, in addition to the changes which the management team have implemented with Council approval, there are a number of initiatives underway, and others being examined or planned for implementation in the short term. Once implemented, City residents can expect additional fire service improvements over the coming months and years.