MINNESOTA DEPARTMENT OF PUBLIC SAFETY

Office of the Commissioner

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Alcohol & Gambling Enforcement

Bureau of Criminal Apprehension

Capitol Security

Driver & Vehicle Services

Emergency Management/ Emergency Response Commission

State Fire Marshal/ Pipeline Safety

State Patrol

Traffic Safety

September 11,2000

The Honorable Jesse Ventura
Governor of the State of Minnesota
And Members of the Legislature
State Capitol Building
Saint Paul, Minnesota 55155

Dear Governor Ventura:

The Department of Public Safety, State Fire Marshal Division, is proud to present *Fire in Minnesota - 1999* for your review.

Minnesota participates in the National Fire Incident Reporting System (NFIRS), sponsored by the U.S. Fire Administration. Our state adapts this federal program into our own Minnesota Fire Incident Reporting System (MFIRS). Data is collected on a state-wide basis; 674 Minnesota Fire Departments reported to the MFIRS system in 1999, which represents 85% of all fire departments in the state. Through this reporting system, we determined that, in 1999, fire dollar loss in Minnesota was in excess of 139 million dollars.

This report, which has become a nation-wide model, provides fire service, law enforcement, public officials and the general public with information and statistics about fire losses and the crime of arson throughout Minnesota.

The State Fire Marshal Division continues to be committed to serving the citizens of Minnesota to protect lives and property from fire. It is through their dedicated efforts that this report is made available.

Sincerely,

Charlie Weaver
Commissioner

STATE FIRE MARSHAL DIVISION MISSION STATEMENT

The mission of the State Fire Marshal Division is to protect lives and property by fostering a fire safe environment through investigation, enforcement, regulation, hazardous materials response, data collection and public education.

From the desk of State Fire Marshal Thomas R. Brace

I am pleased to present "Fire in Minnesota 1999". The information collected through the Minnesota Fire Incident Reporting System (MFIRS) is used to compile this report. Without the continued participation and support of our reporting fire departments, this data and collection program would not be possible.

The State Fire Marshal Division of the Department of Public Safety is committed to protecting the citizens of Minnesota and supporting the Minnesota Fire Service. Our programs, juvenile firesetter intervention, fire sprinkler systems plan review and installation, inspections of schools, hospitals, nursing homes, hotels, motels, resorts, day care/foster care homes & centers, haz-mat and fire/arson scene investigation have a significant impact on the fire problems occurring in Minnesota.

A brief summary of 1999 fire statistics includes:

- A fire is reported in Minnesota every 30 minutes and results in $381,642 fire dollar loss each day.
- Residential structure fires are at an 11-year-low, as are public assembly/commercial fires. In 1999, dollar loss for residential property fires decreased by 1.4 million from 1998.
- For the second consecutive year, incendiary is the leading cause of all structure fires with known causes.
- Sixty civilians died in fires this year; 83% (50 deaths) occurred in residential property and deaths among elderly account for 42% of fire deaths in 1999.
- 266 civilian injuries were reported through the MFIRS system; this is an 8% decrease from 1998. These numbers do not represent the actual number of fire injuries occurring in the state, as it includes only victims who have direct contact with fire departments. Many burn victims are transported by private car or ambulance.

As always, the quality of this report depends on the information submitted by each reporting fire department. Large numbers of "other" and "unknown" information is a recurrent frustration for our Division. MFIRS data must, in every reported fire incident, reflect the best judgement of the fire service. Complete information is vital to make our statewide data a valid and accurate reflection of Minnesota's fire problem.

The fire data unit, within the State Fire Marshal Department, deserves recognition for their team effort in collecting, entering, and analyzing MFIRS information to publish this report. Special thanks to Bureau Chief Bob Dahm, Office Manager Connie Weaver, Nora Gierok, Irene Moore, and Ernie Schiedness for their continued efforts.

TABLE OF CONTENTS

TOTAL IMPACT

Minnesota Fire Clock 2
Overall State Totals 3
Fires by Property Type 5
Dollar Loss by Property 6
Summary 7

CAUSES

Leading Fire Causes 10
Agricultural Properties 12
Cause by Occupancy/Area 15
Summary 20

INCENDIARY TRENDS

Trends 22
Incendiary Structure Fires 23
Incendiary Fires by County 25
Summary 26

CASUALTIES

Feature 28
Smoke Detector Performance 29
Civilian Deaths 30
30 Year History/Firefighter Deaths 33
Civilian Injuries 34
Firefighter Injuries 36
Summary 37

PARTICIPATION

Fire Department Total Participation 40
Participation by Fire Department/County 41
Runs, Dollar Loss, and Deaths by County 50
Runs and Dollar Loss by City 52
Non-Reporting Departments 57

TABLE OF CONTENTS (Cont.)

STATE FIRE MARSHAL ANNUAL REPORT

State Fire Marshal Highlights 60
History of the State Fire Marshal Division 61
State Fire Marshal Division Staff 62
Fire/Arson Investigations 65
Fire Safety Inspections 68
Public School Inspections 71
Code Development Plan Review 72
Fire Protection Licensing 73
Public Display Fireworks Operator Certification 74
Hazardous Materials Regional Response Team 75
Fire Data 77
Public Education 79
Juvenile Firesetting 81
Administrative Support Services 83
Conclusion 84

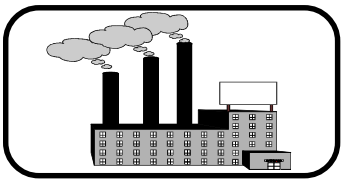
If you would like a copy of this document in an alternate format, please contact: Connie Weaver at 651-215-0504.

3,493 **RESIDENTIAL**

(Single family dwellings, apartments, mobile homes, hotels, motels)

555 **PUBLIC AND MERCANTILE**

(Stores, restaurants, institutions, churches, public facilities, education)



1,485 **INDUSTRIAL, MANUFACTURING, OTHER BUILDINGS**

(Basic industry, manufacturing, storage, residential garages, vacant buildings, unknown)

4,484 **MOBILE PROPERTY**

(Automobiles, trucks, trains, buses, boats)

7,756 **OUTSIDE AND OTHER**

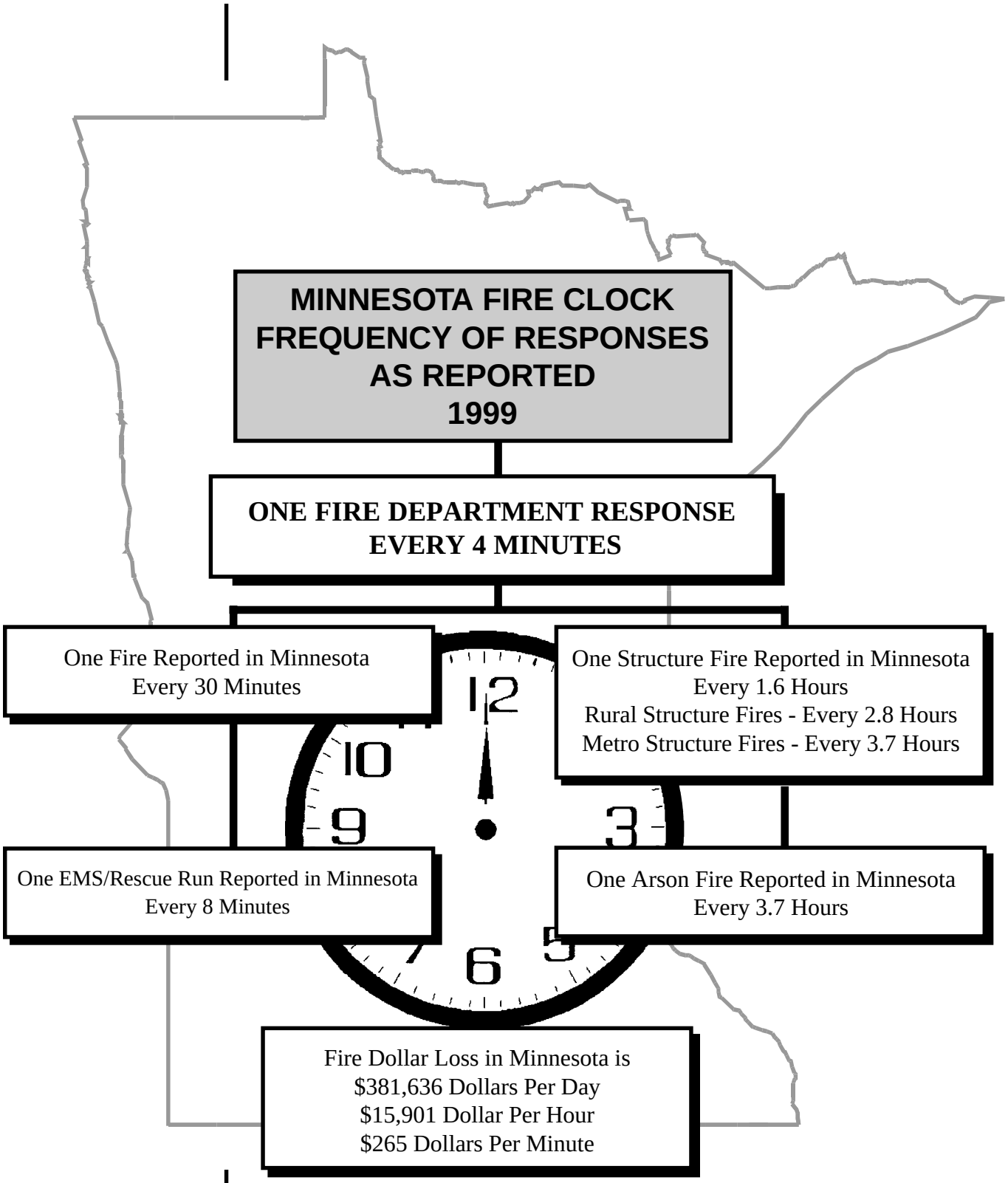
(Dumpsters, trash, wildland, grass, trees)

17,773 **TOTAL FIRES**

$139,297,131 **TOTAL DOLLAR LOSS**

TOTAL IMPACT

Photo by Jean Doran Matua, Tri-County News



These figures represent the collective incidents reported by 674 of Minnesota's 790 fire departments.

Eighty-five percent of the state's fire departments reported into the MFIRS program.

OVERALL STATE TOTALS

In 1999, 674 fire departments (85%) reported into the Minnesota Fire Incident Reporting System (MFIRS) which provides information on fire incidents and related activities. This year's figures represent a slight increase in the participation in MFIRS over last year (when 672 departments reported through MFIRS). (See the section titled "Participation," for a breakdown of reporting and non-reporting departments.)

1999 REPORTED FIRE DEPARTMENT RESPONSES

Incidents Reported	7 County Metro Area	% State Total	Balance of State	% State Total	State Total
Structure Fires	2,397	43%	3,136	57%	5,533
Vehicle Fires	2,365	53%	2,119	47%	4,484
Other Fires	3,833	49%	3,923	51%	7,756
TOTAL FIRES	**8,595**	**48%**	**9,178**	**52%**	**17,773**
Rescue / EMS	49,332	71%	20,150	29%	69,482
Other Emergencies	4,219	57%	3,159	43%	7,378
TOTAL RESCUE	**53,551**	**70%**	**23,309**	**30%**	**76,860**
FALSE CALLS	**16,800**	**75%**	**5,568**	**25%**	**22,368**
MUTUAL AID GIVEN	**1,169**	**42%**	**1,619**	**58%**	**2,788**
OTHER INCIDENTS	**20,381**	**68%**	**9,525**	**32%**	**29,906**
TOTAL CALLS	**100,496**	**67%**	**49,199**	**33%**	**149,695**
Estimated Direct Dollar Loss Due to Fire	**$59,911,148**	**43%**	**$79,385,983**	**57%**	**$139,297,131**

The total number of fire incidents reported by participating Minnesota fire departments in 1999 was 17,773, less than 1% decrease from 1998. The number of all responses by the fire service decreased 2% in 1999, for a total of 149,695.

Total dollar loss increased from 1998 by $3.2 million.

With minor year-to-year fluctuation in fire incident reporting, structure fires continue to be at a five-year low. Total dollar loss increased from 1998 by $3.2 million..

FIVE-YEAR OVERALL INCIDENT COMPARISONS
1995-1999

	1995	1996	1997	1998	1999	98/99 Change + (-)	98/99 % Change + (-)
FIRES							
Structure	6,942	6,739	6,372	5,585	5,533	(52)	(1%)
Vehicle	5,158	5,448	4,832	4,460	4,484	24	1%
Other Fires	7,698	8,184	8,141	7,764	7,756	(8)	(<1%)
TOTAL FIRES	**19,798**	**20,371**	**19,345**	**17,809**	**17,773**	**(36)**	**(<1%)**
OVERPRESSURE RUPTURES	**627**	**557**	**555**	**535**	**825**	**290**	**54%**
RESCUE CALLS							
Emergency	58,079	59,706	65,501	70,754	69,482	(1,272)	(2%)
All Others	6,076	5,635	5,837	6,563	7,378	815	12%
TOTAL RESCUE CALLS	**64,155**	**65,341**	**71,338**	**77,317**	**76,860**	**(457)**	**1%**
HAZARDOUS CONDITION CALLS	**7,132**	**9,954**	**9,578**	**10,177**	**8,823**	**(1,354)**	**(13%)**
SERVICE CALLS	**6,847**	**8,447**	**7,645**	**7,486**	**7,411**	**(75)**	**(1%)**
GOOD INTENT CALLS	**10,537**	**12,852**	**12,915**	**12,509**	**12,064**	**(445)**	**(4%)**
FALSE CALLS							
Malicious	1,456	1,418	1,441	1,346	1,304	(42)	(3%)
Other False	18,872	18,927	20,713	21,539	21,064	(475)	(2%)
TOTAL FALSE CALLS	**20,328**	**20,345**	**22,154**	**22,885**	**22,368**	**(517)**	**(2%)**
MUTUAL AID GIVEN	**2,494**	**2,655**	**2,488**	**2,617**	**2,788**	**171**	**7%**
ALL OTHER	**865**	**976**	**713**	**753**	**783**	**30**	**4%**
TOTAL CALLS	**132,783**	**141,498**	**146,731**	**152,088**	**149,695**	**(2,393)**	**(2%)**
TOTAL DOLLAR LOSS	**$131.6M***	**$144.0M**	**$141.5M**	**$136.1**	**$139.3**	**$3.2M**	**2%**

*Includes one $15 million dollar fire.

With a few exceptions, incidents in every category had decreased in 1999, including emergency rescue calls.

For each of the past five years, residential structure fires have occurred at the rate of one for every 1,369 Minnesotans or one for every 525 households.

STRUCTURE FIRES BY PROPERTY TYPE

Fires in structures continue to occur most frequently in residential property, a category that includes houses, apartments, boarding houses, dorms, hotels/motels, etc. Again in 1999, residential structure fires decreased in number from the previous four years. On average, 3,966 fires have occurred in residential structures each of the past five years. This is approximately one structure fire for every 1,369 Minnesota residents annually or one fire for every 525 households in the state.

Structure Fires by Property Type
1995 - 1999

	1995	1996	1997	1998	1999	% increase (decrease) 1998-1999
Residential	4,521	4,229	4,021	3,564	3,493	(2%)
Educational/ Institutional	240	152	213	158	155	(2%)
Public Assembly/ Commercial	475	527	435	419	400	(5%)
Industrial/ Manufacturing	449	395	338	271	309	14%
Storage	1,009	1,155	1,124	954	944	(1%)
Special/Other	203	220	218	185	188	2%
Unclassified	45	61	23	34	44	29%
TOTAL	**6,942**	**6,739**	**6,372**	**5,585**	**5,533**	**(<1%)**

The total number of all structure fires has decreased steadily for the past six years.

In 1999, although the total number of structure fires decreased by less than 1%, it has been decreasing steadily for the past six years, from a high of 7,223 in 1994.

Residential structure fires are at an 11-year-low, as are Public Assembly/ Commercial fires.

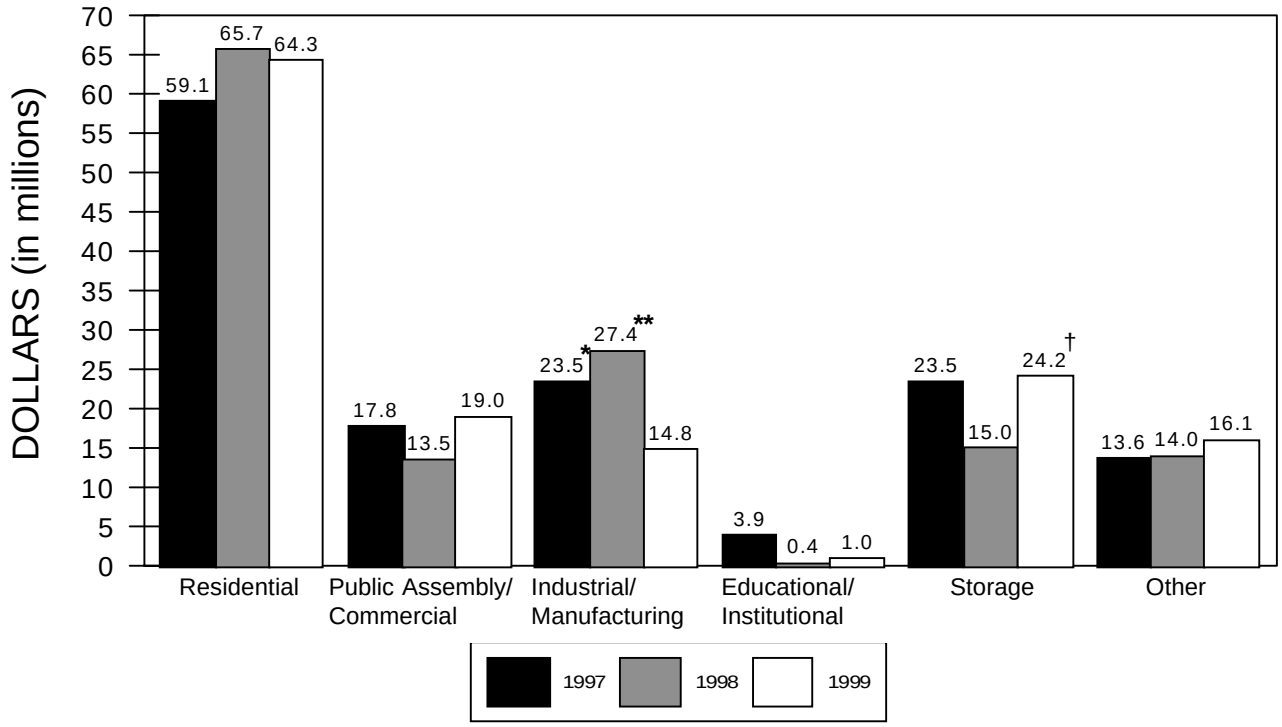
Educational/Institutional structure fire numbers continue to drop; this figure of 155 nearly approaches the 1996 low of 152.

These are encouraging numbers and reflect a decade of cooperative, continuing efforts in service, technology, and education by the agencies in the fire community.

OVERALL STATEWIDE DOLLAR LOSS

Overall, average dollar loss per structure fire was nearly $22,000 per incident.

DOLLAR LOSS BY PROPERTY TYPE



*Includes $7 million plastic manufacturing plant fire and $5.5 million canning plant fire.
**Includes $10 million ore mine fire and $5.8 meat processing plant fire.
†Includes $5 million seed/silage storage fire.

Residential fires accounted for 46% of total dollar loss and represent 63% of all structure fires in 1999.

The 1999 dollar loss in residential property decreased by $1.4 million from 1998. Residential fires accounted for 63% of all structure fires and 46% of total dollar loss, whereas in 1998 residential fires accounted for 64% and represented 48% in total dollar loss.

There was an increase in dollar loss in storage facilities of $9.2 million in 1999, which included a seed/silage storage fire that caused $5 million in damages.

Overall, average dollar loss per structure fire in 1999 was nearly $22,000 per incident. Average dollar loss per residential fire was over $18,000 per incident.

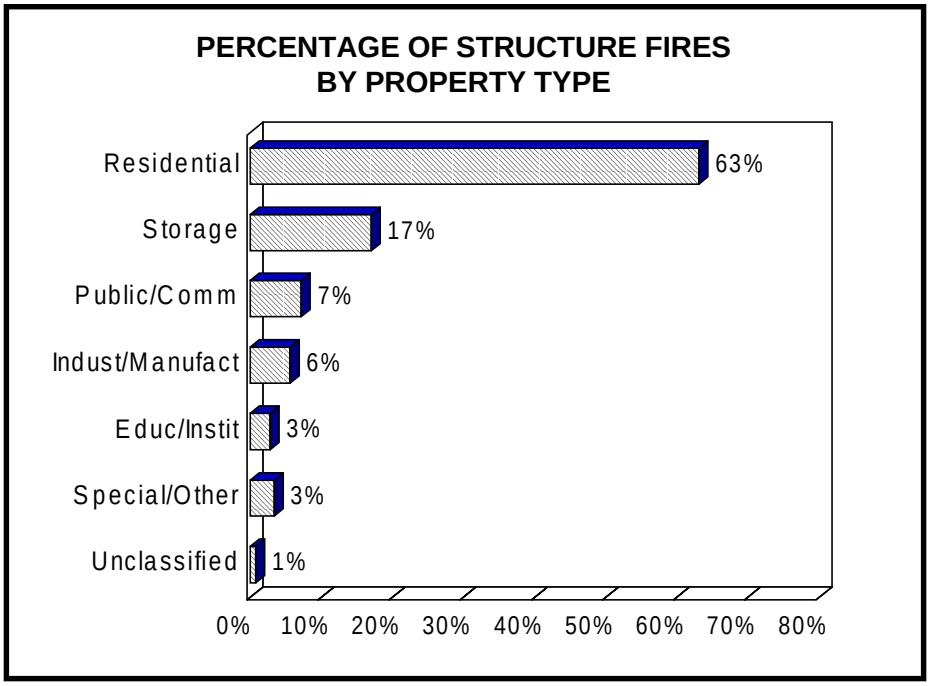
SUMMARY

In the past 11 years residential dollar loss amounted to nearly $674 million dollars.

Although the number of reporting Minnesota fire departments increased slightly, the number of incidents reported decreased by 2%. Dollar loss was in excess of $139 million, a $3.2 million increase from 1998.

Fires occurred most frequently in residential-type properties. The residential fires occurred in significantly higher percentages than the next most reported property type: storage facilities.

Residential fires accounted for 63% of all structure fires, 46% of total dollar loss, and 83% of all fire deaths. This continues to make the home the most dangerous place to be in regard to fire.



In the last 11 years, over $1.4 billion in property was destroyed by fire; of that amount, 47%, or nearly $674 million, occurred in residential property.

Statewide, dollar loss from fires remains high and continues to be a costly problem. Commitment to prevent fires before they occur is the only way to stop the significant loss of life and property from fire. This requires all citizens to actively participate in public education and fire prevention efforts.

CAUSES

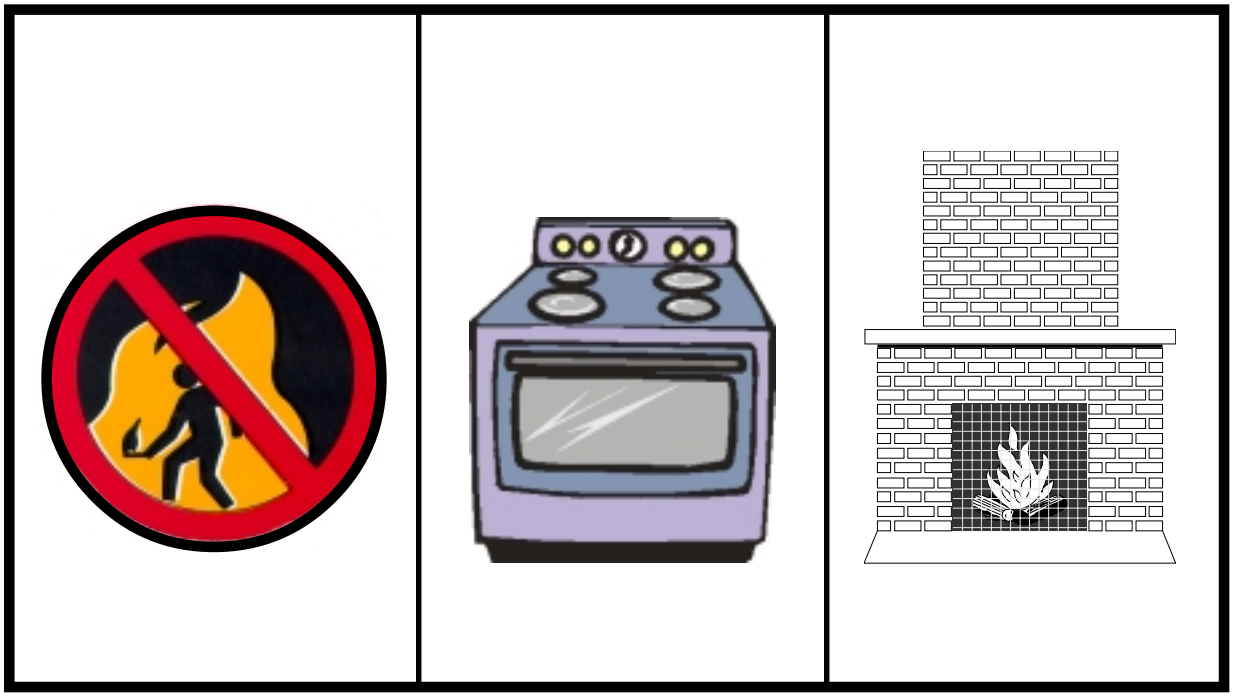
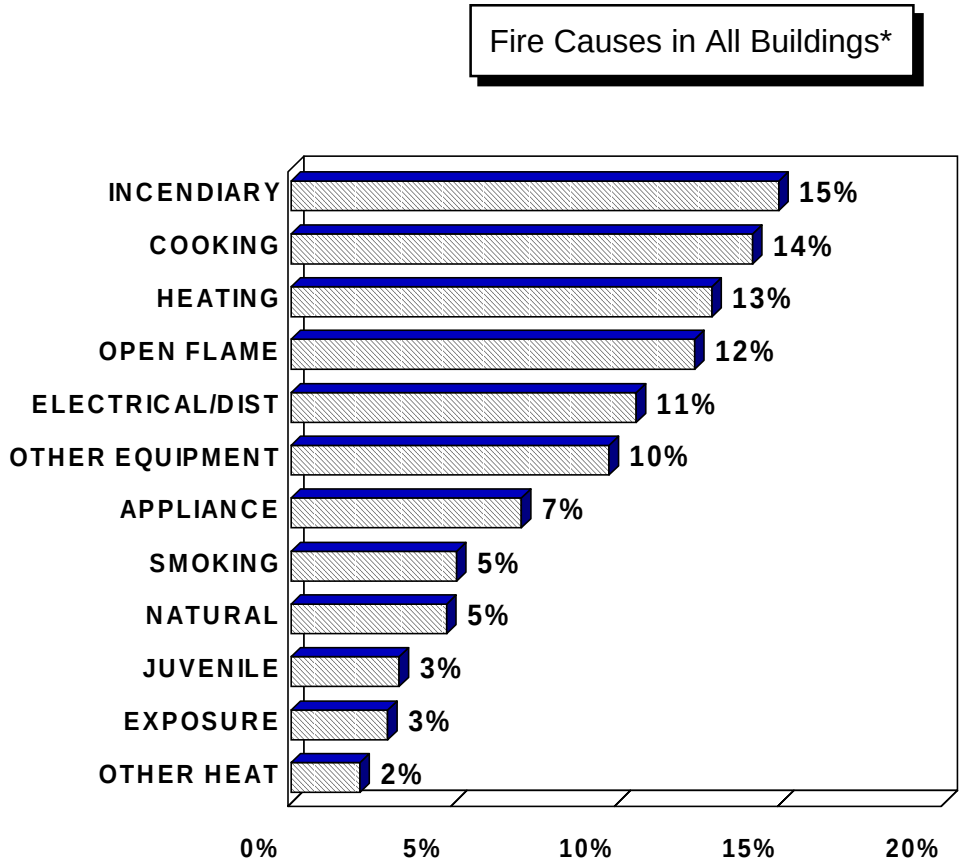


Photo by Denise DeMars

CAUSES

For the 2nd consecutive year, incendiary emerges as the leading cause of all structure fires with known causes. Cooking and heating closely follow as 2nd and 3rd.



**Based solely on reports from fire departments where known fire causes were identified.*

When fire causes in all types of buildings are compared, incendiary, cooking and heating emerge as the "top three." For the second consecutive year, incendiary is the leading cause of structure fires. In residential structures, as a group, cooking is still the most common cause. Fires in residential property represent 63% of all structure fires, and 46% of total dollar loss.

Incendiary was a cause in 10% of residential fires. The dollar loss in all residential fires totaled over $64 million.

While fires in educational/institutional properties represent only 3% of structure fires, forty percent (40%) of these had incendiary causes. In store/office property, (4% of structure fires), incendiarism was reported as the cause in 14% of the fires.

The large number of "other" and "unknown" causes represent a recurrent frustration; MFIRS data must, in every reported fire incident, reflect the best judgment of the fire service as to cause and dollar loss. Only with this information can statewide data be complete and valid.

A Closer Look at Major Fire Causes . . .

In 1999, cooking-related fires accounted for 15% of all civilian fire injuries.

. . . Cooking Fires

Unattended cooking accounted for 30% of cooking-related fires and 21% of the dollar loss. Two cooking-related fire deaths occurred in 1999 as well as 40 civilian and 5 firefighter injuries. This represents a decrease of 9% in civilian injuries; firefighter injuries remained the same from last year. Dollar loss totalled over $6 million, almost double from last year's total!

MOST COMMON CAUSES AND DOLLAR LOSS FOR ALL COOKING FIRES

Cause	# of Fire Incidents	% of Total	Dollar Loss	% of Total	Civ. Deaths	Civ. Injuries	Firefighter Injuries
Combustibles Too Close	53	7%	$1,782,447	27%	--	4	--
Unattend./Fell Asleep	232	30%	1,377,736	21%	1	12	--
Mechanical Failure	156	20%	1,066,767	16%	--	6	1
Operational Deficiency	96	12%	851,423	13%	1	2	3
Abandon. Material (Charcoal)	20	3%	145,600	2%	--	--	--
Other Causes	160	20%	1,111,305	17%	--	16	1
Undetermined	64	8%	290,205	4%	--	--	--
Total	**781**	**100%**	**$6,625,483**	**100%**	**2**	**40**	**5**

Twelve people perished in heating-related fires.

. . . Heating Fires

The majority of heating-related fires (448) occurred in residential properties. These fires have slightly decreased from last year -- 492 fires in 1998; however, dollar loss from these fires increased 10%. Civilian fire deaths increased from 2 to 12 -- 6 of those deaths occurred in one residence.

DOLLAR LOSS FROM HEATING FIRES IN RESIDENTIAL PROPERTIES ONLY

Equipment	# of Fire Incidents	% of Total	Dollar Loss	% of Total	Civ. Deaths	Civ. Injuries	Firefighter Injuries
Fireplace/Chimney	241	54%	$2,655,019	36%	2	2	3
Portable Heaters	37	8%	1,281,148	17%	2	--	1
Fixed Heating Units	60	13%	1,262,120	17%	7	1	1
Water Heaters	38	8%	950,435	13%	--	3	--
Central Heating Units	46	10%	579,201	8%	1	--	--
Other	26	6%	661,500	9%	--	1	--
Total	**448**	**100%**	**$7,389,423**	**100%**	**12**	**7**	**5**

Total dollar loss in agricultural properties exceeded $18 million, an increase of 77% over last year.

AGRICULTURAL PROPERTIES

Agricultural properties are defined as those structures or open pieces of land on which the production of raw agricultural products and farming occurs. Agricultural production and storage properties do not include processing facilities.

AGRICULTURE PRODUCTION

	1998		1999	
Type of Facility	**No. of Incidents**	**Dollar Loss**	**No. of Incidents**	**Dollar Loss**
Hog	24	$ 943,000	20	$2,294,000
Cattle	22	134,001	19	741,520
Other Livestock	7	23,000	5	635,050
Poultry, Egg	10	907,000	14	434,700
Crop/Orchards	51	505,000	48	413,781
Unclassified Agric.	61	251,895	149	1,324,825
TOTAL	**175**	**$2,763,896**	**255**	**$5,843,876**

AGRICULTURE STORAGE

	1998		1999	
Type of Facility	**No. of Incidents**	**Dollar Loss**	**No. of Incidents**	**Dollar Loss**
Seed, Silage	66	$ 233,650	45	$ 5,395,850
Barns	198	4,461,629	197	4,059,787
Grain Elevators	17	1,571,250	15	1,180,050
Ag. Supply Storage	48	751,300	46	413,060
Livestock	7	111,100	15	190,850
Boxed, Bagged Ag.	4	15,300	2	100,150
Unclassified Agric.	24	346,910	38	951,251
TOTAL	**364**	**$7,491,139**	**358**	**$12,290,998**

One large agricultural fire contributed to the 1999 increase in dollar loss.

Overall the number of fire incidents increased 14% and dollar loss increased 77%.

AGRICULTURAL PROPERTY FIRE CAUSES...

Agricultural Production and Storage Facilities

Ignition Factors	1997 No. of Incidents	1998 No. of Incidents	1999 No. of Incidents	1999 Dollar Loss	1999 % Total $ Loss
Mech. Failure/Malfunct.	133	120	100	$ 2,411,750	13%
Open Flame/Inadeq. Ctrl.	93	63	95	1,475,300	8%
Spontaneous Heating	36	30	38	539,250	3%
Combustibles Too Close to Heat/Exposure	55	33	32	526,200	3%
Misuse of Heat	23	23	25	416,750	2%
Incendiary	30	20	25	411,885	2%
Lightning/Other Natural Conditions	20	33	21	386,405	2%
Design, Construction, Installation Defic.	4	5	5	268,700	1%
Operational/Design Defic.	19	12	24	205,501	1%
Other	35	22	35	97,220	1%
Lack of Maintenance	7	9	9	76,250	<1%
Ignited Material Misuse	5	5	10	62,000	<1%
Unattended	9	7	7	58,300	<1%
Children Playing w/Fire	12	14	5	56,600	<1%
Fuel Spill	1	1	2	--	<1%
Undeter./Not Class. Above	184	142	180	11,142,763	61%
TOTAL	**666**	**539**	**613**	**$18,134,874**	**100%**

Mechanical failure again was listed as the #1 known cause of fires in agricultural facilities.

Based on identified causes, mechanical failure or malfunction continues to be the leading cause of fire in agricultural facilities and caused over $2.4 million in property loss, or 13% of the total agricultural dollar loss for 1999. The average dollar loss for these types of fires decreased by 21% from 1998.

If we are to address the problem of fires in agricultural properties, every effort must be made to identify and report the causes of these fires.

Fire Cause and Areas of Origin by Occupancy Class

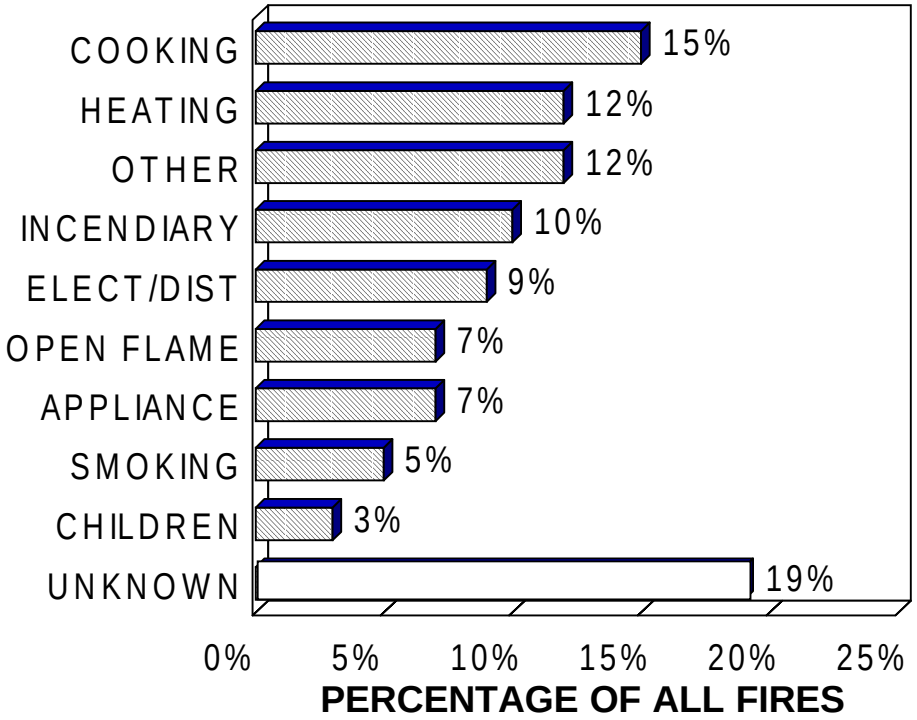
The following pages contain additional information about fire causes and most common areas of fire origin. For each of the four major property types (residential, educational, public assembly, and store/office), leading fire causes are presented. Separate data is included with an illustration of the property type, depicting, to the extent reported, which rooms in a given type of structure are most frequently found to be the origin of a fire. For example, in residential properties the kitchen has been identified as the most hazardous area, where fires may result from any number of causes (e.g., cooking, heating, electrical causes, incendiary, etc.).

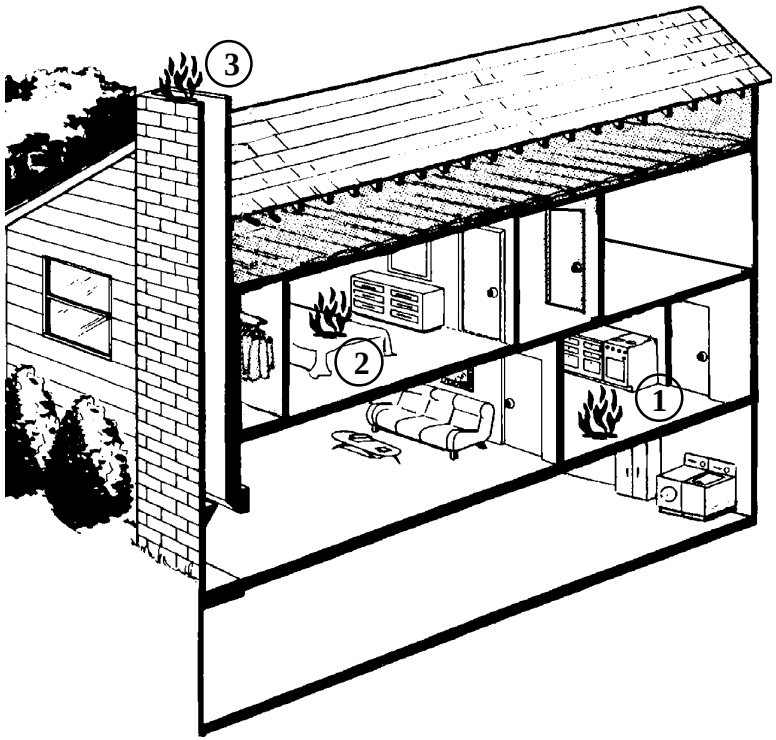
Again, it must be noted that a lack of complete reporting of causes through MFIRS results in a large number of fires categorized as "unknown cause" or "unclassified/other."

RESIDENTIAL PROPERTY

(Single Family Dwellings, Apartments, Hotels)

LEADING FIRE CAUSES





	No. of Incidents	Firefighter Injuries	Civilian Injuries	Firefighter Deaths	Civilian Deaths	Dollar Loss
	3,493	118	188	--	50	$64,288,245
% of Total	63%*	63%	71%	--	83%	46%

*Percent of structure fires

AREA OF FIRE ORIGIN

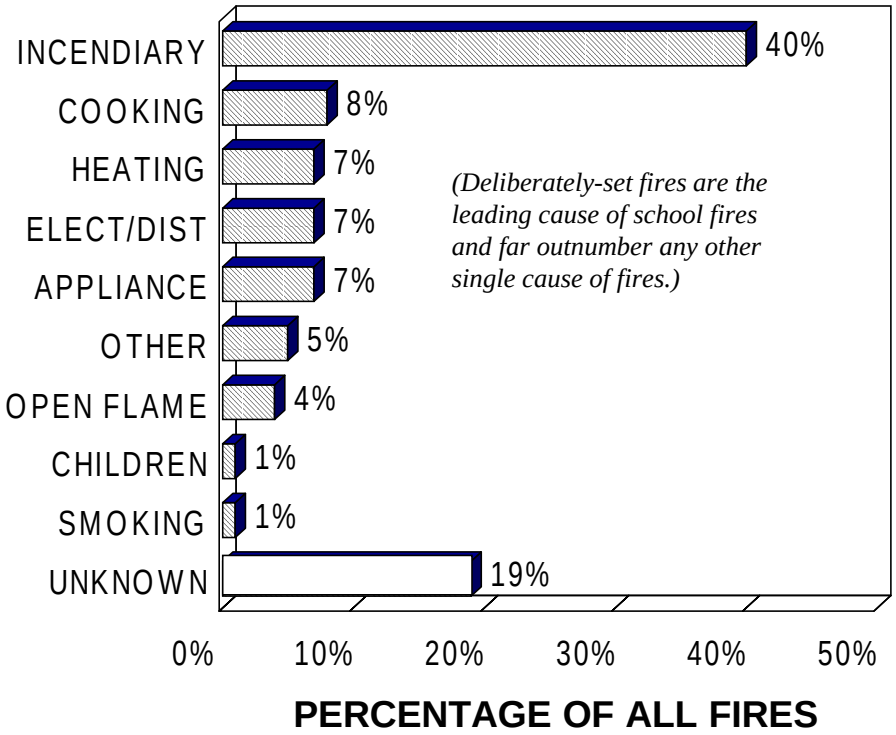
1. Kitchen/Cooking Area 20%
2. Sleeping Area 6%
3. Chimney 6%

Other Areas of Fire Origin: 68%

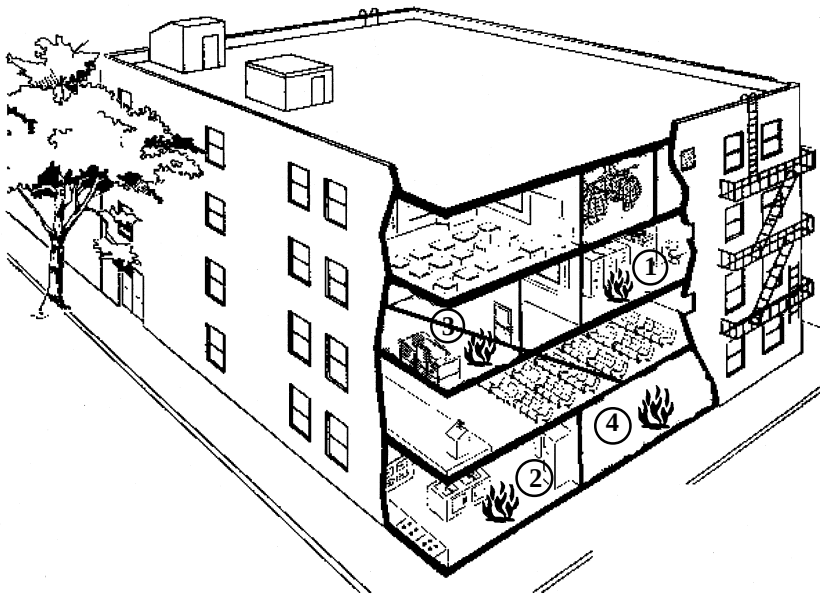
EDUCATIONAL PROPERTY

(Colleges, University, Public/Private Schools)

LEADING FIRE CAUSES



(Deliberately-set fires are the leading cause of school fires and far outnumber any other single cause of fires.)



	No. of Incidents	Firefighter Injuries	Civilian Injuries	Firefighter Deaths	Civilian Deaths	Dollar Loss
	73	3	5	--	--	$596,070
% of Total	1%*	1%	2%	--	--	<1%

*Percent of structure fires

AREA OF FIRE ORIGIN

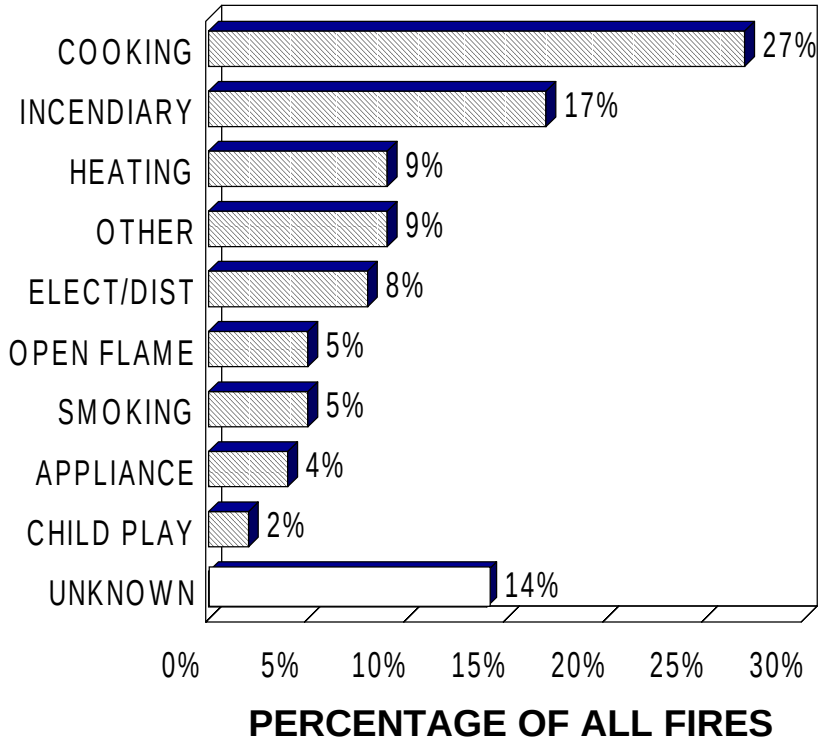
1. Lavatory/Locker Room 27%
2. Heating/Equipment Room 7%
3. Kitchen/Cooking Area 5%
4. Laundry Room/Area 5%

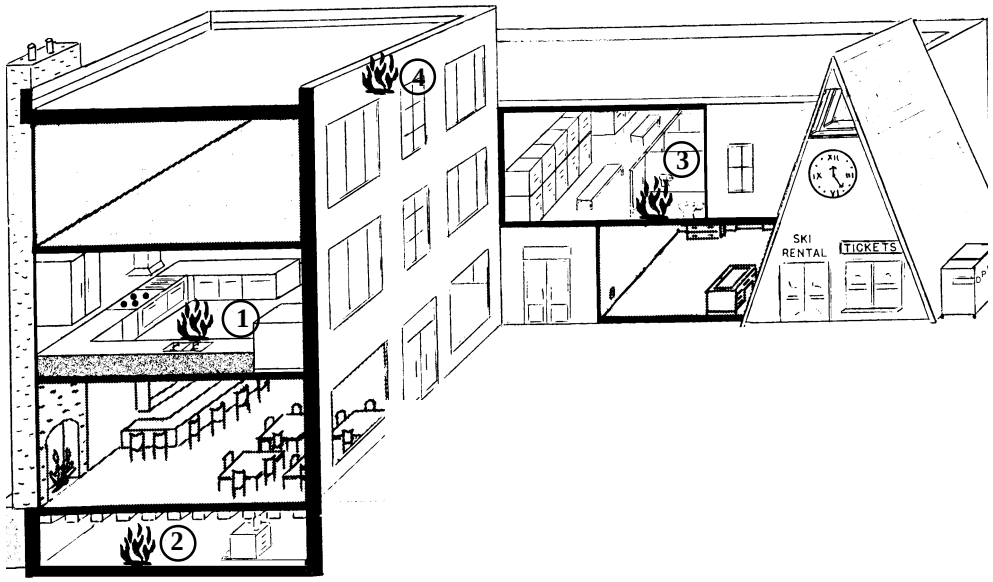
Other Areas of Fire Origin: 56%

PUBLIC ASSEMBLY PROPERTY

(Restaurants, Arenas, Churches, Theatres)

LEADING FIRE CAUSES





	No. of Incidents	Firefighter Injuries	Civilian Injuries	Firefighter Deaths	Civilian Deaths	Dollar Loss
	158	1	2	--	--	$5,866,951
% of Total	3%*	1%	1%	--	--	4%

*Percent of structure fires

AREA OF FIRE ORIGIN

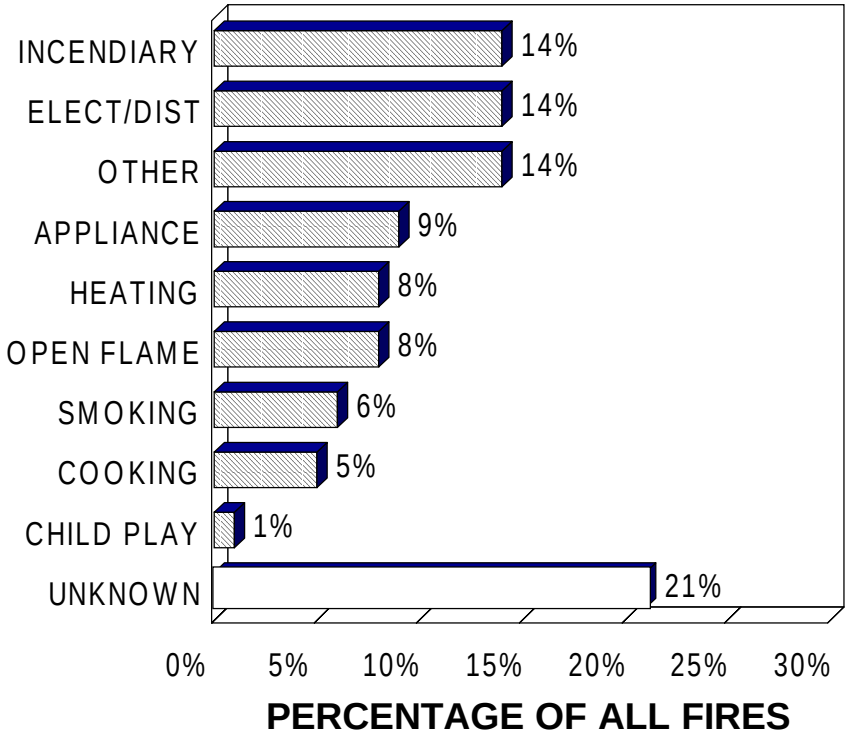
1. Kitchen/Cooking Area 30%
2. Heating/Equipment Room 8%
3. Lavatory/Locker Room 7%
4. Exterior Wall Surface 4%

Other Areas of Fire Origin: 51%

STORE AND OFFICE PROPERTY

(Retail Shopping, Business Offices, Gas Stations)

LEADING FIRE CAUSES



	No. of Incidents	Firefighter Injuries	Civilian Injuries	Firefighter Deaths	Civilian Deaths	Dollar Loss
	242	7	6	--	--	$13,130,841
% of Total	4%*	4%	2%	--	--	9%

*Percent of structure fires

AREA OF FIRE ORIGIN

1. Sales/Showroom Area 7%
2. Office 5%
3. Supply Storage Room/Area 5%
4. Exterior Wall Surface 5%

Other Areas of Fire Origin: 78%*

***The high percentage of "Other" in this category may reflect the difficulty in naming the area of fire origin based on coding associated with the MFIRS report form.**

FIRE PREVENTION WEEK

Since 1925, the week containing Oct. 9, the anniversary of the Great Chicago fire of 1871, has been designated as Fire Prevention Week. The purpose of the week's events is to promote public awareness of the need for fire prevention. The National Fire Protection Association (NFPA) offers a variety of classroom activities and materials designed to educate and encourage families to make their homes fire-safe, and to respond appropriately should a fire occur. Each year's theme highlights a particular fire-safety behavior. This year we continue the theme from last year, "The Great Escape." We encourage fire service personnel to participate in Fire Prevention Week efforts in their own communities. Further information about this yearly event can be found on the NFPA web page at: www.nfpa.org.

Continued support of fire prevention and public education efforts is essential to reduce the tragic losses from fire in Minnesota.

SUMMARY

For the second consecutive year, incendiary tops the list of causes for structure fires. Incendiary, cooking and heating causes resulted in 18 fire deaths and 97 injuries (both civilian and firefighter). A breakdown of fires by major property type gives additional insights into cause.

Two leading causes of fires in residential properties (which accounted for 63% of total structure fires) were identified as cooking and heating. Residential fires accounted for 83% of all fire deaths, 63% of firefighter injuries, and 71% of civilian injuries.

While careless smoking accounts for only 5% of overall fires, it represents 25% of all fire fatalities.

In 1999, as in previous years, MFIRS data reflected a large number of unknown/undetermined causes of fires (20%). In order to focus fire prevention efforts more accurately, complete reporting of causes (ignition factor field on the MFIRS form) is absolutely essential.

The most dangerous place to be, in regard to fire, continues to be the home. Fire prevention education efforts in the areas of cooking and heating must continue to be a top priority. Incendiary fires must be addressed through such efforts as the Arson Reward Program, the Arson Suspect Pointer System, and the Juvenile Firesetter Intervention programs being established throughout the state.

INCENDIARY TRENDS

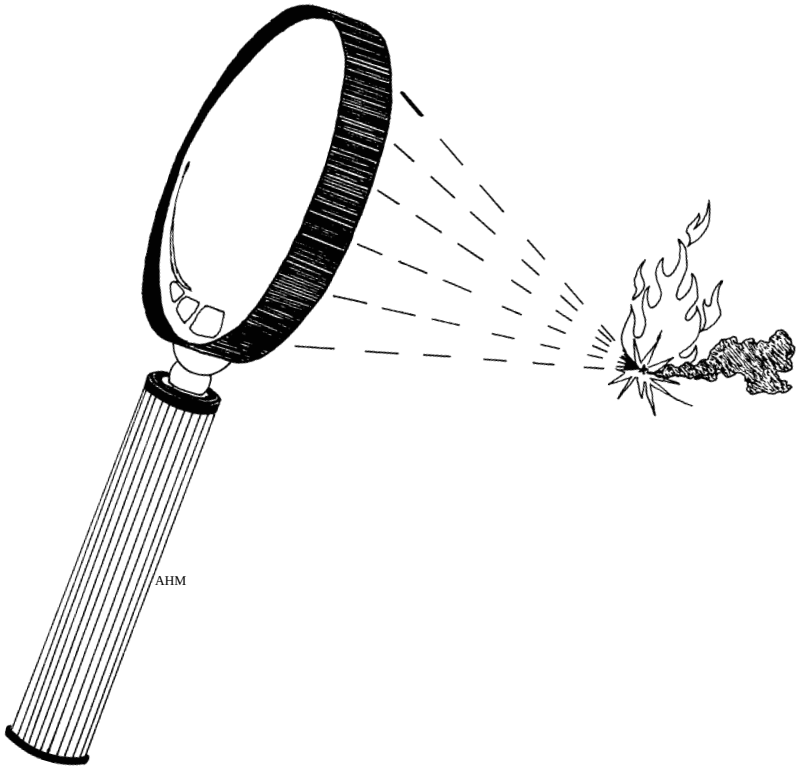


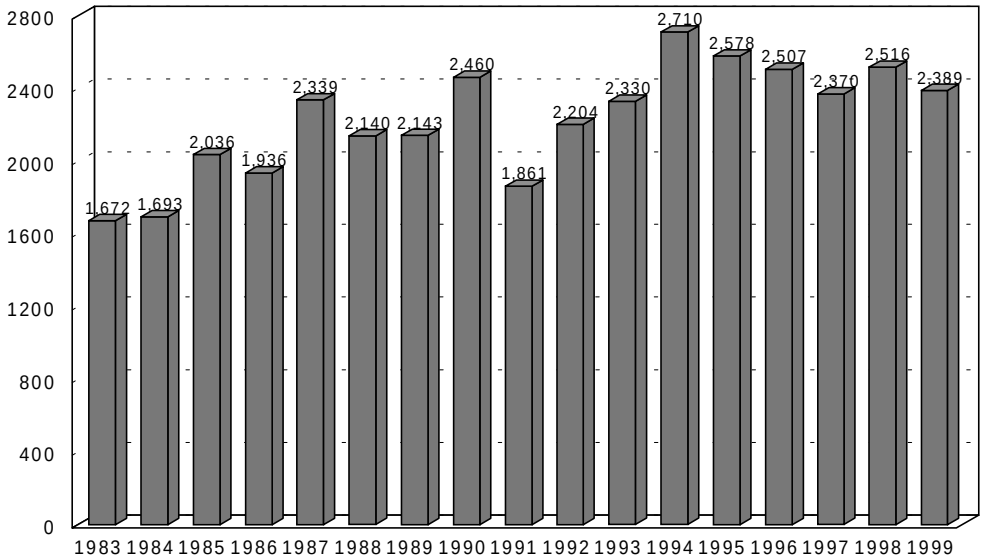
Photo by Gary W. Meyer, West Sherburne Tribune

INCENDIARY TRENDS*

Although slightly decreased in 1999, incendiary was reported as the leading cause of all structure fires with known causes.

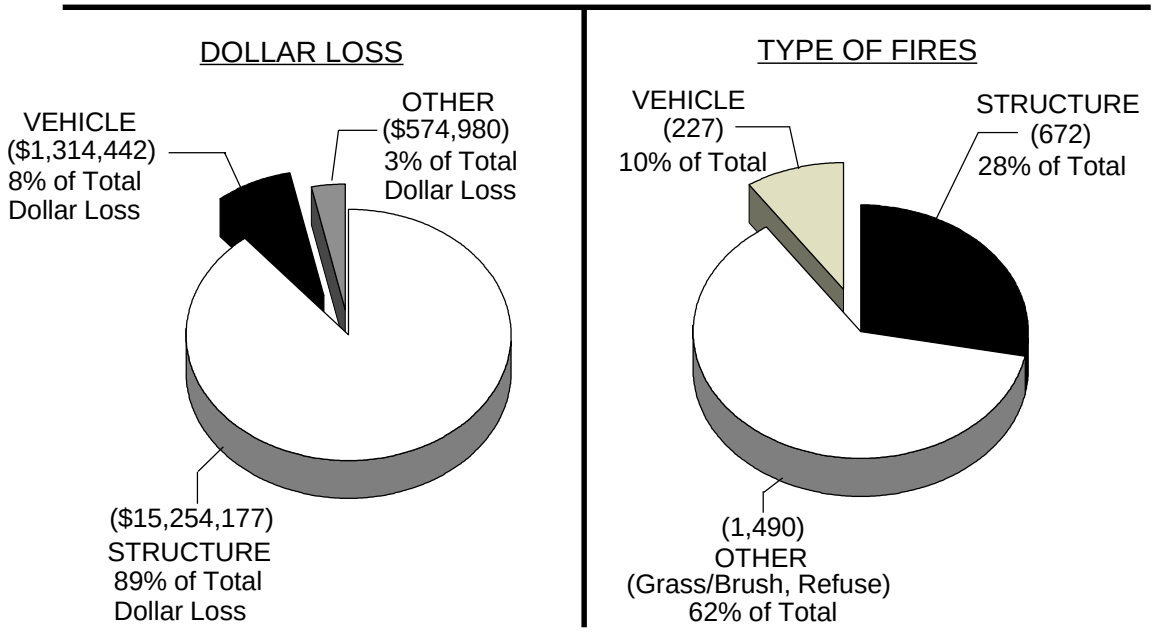
While incendiary fires decreased slightly in 1999, they remain reported as the leading cause of all structure fires with known causes.

INCENDIARY FIRES IN MINNESOTA



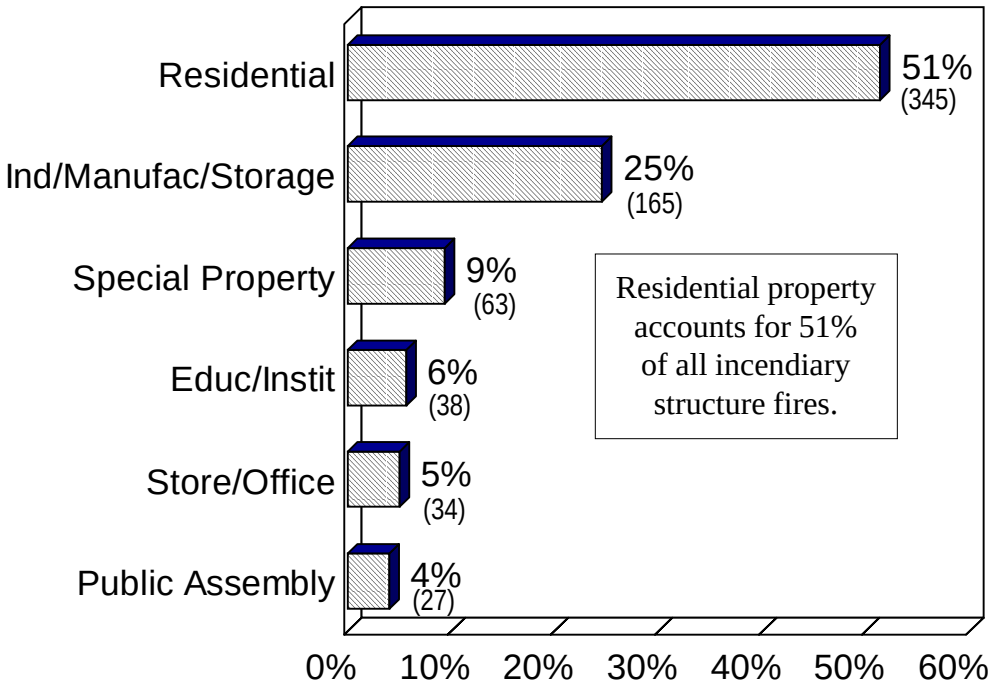
There were a total of 2,389 identified incendiary fires, a 5% decrease from 1998. The value of property destroyed was estimated at over $17 million, which is a 33% increase from last year. The majority of incendiary dollar loss (89%) occurred in structures. There were 5 reported fire deaths directly attributable to incendiary causes in 1999.

INCENDIARY FIRES BY DOLLAR LOSS AND TYPE



*Starting with the 1997 Fire in Minnesota, all incendiary charts and statistics are taken from MFIRS data only. For additional incendiary statistics, please see the Fire/Arson Investigation Team Section on pages 65-67.

Incendiary Fire Incidents By Structure Type

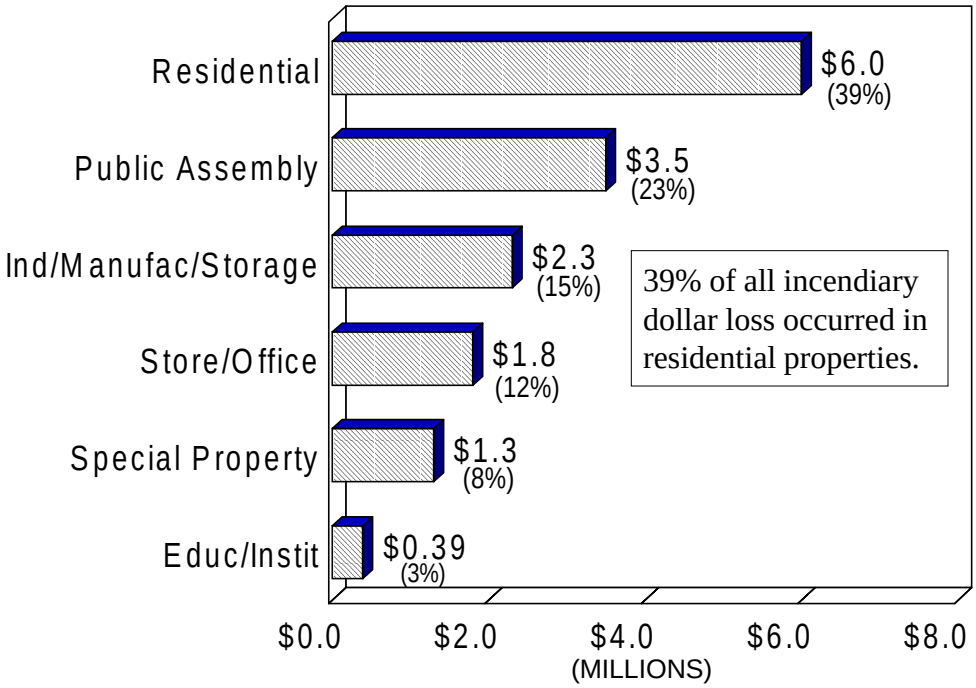


Incendiary Fire Dollar Loss (In Millions)

	Structure	Vehicle
1992	$16.3	$.5
1993	$20.6	$.8
1994	$42.2	$.8
1995	$16.9	$.9
1996	$20.5	$1.3
1997	$13.8	$.9
1998	$11.1	$1.3
1999	$15.3	$1.3

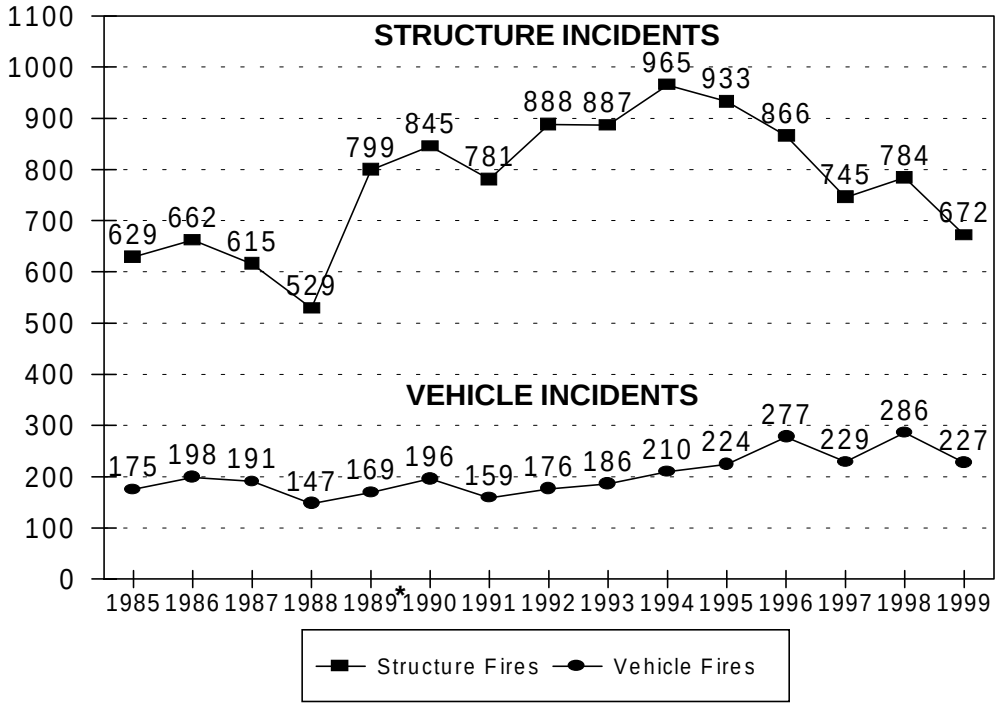
Over half of incendiary fires in structures (51%) occurred in residential properties, a 5% increase from 1998. The dollar loss in those properties totalled $6 million, or 39% of all incendiary dollar losses in structures. While the percent of public assembly incendiary fires remained the same at 4%, the dollar loss in those properties more than doubled.

Incendiary Fire Dollar Loss By Structure Type



Incendiary Structure Fires by Time of Day	
0001-0400	*147*
0401-0800	*104*
0801-1200	*71*
1201-1600	*105*
1601-2000	*106*
2001-2400	*136*
Time - Blank	*3*
Total	***672***

INCENDIARY TREND IN STRUCTURE AND VEHICLE FIRES, 1985-1999



**Two major cities began reporting in 1989. This had a significant impact on the number of arson structure fires reported.*

In 1999, incendiary was listed as the cause of 15% of all reported structure fires with known causes and 5% of all reported vehicle fires in Minnesota. Vehicle incendiary dollar loss represented 9% of total vehicle fire dollar loss, with an average dollar loss per incendiary vehicle fire of $5,790. Fire investigators agree that incendiary vehicle fires are under-reported and may not receive the attention that structure fires do.

RESIDENTIAL STRUCTURE INCENDIARY FIRES

	1998		1999		
Property Type	**Incidents**	**Dollar Loss**	**Incidents**	**Dollar Loss**	**% of Total Dollar Loss**
One-Two Family Dwelling	241	$4.9M	221	$5.4M	90%
Apartment/Tenement/Flat	101	$1.1M	98	$.550M	9%
Other Residential Occupancy	8	$.065M	4	$.037M	1%
Hotel/Motel/Inn/Lodge	7	$.025M	6	$.014M	<1%
Rooming/Boarding/Lodging/Housing	1	$.025M	4	$.006M	<1%
Dormitories	6	<$.001M	12	$.006M	<1%
TOTAL	**364**	**$7.4M**	**345**	**$6.0M**	**100%**

When we look at overall fires, we find residential structures are at greatest risk. These same structures are also at greatest risk from incendiary fires. The 345 residential incendiary incidents reported in 1999 accounted for 10% of all reported residential fires and 9% of the dollar loss for this property type.

INCENDIARY FIRE INCIDENTS AND DOLLAR LOSS BY COUNTY*

In some instances, the protection district of the reporting fire department goes beyond its county boundary, but the incident will still be recorded within the department's home county. Per capita data is calculated at a standard rate of incendiary fires per 100,000 people.

County	Incendiary Incidents	Incend. Fires/ 100,000 Pop.	Incendiary Dollar Loss
Aitkin	2	0	$1,000
Anoka	210	86	$811,036
Becker	21	75	$34,500
Beltrami	33	96	$97,326
Benton	8	27	$0
Big Stone	0	0	$0
Blue Earth	34	63	$29,190
Brown	7	26	$29,502
Carlton	15	51	$187,150
Carver	23	48	$11,350
Cass	35	161	$81,900
Chippewa	1	8	$0
Chisago	16	52	$28,550
Clay	19	38	$69,600
Clearwater	4	48	$12,000
Cook	0	0	$0
Cottonwood	6	47	$19,300
Crow Wing	25	56	$117,204
Dakota	174	63	$425,470
Dodge	2	13	$20,000
Douglas	4	14	$0
Faribault	4	24	$100
Fillmore	0	0	$0
Freeborn	13	39	$285,500
Goodhue	27	66	$28,801
Grant	0	0	$0
Hennepin	417	40	$5,478,251
Houston	4	22	$3,000
Hubbard	3	20	$31,500
Isanti	2	8	$0
Itasca	11	27	$451,000
Jackson	5	43	$37,005
Kanabec	3	23	$143,500
Kandiyohi	9	23	$30,004
Kittson	0	0	$0
Koochiching	0	0	$0
Lac qui Parle	1	11	$1,000
Lake	0	0	$0
Lake of the Woods	0	0	$0
Lesueur	6	26	$127,000
Lincoln	1	15	$4,000
Lyon	3	12	$70,000
McLeod	2	6	$45,000
Mahnomen	4	79	$120,000
Marshall	7	64	$15,100
Martin	8	35	$1,500
Meeker	6	29	$20,000
Mille Lacs	14	75	$31,000
Morrison	6	20	$500
Mower	10	27	$123,370
Murray	1	10	$1,000
Nicollet	9	32	$13,500
Nobles	2	10	$0
Norman	4	50	$0
Olmsted	50	47	$500,060
Ottertail	12	24	$38,700
Pennington	6	45	$66,050
Pine	14	66	$6,600
Pipestone	2	19	$2,000
Polk	29	89	$48,008
Pope	2	19	$0
Ramsey	413	85	$3,694,068
Red Lake	0	0	$0
Redwood	1	6	$50,000
Renville	6	34	$500
Rice	32	65	$101,920
Rock	0	0	$0
Roseau	1	7	$0
St Louis	253	128	$1,896,712
Scott	49	85	$434,225
Sherburne	15	36	$0
Sibley	1	7	$4,000
Stearns	81	68	$92,071
Steele	19	62	$59,362
Stevens	3	28	$75,200
Swift	3	28	$33,500
Todd	9	39	$7,780
Traverse	2	45	$0
Wabasha	6	30	$171,000
Wadena	2	15	$0
Waseca	1	6	$0
Washington	104	71	$602,225
Watonwan	3	26	$250
Wilkin	0	0	$0
Winona	14	29	$3,830
Wright	34	49	$218,629
Yellow Medicine	1	9	$200
TOTAL	**2,389**	**55**	**$17,143,599**

* Based on data received from 674 departments. See pages 41-48 for MFIRS participation by county.

SUMMARY

For the second year, incendiary was reported as the leading cause in all structure fires. The dollar loss in public assembly incendiary fires more than doubled from the previous year and represents nearly 1/4 of the total incendiary fire structure dollar loss.

Fifty-one percent of all incendiary structure fires were in residential property. These fires accounted for 39% of dollar loss from incendiary causes.

Forty percent (40%) of all structure fires in educational facilities were determined to be deliberately set. This continues to be the leading cause of fire in educational property.

In the past eleven years, incendiary fires caused 33 deaths and over $209 million in property loss. Arson prevention must continue to be a priority; incendiary fires kill, maim, and destroy at an alarming rate. It is a crime against every Minnesotan.

CASUALTIES

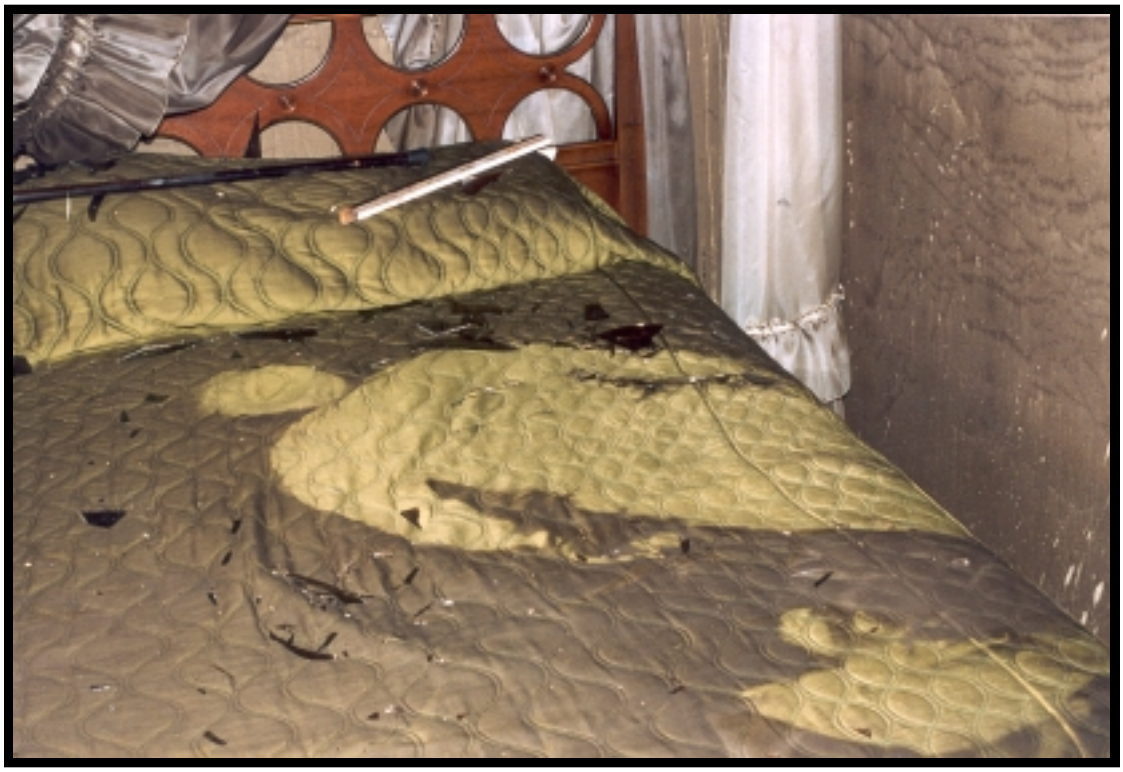


Photo by Denise DeMars

It All Boils Down To ... Common Sense!

For as long as "Fire In Minnesota" has been published, the importance of smoke detectors has been emphasized. This need received public affirmation in 1993, when legislation requiring installation of smoke detectors in all buildings with sleeping areas became law in Minnesota.

Fire departments and other civic agencies have devoted a great deal of time and resources to ensuring that detectors are available to at-risk populations. Smoke detector maintenance has become a major component in public fire safety education - in schools, at safety camps, at events such as "Governor's Fire Safety Day at the Fair." Repeated efforts have been made to teach families how to exit their homes safely should there be a fire. The results of years of broad-based safety education have been encouraging. During the 1990's Minnesota experienced a 25% drop in fire deaths. **The average number of fire deaths in homes with working smoke detectors decreased by nearly 50% during the '90's.**

In 1989, 18 people with working smoke detectors died in Minnesota. In the following nine years (1990-1998) an average of 9 people died despite working smoke alarms. In 1998, the tenth anniversary of "Fire in Minnesota," we achieved a ten year low of 6 deaths in homes with working alarms. It seemed the combination of a more widespread use of detectors, and a better-trained population was bearing fruit. Lest we become over-confident, however, 1999 brought us 17 fire deaths in dwellings with working detectors - the highest number since 1989.

When we seek explanation of these deaths, we see very clearly where our fire safety education efforts need to be focused: on the very old, and the very young. And our avenue of appeal needs to be "common sense."

Our independent, elderly citizens need to be convinced (or given financial assistance) to:

- place phones in multiple locations in their homes; become familiar with their use, if different from what they are accustomed to using.
- widen doorways and walkways to accommodate wheelchairs and walkers.
- have smoke detectors properly placed, and request help with their maintenance
- establish a safety network of family and friends to check on them regularly.

The dollars spent on these things, and the acceptance of a little outside assistance, can help keep seniors living independently, but safely, in their own homes.

Finally: We have been hammering away at the smoke detector message for years, with considerable success. Now we need to remind people that <u>they</u>, not the smoke detector, the fire department, the neighbor, are responsible for their own safety from fire. The smoke detector might work perfectly, but a life might still be lost because of poor fire-safety behaviors. Smoke detectors, sprinkler protection, and fire suppression improvements have played a wonderful part in lowering the fire death rate in Minnesota. Let's not let lives fall through the cracks because of a lack of common-sense fire-safety precautions and behaviors!

Fire Deaths and Smoke Detector Performance*

In 22% of fatalities in residential occupancies, smoke detectors were improperly maintained or absent altogether.

In 1999, 60 civilians lost their lives in fires. Deaths in residential settings were up in 1999 and they represented 80% of Minnesota's fire fatalities. In 22% of the casualties in dwellings, smoke detectors (required in every dwelling since 1993) were either absent or non-operating. In another 26% of the dwelling cases, it was not possible to determine whether a smoke detector was present or operating.

FIRE DEATHS IN RESIDENTIAL DWELLINGS

	Fatalities	% of Dwell. Fires	% of Total Deaths
No Smoke Detectors Present	5	10%	8%
Inoperable Smoke Detectors Present	6	12%	10%
Working Smoke Detectors Present	17	34%	28%
Unk. if Detectors Present/Working	13	26%	22%
Not a Factor/Suicides, Explosions, etc.	9	18%	15%
Total Deaths in Dwellings	**50**	**100%**	**83%**
Other Fire Deaths (Including vehicles, outdoors, other structures, etc.)	10	--	17%
Total Fire Deaths	**60**	**--**	**100%**

In previous years, as we have tabulated the number of fatalities in dwellings with working smoke detectors, we have tried to categorize the reasons for their failure to escape the fire. This year, the variety of situations makes it difficult to assign reasons for the 17 deaths.

In one multiple-death fire, six people died. One adult in that fire showed a BAL over the legal limit, but why did none of the other five escape? In two instances, the residents tried to extinguish the fire, rather than exiting immediately. Four elderly victims had mobility and/or breathing problems; three of these were dependent on walkers or other aids. Two deaths were caused by child fire-play. Three people showed BAL over the legal limit, and may be considered impaired by alcohol. Two more had BAL under the legal definition of impairment. One fire was incendiary, but it is unknown what impeded the victim's escape. One child lost hold of an adult's hand and became confused in the smoke.

Since August 1, 1993, smoke detectors have been required in every dwelling in Minnesota that has a sleeping area.

Six of the seventeen fatalities (35%) were elderly; seven more (41%) were age 19 yrs and under. Two of the young people were teen-agers; five were 10 yrs. or younger. We can see that the reasons may be varied, but it is clear that these victims are clustered at either end of the age spectrum. By reason of infirmity or immaturity, these two age groups are least able to respond appropriately to a fire emergency. Our mission, then, must be to promote fire-safe behaviors and fire-safe environments in these most vulnerable Minnesota populations.

*All charts and information on this page has been taken from the State Fire Marshal Division's 1999 fire death database, which is based on fire death investigations done by this office and MFIRS data.

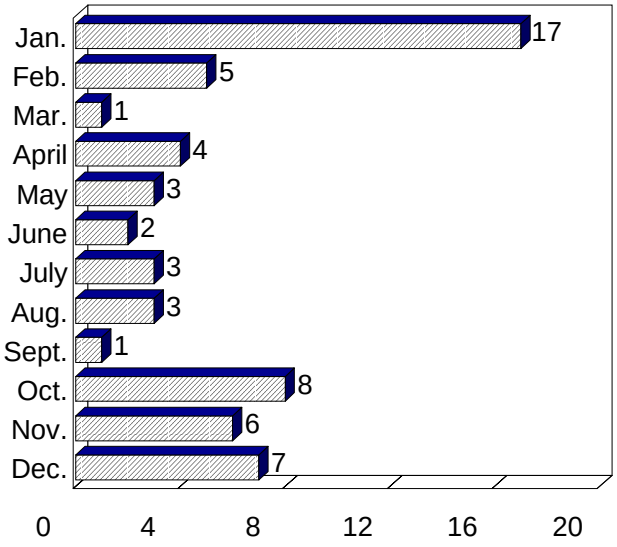
CIVILIAN FIRE DEATHS: WHO AND WHEN

Seventy percent of fire deaths occurred between the hours of midnight and noon. January was the deadliest month and included one multiple death fire on the first day of 1999.

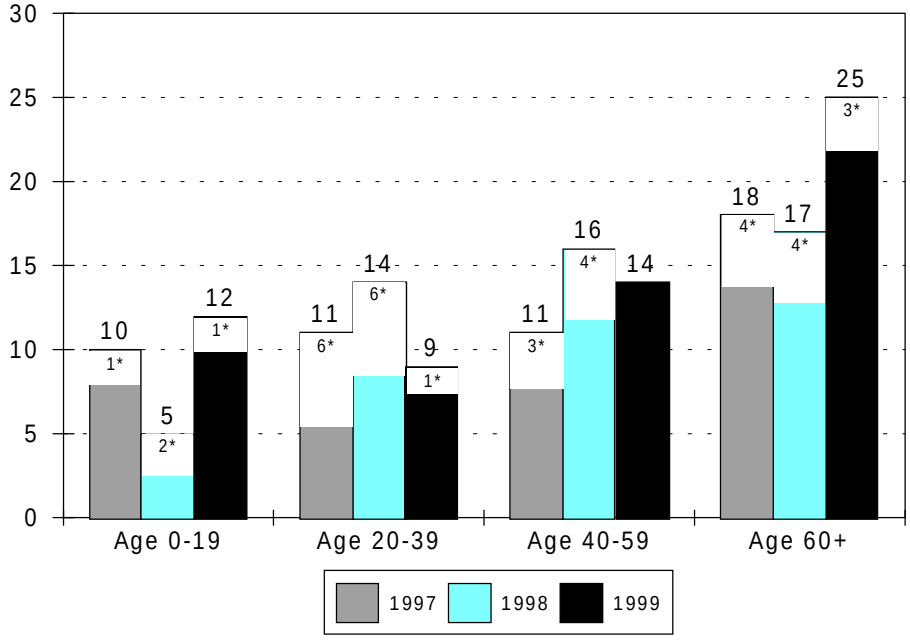
FIRE DEATHS BY TIME OF DAY

	TOTAL	0000-0600	0600-1200	1200-1800	1800-2400
Careless Smoking	15	4	6	0	5
Furnace/Stove Malf.	8	0	7	0	1
Electrical Malf.	6	2	2	2	0
Arson	5	2	2	0	1
Natural Gas/LP Explos.	5	1	4	0	0
Vehicle	3	2	1	0	0
Cooking	2	1	0	0	1
Child Play	2	0	1	1	0
Other	9	0	5	4	0
Undetermined	5	1	1	3	0
Total	**60**	**13**	**29**	**10**	**8**

FIRE DEATHS BY MONTH



FIRE DEATHS BY AGE



Fire death victims over 60 years old account for 42% of fire deaths in 1999.

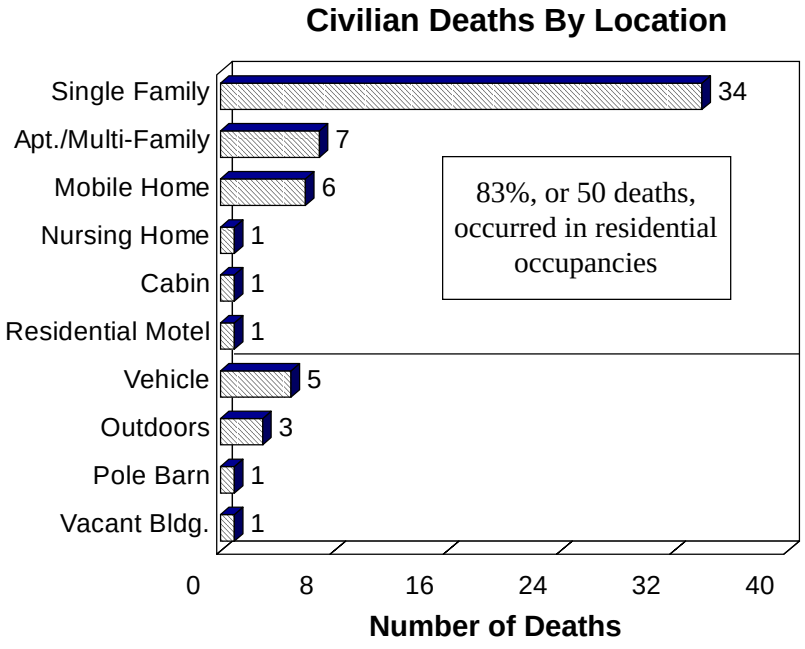
*Fire deaths listed as suicides or motor vehicle fire incidents.

Considerable increases in the fire deaths at each end of the age scale were reported in 1999. The age group 0-19 years had a 140% increase and in the age group 60+, a 47% increase. According to the Minnesota Department of Planning population estimates, the age group 60+ represents 16% of Minnesota's population. That same group, however, represented 42% of the fire deaths in 1999.

The middle group, age 20-39, had a 36% decrease in the number of fire deaths.

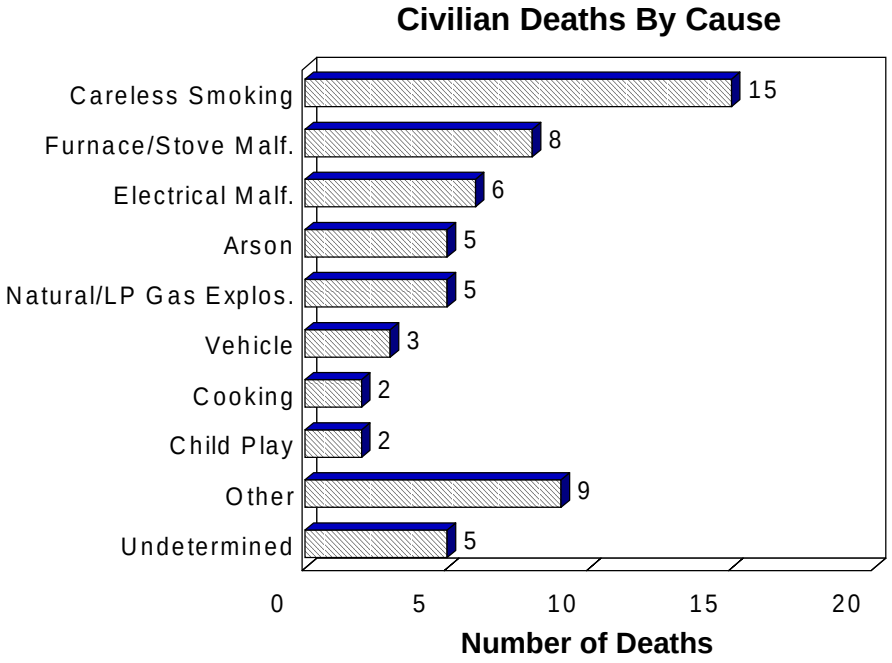
CIVILIAN FIRE DEATHS: WHERE AND WHY

83% of fire deaths occurred in residential property.



Careless smoking was identified as the cause of 25% of all fire deaths. Forty-seven percent (47%) of those careless smoking deaths were also alcohol or drug-related.

Eighty-three percent of the 1999 fire deaths occurred where people generally feel safest - at home. Careless smoking was the major cause of fire in these deaths.



*Two vehicle causes are listed in other categories -- one is in other (suicide) category and the second is in the arson category.

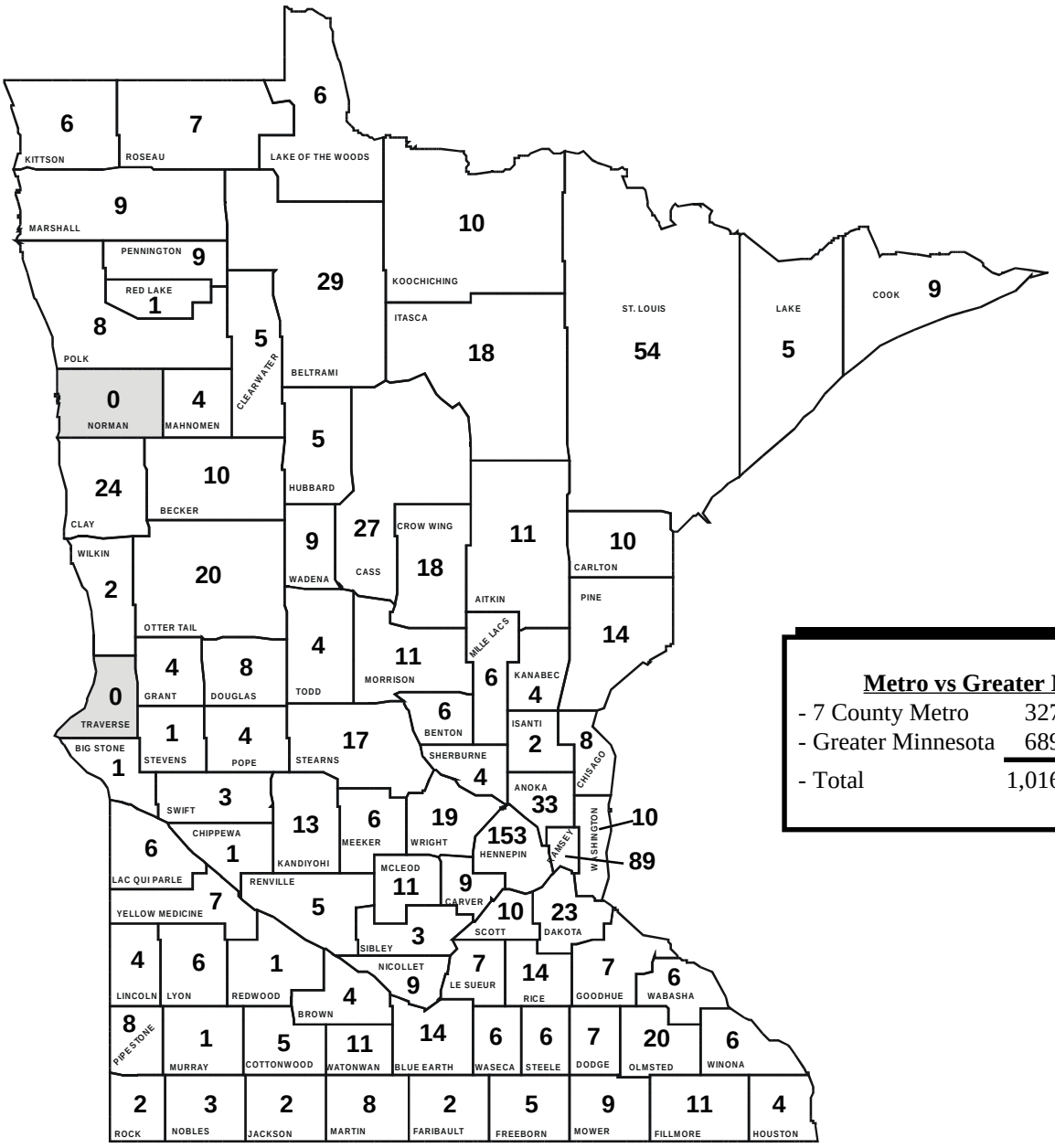
Alcohol/Drugs was clearly a factor in 27% of all fire deaths.

As was the case in all years since 1988, except 1998, careless smoking was the leading cause of fires where civilian deaths occurred. Careless smoking was identified as the cause of 25% percent of all fire deaths. Alcohol or other drug use was present or identified as an impairing factor in 27% of all fire deaths (16 deaths) and 47% in fire deaths attributed to careless smoking.

Civilian Death Rates

Fire deaths in greater Minnesota outpace those in the seven county metro area by a rate of two to one.

In the past 16 years, 1,016 Minnesota civilians have died in fires (see distribution by county below). During that time, fire deaths in greater Minnesota have outpaced those in the seven county metro area by a rate of two to one. In 1999, greater Minnesota represented 48% of the state's population and experienced a per capita death rate of 1.9 for every 100,000 people. The per capita rate for the metro area in 1999 was 0.9 per 100,000, while the rate for the state as a whole was 1.4 per 100,000. (The United States consistently has among the highest per capita death rates in the world.) Two counties in the state have remained fatality free for 16 years; they are Norman and Traverse.



Metro vs Greater MN

- 7 County Metro	327	32%
- Greater Minnesota	689	68%
- Total	1,016	100%

30 YEARS OF FIRE DEATH HISTORY

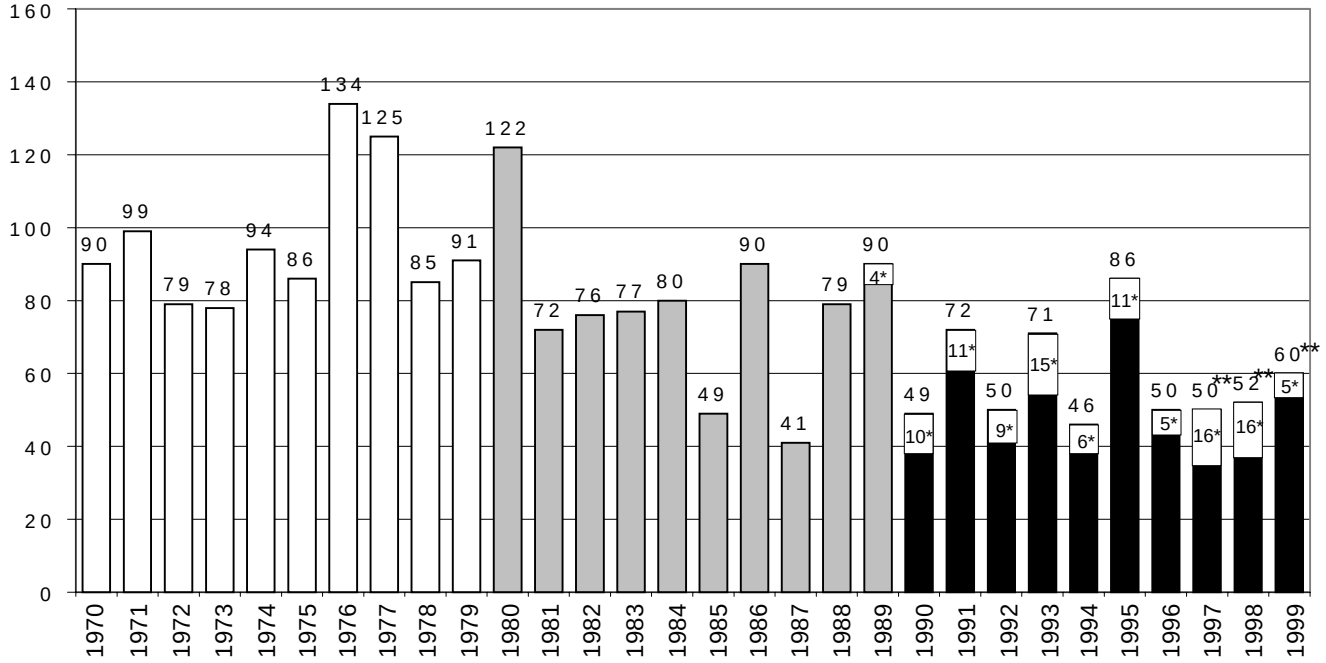
As the population of Minnesota has continued to grow, from 3.8 million in 1970 to 4.4 million in 1990, fire deaths have decreased. During the decade of the eighties, fire deaths in Minnesota dropped 19% from the levels of the 1970s. The nineties show a decrease of 25% in the number of fire deaths from the eighties. This steady decrease is encouraging.

Minnesota's Fire Deaths

1970's	*961 deaths*
1980's	*776 deaths*
1990's	*585 deaths*

What factors might be affecting this decline in the rate of deaths? Since the mid-seventies, the promotion of fire protection technology (smoke detectors, sprinkler systems, etc.) has become more widespread in Minnesota. During this time, the state has mandated new inspection programs targeting hotels, motels and schools. Fire safety awareness and public education efforts have also increased.

FIRE DEATHS 1970 - 1999



*Number of vehicle/suicide fires.
**Does not include firefighter deaths.

FIREFIGHTER DEATHS

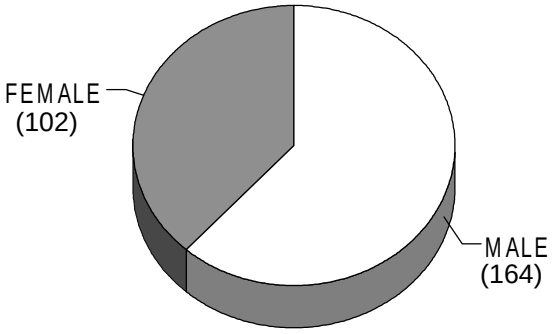
We regret to report one on-duty death of a firefighter in 1999. Marvin Huisman died from a heart attack while fighting a grass fire. He was a member of the Wilmont Fire Department. The entire fire community mourns his loss and grieves with his family.

As a fire service serving a wider community, we must be increasingly committed to guarding the health and safety practices of our members, just as we would for members of the military service who risk their lives for us.

CIVILIAN INJURIES

In 1999, 266 civilians were injured in Minnesota fires. Injuries to males were 62%, compared with 38% to females.

In 1999, 266 civilian injuries were reported through the MFIRS system, an 8% decrease from 1998. The numbers do not represent the actual number of fire injuries occurring in the state, as it includes only those victims who have direct contact with the fire department. Many burn victims are taken to emergency rooms by private car or ambulance.



AGE OF VICTIM	NO. OF VICTIMS
0-19	60
20-39	89
40-59	49
60-OVER	23
UNREPORTED	45
TOTAL	**266**

A breakdown of reported injuries by gender shows 60% more injuries to males than females. Persons age 20-39 were most frequently reported as injured.

ACTIVITY AT TIME OF FIRE

People trying to control a fire accounted for 28% of all injuries, indicating a need to educate people on how to react to a fire. The age group between 20-39 yrs. has the largest number of reported injuries, perhaps because they are the most mobile and active age group, and are more likely to try to contain the fire themselves before calling the fire department.

Twenty-eight percent of all injuries were to people trying to control or extinguish a fire. Citizens between 20-39 yrs. of age were the most frequently injured age group.

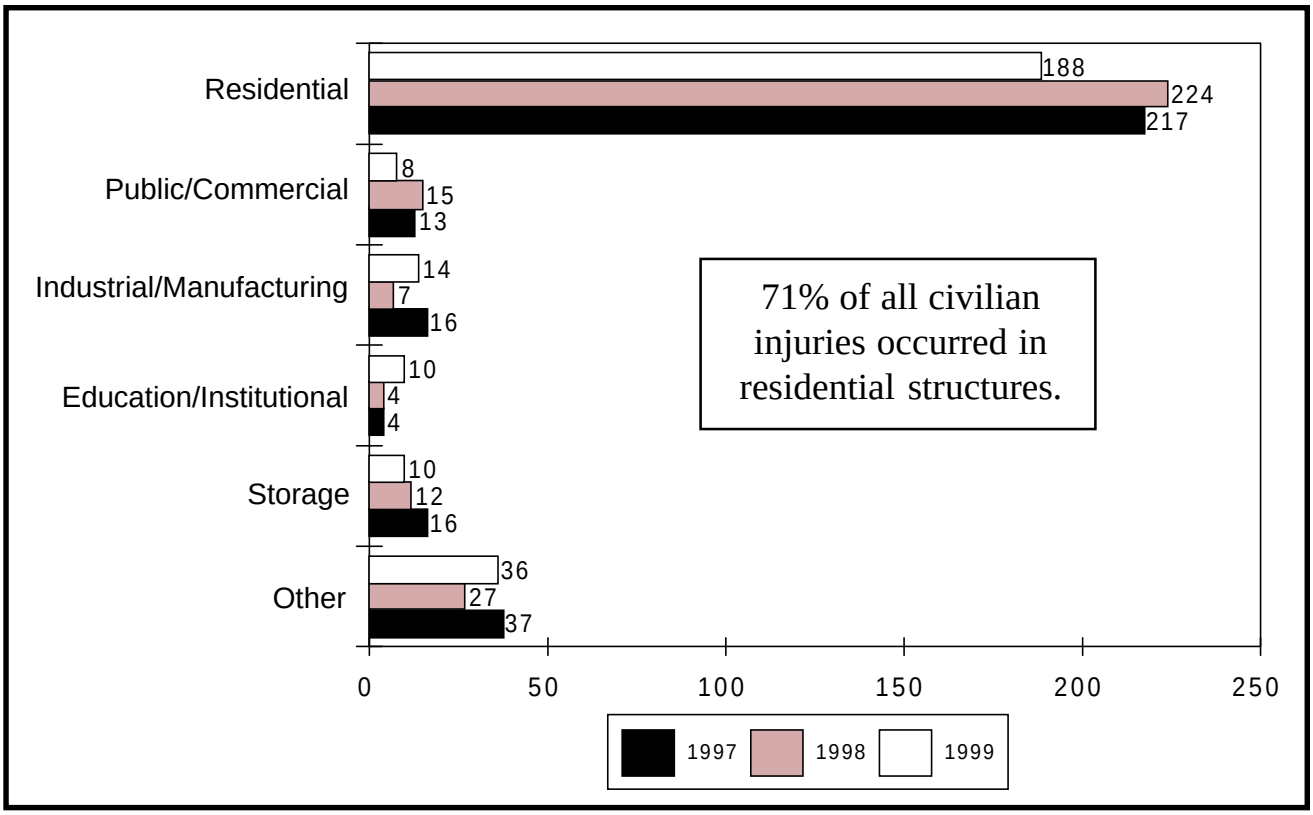
ACTIVITIES FOR ALL INJURIES

Activity	#	%
Fire Control	74	28%
Escape	26	10%
Sleeping	25	9%
Irrational act	16	6%
Rescue attempt	15	6%
Unable to act	7	3%
Other	46	17%
Unkn/Unrep	57	21%
	266	100%

ACTIVITIES FOR 20-39 YEAR OLDS

Activity	#	%
Fire Control	28	31%
Sleeping	7	8%
Escape	7	8%
Rescue attempt	5	6%
Irrational act	3	3%
Unable to act	2	2%
Other	16	18%
Unkn/Unrep	21	24%
	89	100%

CIVILIAN INJURIES BY PROPERTY TYPE



As with fire fatalities, more civilian fire injuries occur in residential structures than any other property.

CIVILIAN INJURIES BY ACTIVITY AND STRUCTURE

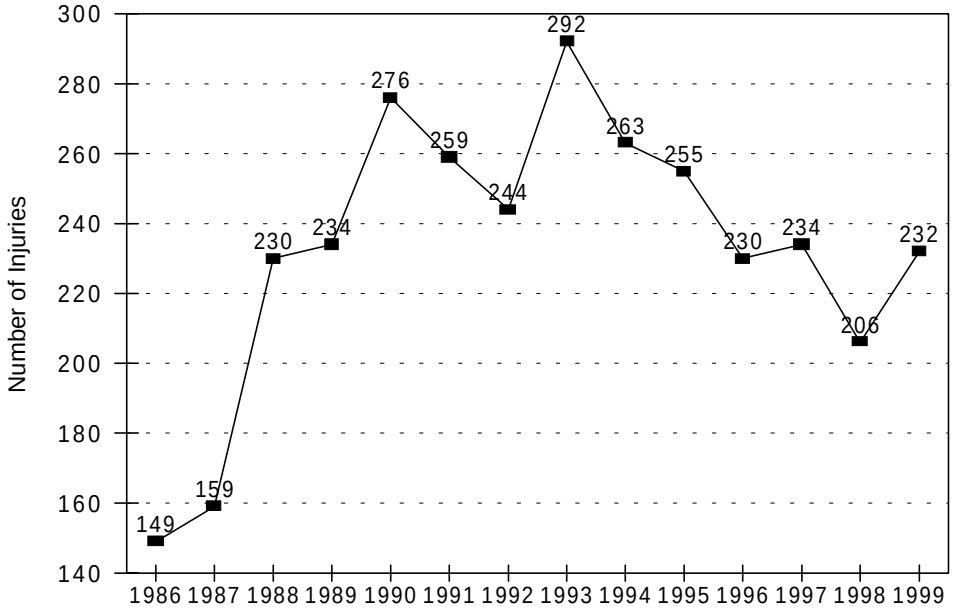
	Residential	Pub/Comm	Indus/Manu	Educ/Inst	Storage	Other
Fire Control	58	--	5	1	4	6
Escaping	19	--	3	2	--	2
Sleeping	22	--	--	--	--	3
Other	23	4	5	--	3	11
Rescue Attempt	10	1	--	--	--	4
Unable to Act	4	--	--	1	1	1
Irrational Action	12	--	--	1	--	3
Unknown	40	3	1	5	2	6
TOTAL	**188**	**8**	**14**	**10**	**10**	**36**

FIREFIGHTER INJURIES

In 1999, 232 Minnesota firefighters were injured while responding to, involved in, or returning from emergency situations, representing an increase of 13% from last year. Of these 232 injuries, 187, or 81%, were directly fire related. (This does not include injuries that occur during training or at the stations.) Sixty-three percent (63%) of these fire-related injuries occurred while firefighters were fighting residential structure fires.

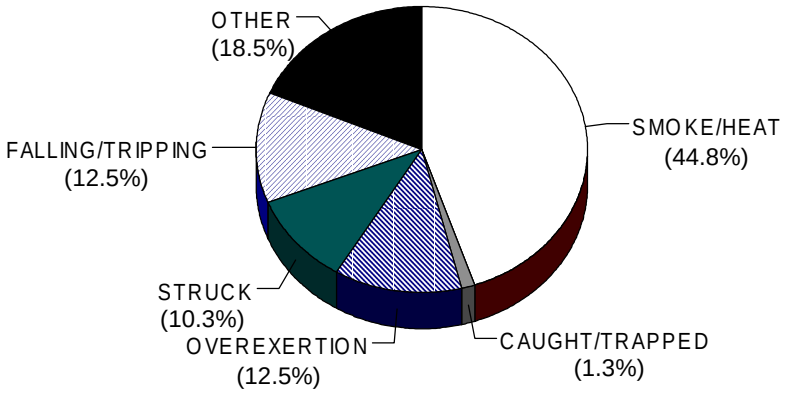
Of the 232 firefighter injuries, 187 (81%) occurred in the course of fighting fires.

THIRTEEN-YEAR HISTORY OF MINNESOTA FIREFIGHTER INJURIES



A breakdown of injuries shows that smoke/heat and other related injuries are the most frequent causes of firefighter injuries.

MINNESOTA FIREFIGHTER INJURIES: CAUSES



Exposure to smoke and heat accounted for 44.8% of the injuries. Falling or tripping also caused 12.5% of Minnesota firefighter injuries. The percentage for the smoke and heat category is much higher than the national average (27.8%), but the falling and tripping category is below the national (16.5%).

SUMMARY

Clearly, Minnesotans are most at risk from fire death and injury at home. Eighty-three percent (83%) of the state's fire deaths and 71% of civilian injuries in 1999 occurred in residential occupancies.

The presence or absence of working smoke detectors in dwellings is a critical factor in fire fatalities. In 22% of the 50 fire fatalities occurring in dwellings, no smoke detectors were present, or they were present but not working; in 26% it was not known whether detectors were present or functioning.

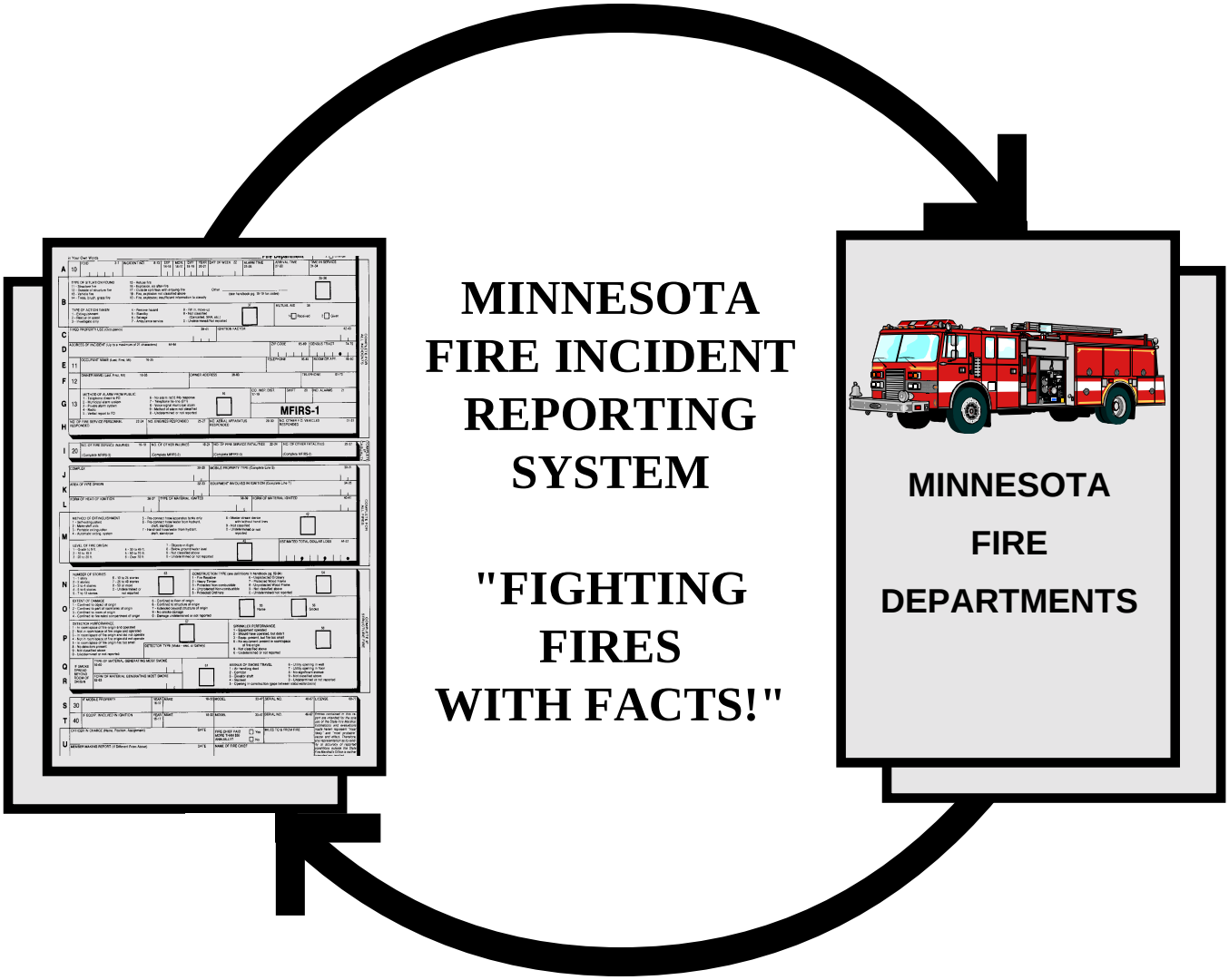
Twenty-five Minnesotans aged 60 yrs. and above lost their lives in fires in 1999 (42% of all fire deaths), indicating once again the vulnerability of the elderly population.

Careless smoking was the leading cause of fire deaths, as it had been since 1988, except for last year, when vehicle fires had the most fatalities. Alcohol or other drug use was an impairing factor in 25% of all fire deaths; these fires resulted in fifteen fatalities.

Over 80% of all fire-related civilian injuries occurred in residential dwellings. Twenty-eight percent (28%) of all civilian fire injuries occurred during attempts to control the fire. **Sixty-three percent of fire-related firefighter injuries occurred in the course of battling residential fires.** These numbers accentuate the need for fire safety education in the home and consistent, ongoing training and updated equipment for the fire service.

Since 1984, fire deaths in greater Minnesota have outpaced those in the metro area at a rate of two to one. Statewide, fire deaths have decreased over the past twenty years, even as Minnesota's population has grown. Total fire deaths during the eighties reflected a 19% drop from the seventies. The decade of the nineties has seen a 25% decrease in fire deaths from the previous 10 years. However, many preventable tragedies continue to occur. **Prevention efforts, particularly those targeting children, the elderly, and other at-risk groups are essential to reducing the needless, tragic losses from fire.**

PARTICIPATION



PARTICIPATION - Minnesota Fire Incident Reporting System

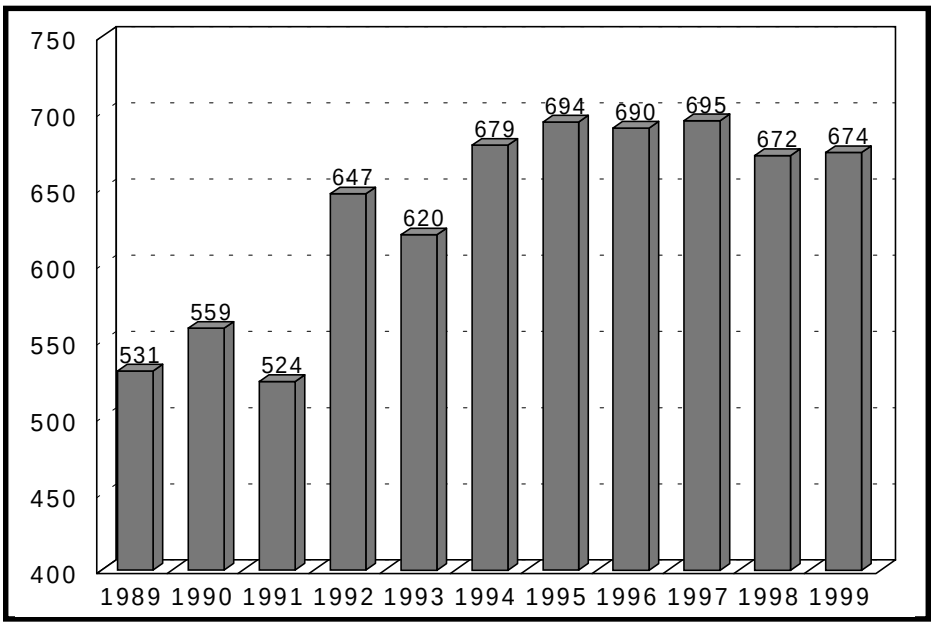
Fire information is requested on a weekly basis by the media, the public, the fire service and the fire protection community.

The Minnesota State Fire Marshal Division appreciates the efforts of the fire departments who submitted MFIRS reports in 1999. MFIRS input tells us where you have been, and what you have done. This information is essential if we are to understand and effectively combat the fire problem in Minnesota. It allows the Division to focus on real fire problems, rather than popular perceptions. On the local level, this data gives us the knowledge to intelligently focus prevention efforts; it documents our needs when we make budget requests for staffing or equipment.

Fire information is requested on a weekly basis by the media, the public, the fire service and the fire protection community. It is used to support legislative initiatives and to guide public fire safety campaigns.

The reporting history of Minnesota fire departments from 1995 - 1999 is listed on the following pages. Departments are listed by county, with the total percent of those reporting in 1999 indicated. In 23 counties, 100% of the fire departments reported to the MFIRS system.

FIRE DEPARTMENTS' MFIRS PARTICIPATION



Fire Departments will begin using the new NFIRS 5.0 reporting standard in the year 2000.

The Division is concerned with MFIRS participation and is making an effort to increase it. We have made available free to departments a special state version of Firehouse Software®. This new software will enable departments to move to the new NFIRS 5.0 reporting standard and to easily do their reporting in a paperless procedure. If you would like more information about how to get the new software, call Ernie Scheidness or Nora Gierok at 651-215-0500.

AITKIN COUNTY
83% Reporting

95	96	97	98	99	
*	*	*	*	*	AITKIN
*	*	*	*	*	HILL CITY
*	*	*		*	MCGREGOR VOL
*	*	*	*	*	MCGRATH
*	*	*	*	*	PALISADE VOL
*	*	*	*		Jacobson

ANOKA COUNTY
87% Reporting

*	*	*	*	*	ANDOVER
*	*	*	*	*	ANOKA-CHAMPLIN
*	*	*	*	*	BETHEL
*	*	*	*	*	CENTENNIAL
*	*	*	*	*	COLUMBIA HEIGHTS
*	*	*	*	*	COON RAPIDS
*	*	*	*	*	FRIDLEY
*	*	*	*	*	HAM LAKE
*	*	*	*	*	LEXINGTON
*	*	*	*	*	LINWOOD VOL
*	*	*	*	*	RAMSEY
*	*	*	*	*	SPRING LAKE PARK
*	*	*	*	*	ST FRANCIS
*	*	*	*		East Bethel
		*	*		Oak Grove

BECKER COUNTY
89% Reporting

*	*	*	*	*	AUDUBON
*	*	*	*	*	CALLAWAY
*	*	*	*	*	CARSONVILLE VOL
*	*	*	*	*	DETROIT LAKES
*	*	*		*	FRAZEE
*	*	*	*	*	LAKE PARK
		*		*	OGEMA
*	*	*	*	*	WOLF LAKE
					White Earth Vol

BELTRAMI COUNTY
50% Reporting

95	96	97	98	99	
*	*	*	*	*	BEMIDJI
*	*	*		*	BLACKDUCK
*	*	*	*	*	KELLIHER VOL
*	*	*	*		Alaska
*	*	*			Red Lake
	*				Solway

BENTON COUNTY
67% Reporting

*	*	*	*	*	FOLEY
*	*	*	*	*	SAUK RAPIDS
					Rice

BIG STONE COUNTY
83% Reporting

			*	*	BEARDSLEY
*	*	*	*	*	CLINTON
			*	*	CORRELL
*	*	*	*	*	GRACEVILLE
*	*	*	*	*	ORTONVILLE
*	*		*		Odessa

BLUE EARTH COUNTY
83% Reporting

*	*	*	*	*	AMBOY
*	*	*	*	*	EAGLE LAKE VOL
*	*	*	*	*	GOOD THUNDER
*	*	*	*	*	LAKE CRYSTAL
*	*	*	*	*	MADISON LAKE
*	*	*	*	*	MANKATO
*	*	*	*	*	PEMBERTON
*	*	*	*	*	SOUTH BEND
*	*	*	*	*	ST CLAIR
*		*		*	VERNON CENTER
*	*	*	*		Mapleton
	*	*	*		Skyline

BROWN COUNTY
80% Reporting

95	96	97	98	99	
*	*	*	*	*	COMFREY
*	*	*	*	*	NEW ULM
*	*	*	*	*	SLEEPY EYE
		*	*	*	SPRINGFIELD VOL
					Hanska

CARLTON COUNTY
93% Reporting

*	*	*	*	*	BARNUM VOL
*	*	*	*	*	BLACKHOOF
*	*	*	*	*	CARLTON VOL
*	*	*	*	*	CLOQUET
*	*	*	*	*	CROMWELL VOL
*	*		*	*	HOLYOKE VOL
*	*	*	*	*	KETTLE RIVER
*	*	*	*	*	MAHTOWA
*		*	*	*	MOOSE LAKE
*	*	*	*	*	PERCH LAKE VOL
*	*	*	*	*	THOMSON TWP
*	*	*	*	*	WRENSHALL
*		*	*	*	WRIGHT VOL
*	*	*			Scanlon Vol

CARVER COUNTY
(12) - 100% Reporting

*	*	*	*	*	CARVER
*	*	*	*	*	CHANHASSEN
*	*	*	*	*	CHASKA
*	*	*	*	*	COLOGNE
*	*	*	*	*	HAMBURG
*	*	*	*	*	MAYER
*	*	*	*	*	NEW GERMANY
*	*	*	*	*	NORWOOD
*	*	*	*	*	VICTORIA
*	*	*	*	*	WACONIA
*	*	*	*	*	WATERTOWN
*	*	*	*	*	YOUNG AMERICA

KEY

* Fire Departments submitting MFIRS each year.

CASS COUNTY
91% Reporting

95	96	97	98	99	
*	*	*	*	*	BACKUS VOL
			*	*	BENA
*	*	*	*	*	CASS LAKE
	*	*	*	*	CROOKED LAKE VOL
*	*	*	*	*	HACKENSACK AREA
*	*	*	*	*	LONGVILLE VOL
*	*	*	*	*	PILLAGER AREA
*	*	*	*	*	PINE RIVER
*	*	*	*	*	REMER
*	*	*		*	WALKER
*	*	*	*		Federal Dam

CHIPPEWA COUNTY
80% Reporting

*	*	*	*	*	CLARA CITY
*	*	*	*	*	MAYNARD
*	*	*	*	*	MONTEVIDEO
*	*	*	*	*	WATSON
*	*		*		Milan

CHISAGO COUNTY
(11) - 100% Reporting

*		*	*	*	ALMELUND
*	*	*	*	*	CENTER CITY
*	*	*	*	*	CHISAGO CITY
*	*	*	*	*	HARRIS
*	*	*	*	*	LINDSTROM
*	*	*	*	*	NORTH BRANCH
*	*	*	*	*	RUSH CITY
*		*	*	*	SHAFER
*	*	*	*	*	STACY
*		*	*	*	TAYLORS FALLS
*	*	*	*	*	WYOMING

CLAY COUNTY
67% Reporting

*	*	*	*	*	BARNESVILLE
	*	*	*	*	DILWORTH
*	*	*		*	GLYNDON VOL
*	*	*	*	*	HITTERDAL
*	*	*	*	*	MOORHEAD
*	*	*	*	*	SABIN-ELMWOOD
*	*	*	*	*	ULEN
	*				Felton Comm
*	*				Hawley

CLEARWATER COUNTY
86% Reporting

95	96	97	98	99	
*	*	*	*	*	BAGLEY
	*		*	*	BEAR CREEK
*	*	*	*	*	CLEARBROOK
		*		*	GONVICK
			*	*	ITASCA TWP
*		*	*	*	SHEVLIN
			*		Hangaard Twp

COOK COUNTY
44% Reporting

				*	COVILL AREA
*	*	*	*	*	GUNFLINT TRAIL
	*	*		*	LUTSEN TWP VOL
		*	*	*	SCHROEDER
					Grand Marais Vol
					Grand Portage
*	*	*	*		Hovland
		*			Maple Hill
*	*	*	*		Tofte

COTTONWOOD COUNTY
(5) - 100% Reporting

	*	*	*	*	JEFFERS
*	*	*	*	*	MOUNTAIN LAKE
	*	*	*	*	STORDEN
*	*	*	*	*	WESTBROOK
*	*	*	*	*	WINDOM

CROW WING COUNTY
93% Reporting

*	*	*	*	*	BRAINERD
*	*	*	*	*	CROSBY VOL
*	*	*	*	*	CROSSLAKE
*	*	*	*	*	CUYUNA
*	*	*	*	*	DEERWOOD
*	*	*	*	*	EMILY VOL
*	*	*	*	*	GARRISON
*	*	*	*	*	IDEAL TWP
*	*	*	*	*	IRONTON
*	*	*	*	*	MISSION TWP
*	*			*	NISSWA
*	*	*	*	*	PEQUOT LAKES
*	*		*	*	RIVERTON
	*	*			Fifty Lakes

DAKOTA COUNTY
(14) - 100% Reporting

95	96	97	98	99	
*	*	*	*	*	APPLE VALLEY
*	*	*	*	*	BURNSVILLE
*	*	*	*	*	EAGAN
*	*	*	*	*	FARMINGTON
*	*	*	*	*	HAMPTON
*	*	*	*	*	HASTINGS
*	*	*	*	*	INVER GROVE HTS
*	*	*	*	*	LAKEVILLE
*	*	*	*	*	MENDOTA HEIGHTS
*	*	*	*	*	MIESVILLE VOL
*	*	*	*	*	RANDOLPH
*	*	*	*	*	ROSEMOUNT
*	*	*	*	*	SOUTH ST PAUL
*	*	*	*	*	WEST ST PAUL

DODGE COUNTY
(6) - 100% Reporting

*	*	*	*	*	CLAREMONT
*	*	*	*	*	DODGE CENTER
*	*	*	*	*	HAYFIELD
*	*	*	*	*	KASSON
*	*	*	*	*	MANTORVILLE
*	*	*	*	*	WEST CONCORD

DOUGLAS COUNTY
91% Reporting

*	*	*	*	*	ALEXANDRIA
*	*	*	*	*	BRANDON
*	*	*	*	*	CARLOS
*	*	*	*	*	EVANSVILLE
*	*	*	*	*	FORADA TWP
*	*	*	*	*	KENSINGTON
*	*	*	*	*	LEAF VALLEY TWP
*	*	*	*	*	MILLERVILLE
*	*	*	*	*	MILTONA
*	*	*	*	*	OSAKIS
*	*				Garfield

FARIBAULT COUNTY
91% Reporting

95	96	97	98	99	
*	*	*	*	*	BLUE EARTH
*	*	*	*	*	BRICELYN
*	*	*	*	*	DELAVAN VOL
*	*	*	*	*	EASTON VOL
*	*	*	*	*	ELMORE
*	*	*	*	*	KIESTER
	*	*	*	*	MINNESOTA LAKE
*	*	*	*	*	WALTERS VOL
*	*	*	*	*	WELLS
*	*	*	*	*	WINNEBAGO VOL
*	*	*	*		Frost

FILLMORE COUNTY
82% Reporting

*	*	*	*	*	CHATFIELD
*	*	*	*	*	FOUNTAIN
*	*	*	*	*	HARMONY
*	*	*	*	*	LANESBORO
*	*	*	*	*	MABEL VOL
*	*	*	*	*	OSTRANDER
*	*	*	*	*	RUSHFORD
*	*	*	*	*	SPRING VALLEY
*	*	*	*	*	WYKOFF
		*			Canton
*	*	*			Preston

FREEBORN COUNTY
50% Reporting

*	*	*	*	*	ALBERT LEA
*	*	*	*	*	ALBERT LEA TWP
*	*	*	*	*	ALDEN
*	*	*	*	*	EMMONS
*	*	*	*	*	FREEBORN
*	*	*	*	*	HARTLAND
*	*	*	*	*	MANCHESTER
*	*	*	*	*	MYRTLE
					Clarks Grove Vol
					Conger
*					Geneva
		*	*		Glenville
		*			Hayward
*					Hollandale
*	*	*	*		London
	*		*		Twin Lakes

GOODHUE COUNTY
63% Reporting

95	96	97	98	99	
*	*	*	*	*	CANNON FALLS
*	*	*	*	*	GOODHUE
*	*	*	*	*	PINE ISLAND
*	*	*	*	*	RED WING
	*	*		*	ZUMBROTA
*	*	*			Dennison
					Kenyon
					Wanamingo

GRANT COUNTY
75% Reporting

*	*	*	*	*	ELBOW LAKE
*	*	*	*	*	HERMAN VOL
*	*	*	*	*	HOFFMAN
*	*	*	*	*	WENDELL
*	*	*	*		Ashby
*	*	*			Barrett

HENNEPIN COUNTY
(31) - 100% Reporting

*	*	*	*	*	BLOOMINGTON
*	*	*	*	*	BROOKLYN CENTER
*	*	*	*	*	BROOKLYN PARK
*	*	*	*	*	CRYSTAL
*	*	*	*	*	DAYTON
*	*	*	*	*	EDEN PRAIRIE
*	*	*	*	*	EDINA
*	*	*	*	*	EXCELSIOR
*	*	*	*	*	GOLDEN VALLEY
*	*	*	*	*	HAMEL
*	*	*		*	HANOVER
*	*	*	*	*	HOPKINS
*	*	*	*	*	LONG LAKE
*	*	*	*	*	LORETTO VOL
*	*	*	*	*	MAPLE GROVE
*	*	*	*	*	MAPLE PLAIN
*	*	*	*	*	MEDICINE LAKE
*	*	*	*	*	MINNEAPOLIS
*	*	*	*	*	MINNETONKA
*	*	*	*	*	MOUND
*	*	*	*	*	MPLS/ST PAUL INT'L AIRPORT
*	*	*	*	*	NEW HOPE
*	*	*	*	*	OSSEO
*	*	*	*	*	PLYMOUTH
*	*	*	*	*	RICHFIELD
*	*	*	*	*	ROBBINSDALE
*	*	*	*	*	ROGERS
*	*	*	*	*	ST ANTHONY

95	96	97	98	99	
*	*	*	*	*	ST BONIFACIUS
*	*	*	*	*	ST LOUIS PARK
*	*	*	*	*	WAYZATA

HOUSTON COUNTY
86% Reporting

*	*	*	*	*	BROWNSVILLE
*	*	*	*	*	CALEDONIA
	*	*	*	*	HOKAH VOL
*	*	*	*	*	HOUSTON
*	*	*	*	*	LACRESCENT
*	*	*	*	*	SPRING GROVE
					Eitzen

HUBBARD COUNTY
40% Reporting

*	*		*	*	LAPORTE/LAKEPORT
*	*	*	*	*	PARK RAPIDS
*	*	*	*		East Hubbard Co
*	*	*	*		Lake George
					Nevis

ISANTI COUNTY
75% Reporting

*	*	*	*	*	CAMBRIDGE
*	*	*	*	*	DALBO
*	*	*		*	ISANTI VOL
*	*	*			Braham

ITASCA COUNTY
94% Reporting

*	*	*	*	*	BALSAM VOL
*	*		*	*	BEARVILLE TWP
*	*	*	*	*	BOVEY
*	*	*	*	*	CALUMET
*	*	*	*	*	COHASSET
*	*	*	*	*	COLERAINE
*	*	*	*	*	DEER RIVER
*	*	*	*	*	GOODLAND
*	*	*	*	*	GRAND RAPIDS
*	*		*	*	KEEWATIN VOL
*	*	*	*	*	MARBLE
*	*	*	*	*	NASHWAUK
		*	*	*	SQUAW LAKE
*	*	*	*	*	TACONITE
*	*	*	*	*	WARBA
	*				Bigfork Vol

JACKSON COUNTY
80% Reporting

95	96	97	98	99	
*	*	*	*	*	ALPHA
*	*	*	*	*	HERON LAKE VOL
*	*	*	*	*	JACKSON
*	*	*	*	*	LAKEFIELD
					Okabena

KANABEC COUNTY
(3) - 100% Reporting

*	*	*	*	*	GRASSTON
*	*	*	*	*	MORA
*	*	*	*	*	OGILVIE

KANDIYOHI COUNTY
91% Reporting

*	*	*	*	*	ATWATER
*	*	*	*	*	BLOMKEST
*	*			*	KANDIYOHI
*	*	*	*	*	NEW LONDON
				*	PENNOCK
*	*	*	*	*	PRINSBURG
*	*			*	RAYMOND
*	*	*	*	*	SPICER
*	*	*	*	*	SUNBURG
*	*	*	*	*	WILLMAR
*	*				Lake Lillian

KITTSON COUNTY
(5) - 100% Reporting

*	*	*	*	*	HALLOCK
*	*	*	*	*	KARLSTAD VOL
*	*			*	KENNEDY
*	*	*	*	*	LAKE BRONSON
*	*	*	*	*	LANCASTER

KOOCHICHING COUNTY
83% Reporting

*	*	*	*	*	BIG FALLS VOL
	*	*	*	*	BIRCHDALE RURAL
*	*	*	*	*	INTERNATIONAL FLS
*	*	*	*	*	LITTLEFORK
*	*	*	*	*	LOMAN RURAL
	*				Northome

LAC QUI PARLE COUNTY
71% Reporting

95	96	97	98	99	
*	*	*	*	*	BELLINGHAM
				*	BOYD
*	*	*	*	*	DAWSON
*	*	*	*	*	MADISON
*		*	*	*	NASSAU
	*				Louisburg
					Marietta

LAKE COUNTY
(4) - 100% Reporting

*	*	*	*	*	BEAVER BAY VOL
*	*	*	*	*	FINLAND
*	*	*	*	*	SILVER BAY
*	*	*	*	*	TWO HARBORS

LAKE OF THE WOODS COUNTY
(2) - 100% Reporting

*	*	*	*	*	BAUDETTE
*	*	*	*	*	WILLIAMS

LE SUEUR COUNTY
75% Reporting

*	*	*	*	*	CLEVELAND
*	*	*	*	*	ELYSIAN
*	*	*	*	*	KASOTA
*	*	*	*	*	LE CENTER
*	*	*	*	*	LESUEUR
*	*	*	*	*	MONTGOMERY
*	*	*	*		Kilkenny
*	*	*	*		Waterville

LINCOLN COUNTY
80% Reporting

*		*	*	*	ARCO
*	*	*	*	*	IVANHOE
*	*	*	*	*	LAKE BENTON
*	*	*	*	*	TYLER
					Hendricks

LYON COUNTY
90% Reporting

95	96	97	98	99	
*	*	*	*	*	BALATON
*	*	*	*	*	GARVIN
*	*	*	*	*	GHENT
*	*	*		*	LYND
*	*	*	*	*	MARSHALL
*	*	*	*	*	MINNEOTA
	*			*	RUSSELL
	*	*	*	*	TAUNTON
*	*	*	*	*	TRACY
					Cottonwood

MC LEOD COUNTY
75% Reporting

*	*	*	*	*	BROWNTON VOL
*	*	*	*	*	LESTER PRAIRIE
*	*	*	*	*	PLATO
*	*	*	*	*	SILVER LAKE
*	*	*	*	*	STEWART
*	*	*	*	*	WINSTED
*	*	*	*		Glencoe
					Hutchinson

MAHNOMEN COUNTY
75% Reporting

*	*	*	*	*	ELBOW-TULABY LKS
*	*	*	*	*	MAHNOMEN
*	*			*	TWIN LAKES VOL
					Waubun

MARSHALL COUNTY
75% Reporting

*	*	*	*	*	ALVARADO VOL
*	*	*	*	*	ARGYLE
*	*	*	*	*	NEWFOLDEN
*	*		*	*	OSLO
*	*	*	*	*	STEPHEN
*	*	*	*	*	WARREN
*					Grygla
	*				Middle River

MARTIN COUNTY
78% Reporting

95	96	97	98	99	
*		*	*	*	CEYLON
*	*	*	*	*	DUNNELL
*	*	*	*	*	FAIRMONT
*	*		*	*	GRANADA
*	*		*	*	NORTHROP
*		*	*	*	TRIMONT
*	*	*	*	*	TRUMAN
*	*	*	*		Sherburn
		*			Welcome

MEEKER COUNTY
(6) - 100% Reporting

	*	*	*	*	COSMOS
*	*	*	*	*	DASSEL
*	*	*	*	*	EDEN VALLEY
*	*	*	*	*	GROVE CITY
*	*	*	*	*	LITCHFIELD
*	*	*	*	*	WATKINS

MILLE LACS COUNTY
80% Reporting

*	*	*	*	*	FORESTON
*	*	*	*	*	MILACA
*	*	*	*	*	ONAMIA
*	*	*	*	*	PRINCETON
*	*	*			Isle

MORRISON COUNTY
90% Reporting

*	*	*	*	*	BOWLUS
		*	*	*	FLENSBURG
*	*	*	*	*	LITTLE FALLS
*	*	*	*	*	MOTLEY
*	*	*	*	*	PIERZ
*	*	*	*	*	RANDALL
	*	*	*	*	ROYALTON
*	*	*	*	*	SCANDIA VALLEY
	*	*	*	*	SWANVILLE
			*		Upsala

MOWER COUNTY
56% Reporting

95	96	97	98	99	
*	*	*	*	*	ADAMS VOL
*	*	*	*	*	AUSTIN
*	*	*	*	*	BROWNSDALE
				*	LE ROY
*	*	*	*	*	ROSE CREEK AREA
		*	*		Dexter Vol
*	*		*		Grand Meadow
		*	*		Lyle
					Mapleview

MURRAY COUNTY
75% Reporting

*	*	*	*	*	CHANDLER
*	*	*	*	*	CURRIE VOL
*	*	*	*	*	DOVRAY
*	*	*	*	*	FULDA
*	*	*	*	*	LAKE WILSON
*	*	*	*	*	SLAYTON
			*		Avoca
*	*	*	*		Iona

NICOLLET COUNTY
(5) - 100% Reporting

*	*	*	*	*	COURTLAND
*	*	*	*	*	LAFAYETTE
*	*	*	*	*	NICOLLET
*	*	*	*	*	NORTH MANKATO
*	*	*	*	*	ST PETER

NOBLES COUNTY
80% Reporting

*	*	*	*	*	ADRIAN
*		*	*	*	BIGELOW
*	*	*	*	*	BREWSTER
*	*	*	*	*	ELLSWORTH
*		*	*	*	LISMORE
*	*	*	*	*	RUSHMORE
*		*	*	*	WILMONT
*	*	*	*	*	WORTHINGTON
*	*	*			Dundee
*	*				Round Lake

NORMAN COUNTY
(8) - 100% Reporting

95	96	97	98	99	
*	*	*	*	*	ADA
	*	*	*	*	BORUP
*	*	*	*	*	GARY VOL
*	*	*	*	*	HALSTAD
		*		*	HENDRUM
	*	*		*	PERLEY-LEE TWP
	*	*	*	*	SHELLY
*	*	*	*	*	TWIN VALLEY

OLMSTED COUNTY
88% Reporting

*	*	*	*	*	BYRON
*	*	*	*	*	DOVER
*	*	*	*	*	EYOTA VOL
*	*	*	*	*	ORONOCO
*	*	*	*	*	ROCHESTER
*	*	*	*	*	ROCHESTER RURAL
*	*	*	*	*	STEWARTVILLE
*	*	*			Rochester Airport

OTTERTAIL COUNTY
88% Reporting

*	*	*	*	*	CLITHERALL
*	*	*	*	*	DALTON
*	*	*	*	*	DEER CREEK
*				*	DENT
*	*	*	*	*	ELIZABETH
*	*	*	*	*	FERGUS FALLS
*	*	*	*	*	HENNING VOL
*	*	*	*	*	NEW YORK MILLS
*	*	*	*	*	OTTERTAIL
*	*		*	*	PARKERS PRAIRIE
*		*		*	PELICAN RAPIDS VOL
*	*		*	*	PERHAM
*	*	*	*	*	UNDERWOOD
*	*	*		*	VERGAS
		*	*	*	VINING
					Battle Lake
*	*				Bluffton

PENNINGTON COUNTY
(3) - 100% Reporting

*	*	*	*	*	GOODRIDGE AREA
*	*	*	*	*	ST HILAIRE
*	*	*	*	*	THIEF RIVER FALLS

PINE COUNTY
90% Reporting

95	96	97	98	99	
*		*	*	*	ASKOV VOL
*	*	*	*	*	BROOK PARK
*	*	*	*	*	BRUNO
*	*	*	*	*	FINLAYSON
*	*	*	*	*	HINCKLEY VOL
				*	PINE CITY
*	*	*	*	*	SANDSTONE VOL
*	*	*	*	*	STURGEON LAKE
*	*	*	*	*	WILLOW RIVER
					Kerrick

PIPESTONE COUNTY
(6) - 100% Reporting

*	*	*	*	*	EDGERTON
*	*	*		*	HOLLAND
*	*	*	*	*	JASPER
*	*	*	*	*	PIPESTONE
*	*	*	*	*	RUTHTON
*	*	*	*	*	WOODSTOCK

POLK COUNTY
83% Reporting

*	*	*	*	*	BELTRAMI
*	*	*	*	*	CROOKSTON
*	*	*	*	*	EAST GRAND FORKS
*	*	*	*	*	ERSKINE
*	*	*		*	FERTILE
*	*	*	*	*	FISHER
*	*	*		*	FOSSTON
*	*	*	*	*	MENTOR
*		*		*	NIELSVILLE
			*	*	WINGER
		*			Climax
*	*	*	*		McIntosh

POPE COUNTY
83% Reporting

*	*	*	*	*	GLENWOOD
*	*	*	*	*	LOWRY
*		*	*	*	SEDAN
*	*	*	*	*	STARBUCK
*	*	*	*	*	VILLARD VOL
					Cyrus

RAMSEY COUNTY
(11) - 100% Reporting

95	96	97	98	99	
*	*	*	*	*	FALCON HEIGHTS
*	*	*	*	*	FIRE MARSHAL CENTRAL OFFICE
*	*	*	*	*	LAKE JOHANNA
*	*	*	*	*	LITTLE CANADA
		*	*	*	MAPLEWOOD
*	*	*	*	*	NEW BRIGHTON
*	*	*	*	*	NORTH ST PAUL
*	*	*	*	*	ROSEVILLE
*	*	*	*	*	ST PAUL
*	*	*	*	*	VADNAIS HEIGHTS
*	*	*	*	*	WHITE BEAR LAKE

RED LAKE COUNTY
0% Reporting

*	*	Oklee
		Plummer
		Red Lake Falls

REDWOOD COUNTY
93% Reporting

*	*	*	*	*	BELVIEW
*	*	*	*	*	CLEMENTS
*		*	*	*	LAMBERTON
*	*	*	*	*	MILROY
*	*	*	*	*	MORGAN
*	*	*	*	*	REDWOOD FALLS
*	*	*	*	*	REVERE
*	*	*	*	*	SANBORN
	*	*	*	*	SEAFORTH
*	*	*	*	*	VESTA
*	*	*	*	*	WABASSO VOL
*	*	*	*	*	WALNUT GROVE
*	*	*	*	*	WANDA
*	*	*	*		Lucan

RENVILLE COUNTY
90% Reporting

*	*	*	*	*	BIRD ISLAND
*	*	*	*	*	BUFFALO LAKE
*	*	*	*	*	FAIRFAX
*		*	*	*	FRANKLIN
*	*	*	*	*	HECTOR
*	*	*	*	*	MORTON
*	*	*	*	*	OLIVIA
*	*	*	*	*	RENVILLE
	*	*	*	*	SACRED HEART
					Danube

RICE COUNTY
(5) - 100% Reporting

95	96	97	98	99	
*	*	*	*	*	FARIBAULT
*	*	*	*	*	LONSDALE
*	*	*	*	*	MORRISTOWN
*	*	*	*	*	NERSTRAND VOL
*	*	*	*	*	NORTHFIELD

ROCK COUNTY
67% Reporting

*				*	HARDWICK
*	*	*	*	*	HILLS
*	*	*	*	*	LUVERNE
*	*			*	MAGNOLIA
*	*	*	*		Beaver Creek
	*		*		Kenneth Vol

ROSEAU COUNTY
50% Reporting

*	*	*	*	*	GREENBUSH
*	*	*		*	WARROAD
*	*	*	*		Badger
*	*	*	*		Roseau

ST LOUIS COUNTY
92% Reporting

*	*	*	*	*	ALBORN
*	*	*	*	*	ARROWHEAD
*	*	*	*	*	AURORA
*	*	*	*	*	BABBITT VOL
*	*	*	*	*	BIWABIK VOL
*	*	*		*	BIWABIK TWP VOL
*	*	*	*	*	BREITUNG
*	*	*	*	*	BREVATOR
*		*	*	*	BRIMSON AREA VOL
*	*	*	*	*	BUHL VOL
		*	*	*	BUYCK COMM VOL
	*	*	*	*	CANOSIA VOL
*		*	*	*	CENTRAL LKS VOL
*	*	*	*	*	CHERRY TWP
*	*	*	*	*	CHISHOLM
*	*	*	*	*	CLIFTON TWP
*	*	*	*	*	CLINTON VOL
*	*	*	*	*	COLVIN TWP
*	*	*	*	*	COOK
*	*	*	*	*	COTTON VOL
*		*		*	CRANE LAKE
*	*	*	*	*	CULVER

95	96	97	98	99	
*		*	*	*	DULUTH
*	*	*	*	*	EAGLES NEST
*	*	*	*	*	ELLSBURG
*	*	*	*	*	ELMER
*	*	*	*	*	ELY
*	*	*	*	*	EMBARRASS VOL
*	*	*	*	*	EVELETH
*	*	*	*	*	FAYAL
*	*	*	*	*	FLOODWOOD
*	*	*	*	*	FREDENBERG
*	*	*	*	*	FRENCH VOL
	*			*	GILBERT
*	*	*	*	*	GNESEN VOL
*	*	*	*	*	GRAND LAKE VOL
*	*	*	*	*	GREENWOOD TWP
*	*	*	*	*	HERMANTOWN VOL
*	*	*	*	*	HIBBING
*	*	*	*	*	HOYT LAKES
	*	*	*	*	INDUSTRIAL VOL
*	*	*	*	*	KABETOGAMA
*		*	*	*	KELSEY VOL
*	*	*	*	*	KINNEY-GRT SCOTT
*	*		*	*	LAKELAND VOL
*	*	*	*	*	LAKEWOOD TWP
*	*	*	*	*	MAKINEN
*	*	*	*	*	MC DAVITT
*	*	*	*	*	MC KINLEY VOL
*	*	*	*	*	MEADOWLNDS AREA
	*	*	*	*	MORSE VOL
*	*	*	*	*	MOUNTAIN IRON
	*	*	*	*	NORMANNA VOL
*	*	*	*	*	NORTH STAR TWP
*	*	*	*	*	NORTHLAND
*	*	*	*	*	ORR VOL
*	*	*	*	*	PALO TWP
*		*	*	*	PEQUAYWAN LAKE
*	*	*	*	*	PIKE-SANDY BRITT
*	*	*	*	*	PROCTOR
*	*	*	*	*	SILICA AREA
*	*	*	*	*	SOLWAY RURAL
*	*	*		*	TOIVOLA TWP
*	*	*	*	*	TOWER
*	*	*	*	*	VERMILLION LAKE
*	*	*	*	*	VIRGINIA
					Bois Forte
					Evergreen
		*			Greaney-Rauch-Silverdale
					Nett Lake
*	*	*	*		Rice Lake Vol.
*		*			Sturgeon Twp

SCOTT COUNTY

(7) - 100% Reporting

95	96	97	98	99	
*	*	*	*	*	BELLE PLAINE
*	*	*	*	*	JORDAN
*	*	*	*	*	NEW MARKET
*	*	*	*	*	NEW PRAGUE
*	*	*	*	*	PRIOR LAKE
*	*	*	*	*	SAVAGE
*	*	*	*	*	SHAKOPEE

SHERBURNE COUNTY

(5) - 100% Reporting

*	*	*	*	*	BECKER VOL
*	*	*	*	*	BIG LAKE
*	*	*	*	*	CLEAR LAKE
*	*	*	*	*	ELK RIVER
*	*	*	*	*	ZIMMERMAN

SIBLEY COUNTY

86% Reporting

		*	*	*	ARLINGTON
*	*	*	*	*	GAYLORD
*	*	*	*	*	GIBBON
*	*	*	*	*	HENDERSON
*	*	*		*	NEW AUBURN
*	*	*	*	*	WINTHROP VOL
*	*	*	*		Green Isle

STEARNS COUNTY

(23) - 100% Reporting

*	*	*	*	*	ALBANY
*	*	*	*	*	AVON
*	*	*	*	*	BELGRADE
*	*	*	*	*	BROOTEN
*	*	*	*	*	COLD SPRING
*	*	*	*	*	ELROSA
*	*	*	*	*	FREEPORT
*	*	*	*	*	HOLDINGFORD
*	*	*	*	*	KIMBALL
*	*	*		*	LAKE HENRY
*	*	*	*	*	MELROSE
*	*	*	*	*	NEW MUNICH
*	*	*	*	*	PAYNESVILLE
*	*	*	*	*	RICHMOND
*	*	*	*	*	ROCKVILLE
*	*	*	*	*	SARTELL-LESAUK
*	*	*	*	*	SAUK CENTRE
*	*	*	*	*	ST CLOUD
*	*	*	*	*	ST JOHN'S UNIV
*	*	*	*	*	ST JOSEPH VOL
*	*	*	*	*	ST MARTIN
*	*	*	*	*	ST STEPHEN
*	*	*	*	*	WAITE PARK

STEELE COUNTY

75% Reporting

*	*	*	*	*	BLOOMING PRAIRIE
*	*	*	*	*	MEDFORD VOL
*	*	*	*	*	OWATONNA
*					Ellendale Vol

STEVENS COUNTY

(4) - 100% Reporting

*	*	*	*	*	CHOKIO
*	*	*	*	*	DONNELLY
*	*	*	*	*	HANCOCK
*	*	*	*	*	MORRIS

SWIFT COUNTY

75% Reporting

*	*	*	*	*	APPLETON
*	*	*	*	*	BENSON
*	*	*		*	CLONTARF
*	*	*	*	*	DANVERS
*	*	*	*	*	HOLLOWAY
*	*	*	*	*	KERKHOVEN
			*		Degraff
					Murdock

TODD COUNTY

88% Reporting

*	*	*	*	*	BERTHA
*	*	*	*	*	BROWERVILLE
*	*	*	*	*	CLARISSA
*	*	*	*	*	GREY EAGLE
*	*	*	*	*	HEWITT
*	*	*	*	*	LONG PRAIRIE
*	*	*	*	*	STAPLES
*					Eagle Bend

TRAVERSE COUNTY

50% Reporting

*	*	*		*	DUMONT
*	*	*	*	*	WHEATON
					Browns Valley
					Tintah

WABASHA COUNTY
86% Reporting

95	96	97	98	99	
*	*	*	*	*	ELGIN
*	*	*	*	*	KELLOGG
*	*	*	*	*	LAKE CITY
*	*	*	*	*	PLAINVIEW
*	*	*	*	*	WABASHA
*	*	*	*	*	ZUMBRO FALLS
*	*	*	*		Mazeppa Vol

WADENA COUNTY
50% Reporting

*	*	*	*	*	VERNDALE
*	*	*	*	*	WADENA
					Menagha
					Sebeka

WASECA COUNTY
(4) - 100% Reporting

*	*	*	*	*	JANESVILLE
*	*		*	*	NEW RICHLAND
		*	*	*	WALDORF
*	*	*	*	*	WASECA

WASHINGTON COUNTY
(14) - 100% Reporting

*		*	*	*	BAYPORT
*	*	*	*	*	COTTAGE GROVE
*	*	*		*	FOREST LAKE
*	*	*	*	*	HUGO
*	*	*	*	*	LAKE ELMO
*	*	*	*	*	LWR ST CROIX VLY
*	*	*	*	*	MAHTOMEDI
*	*	*	*	*	MARINE ON ST CROIX
*	*	*	*	*	NEW SCANDIA
*	*	*	*	*	NEWPORT
*	*	*	*	*	OAKDALE
*	*	*	*	*	ST PAUL PARK VOL
*	*	*	*	*	STILLWATER
*	*	*	*	*	WOODBURY

WATONWAN COUNTY
63% Reporting

95	96	97	98	99	
*	*	*	*	*	DARFUR
				*	LASALLE
*	*	*	*	*	MADELIA
*	*	*	*	*	ODIN
		*	*	*	ST JAMES
					Butterfield
*	*	*	*		Lewisville
	*				Ormsby

WILKIN COUNTY
67% Reporting

*	*			*	BRECKENRIDGE
*	*		*	*	CAMPBELL
*	*	*	*	*	ROTHSAY
*	*	*	*	*	WOLVERTON
		*	*		Foxhome
	*		*		Kent-Abercrombie

WINONA COUNTY
77% Reporting

*	*	*	*	*	GOODVIEW
*	*	*	*	*	LEWISTON
*	*	*	*	*	MINNESOTA CITY
*	*	*	*	*	NODINE VOL
	*	*	*	*	PICKWICK AREA
*	*		*	*	RIDGEWAY COMM
*	*	*	*	*	ROLLINGSTONE
*	*	*	*	*	ST CHARLES
*	*	*	*	*	WILSON VOL
*	*	*	*	*	WINONA
*	*	*			Altura
*	*	*	*		Dakota
*					Hidden Valley

WRIGHT COUNTY
93% Reporting

95	96	97	98	99	
*				*	ALBERTVILLE
	*	*	*	*	BUFFALO
*	*	*	*	*	CLEARWATER
*	*	*	*	*	COKATO
*	*	*	*	*	DELANO VOL
*	*	*	*	*	HOWARD LAKE
*	*	*	*	*	MAPLE LAKE
	*	*	*	*	MONTICELLO
*	*	*	*	*	MONTROSE
*	*	*	*	*	ROCKFORD
*	*	*	*	*	SOUTH HAVEN
			*	*	ST MICHAEL
*	*	*	*	*	WAVERLY
*	*	*	*		Annandale

YELLOW MEDICINE COUNTY
75% Reporting

*	*	*	*	*	CANBY
*		*	*	*	CLARKFIELD
*	*	*		*	ECHO
*	*	*	*	*	HANLEY FALLS
*	*	*	*	*	PORTER
		*	*	*	ST LEO
	*	*	*		Granite Falls
*	*				Woodlake

Forty-nine fire departments began participating in 1999.

We welcome new and returning departments reporting in 1999:

Albertville
Biwabik Twp. Vol.
Blackduck
Boyd
Breckenridge
Clontarf
Covill Area
Crane Lake
Dent
Dumont
Echo
Fertile
Forest Lake
Fosston
Frazee
Gilbert
Glyndon Vol.
Gonvick
Hanover
Hardwick
Hendrum
Holland
Isanti Vol.
Kandiyohi
Kennedy
Lake Henry
LaSalle
Le Roy
Lutsen Twp. Vol.
Lynd
Magnolia
McGregor
New Auburn
Nielsville
Nisswa
Ogema
Pelican Rapids Vol.
Pennock
Perley-Lee Twp.
Pine City
Raymond
Russell
Toivola Twp.
Twin Lakes Vol.
Vergas
Vernon Center
Walker
Warroad
Zumbrota

We lost the following departments in 1999 and encourage them to report next year.

Alaska
Annandale
Ashby
Avoca
Badger
Beaver Creek
Dakota
Degraff
Dexter Vol.
East Bethel
East Hubbard Co.
Federal Dam
Foxhome
Frost
Glencoe
Glenville
Grand Meadow
Granite Falls
Green Isle
Hangaard Twp.
Hovland
Iona
Jacobson
Kenneth Vol.
Kent-Abercrombie
Kilkenny
Lake George
Lewisville
London
Lucan
Lyle
Mapleton
Mazeppa Vol.
McIntosh
Milan
Oak Grove
Odessa
Rice Lake Vol.
Roseau
Sherburn
Skyline
Tofte
Twin Lakes
Upsala
Waterville

FIRE DEPARTMENT RUNS, DOLLAR LOSSES, AND FIRE DEATHS PER COUNTY IN ORDER OF TOTAL DOLLAR LOSS

In some instances, the protection district of the reporting fire department goes beyond its county boundary, but the incident will still be recorded within the department's home county. (*Fire rate = one fire for number of persons indicated. For example, in Hennepin County in 1999 there was one fire for every 288 people.)*

County	Population	Total Fire Runs	Total Other Runs	Total Co. Dollar Loss	Fire Rate	Average Dollar Loss/Fire	Fire Deaths
*Hennepin	1,032,431	3,660	44,688	$28,067,542	288	$7,838	10
*Ramsey	485,765	2,023	16,321	$12,946,337	243	$6,470	8
St. Louis	198,213	1,126	10,984	$7,766,742	199	$7,790	3
*Stearns	118,791	637	2,165	$6,180,027	203	$10,564	
Polk	32,498	191	1,331	$5,610,080	183	$31,517	1
Anoka	243,641	1,122	12,036	$5,413,298	241	$5,354	1
*Dakota	275,227	1,067	7,991	$5,054,480	266	$4,879	2
*Washington	145,896	590	7,384	$3,820,035	294	$7,702	
*Scott	57,846	329	1,228	$3,346,302	197	$11,421	
Olmsted	106,470	397	4,950	$3,028,956	274	$7,807	1
*Chisago	30,521	257	413	$2,915,623	143	$13,624	1
Wright	68,710	284	1,257	$2,755,992	258	$10,361	1
Morrison	29,604	120	120	$2,226,400	257	$19,360	
Clay	50,422	152	2,048	$2,191,195	345	$15,008	2
Ottertail	50,714	231	315	$2,149,305	255	$10,801	1
*Rice	49,183	232	376	$1,992,781	221	$8,936	
Itasca	40,863	224	663	$1,969,804	211	$10,154	1
Sibley	14,366	69	78	$1,849,129	248	$31,882	1
*Pipestone	10,491	68	39	$1,807,900	169	$29,160	1
Carlton	29,259	227	1,017	$1,640,765	152	$8,546	1
Crow Wing	44,249	265	750	$1,596,369	184	$6,652	1
Blue Earth	54,044	232	2,191	$1,544,221	249	$7,116	
*Sherburne	41,945	213	669	$1,471,670	215	$7,547	
*Carver	47,915	203	2,326	$1,313,154	265	$7,255	
Freeborn	33,060	98	407	$1,142,085	367	$12,690	1
Lincoln	6,890	34	8	$1,140,200	230	$38,007	
Mower	37,385	117	217	$1,125,135	334	$10,046	
LeSueur	23,239	82	129	$1,049,250	306	$13,806	
Douglas	28,674	183	227	$1,010,450	171	$6,015	1
Winona	47,828	132	1,530	$987,995	389	$8,032	1
Pine	21,264	167	104	$871,250	154	$6,313	1
*Meeker	20,846	129	282	$861,750	177	$7,303	1
Wabasha	19,744	119	201	$858,750	186	$8,101	1
Lac Qui Parle	8,924	46	37	$821,269	241	$22,196	
Steele	30,729	145	356	$805,131	218	$5,710	
Swift	10,724	52	44	$797,600	244	$18,127	
Becker	27,881	205	154	$791,100	158	$4,495	
Kandiyohi	38,761	216	414	$790,859	207	$4,229	2
Aitkin	12,425	84	84	$775,800	163	$10,208	
Nobles	20,098	94	92	$719,800	226	$8,088	
*Pennington	13,306	84	130	$692,810	162	$8,449	
Renville	17,673	89	45	$692,111	227	$8,873	
Cass	21,791	178	198	$692,100	133	$4,220	1
Goodhue	40,690	169	944	$685,502	254	$4,284	
*Stevens	10,634	38	21	$678,900	287	$18,349	

County	Population	Total Fire Runs	Total Other Runs	Total Co. Dollar Loss	Fire Rate	Average Dollar Loss/Fire	Fire Deaths
Fillmore	20,777	117	114	$678,425	204	$6,651	2
*Nicollet	28,076	106	224	$624,800	273	$6,066	
*Cottonwood	12,694	67	18	$615,100	208	$10,084	1
*Waseca	18,079	66	209	$596,005	312	$10,276	
Redwood	17,254	101	44	$590,775	186	$6,352	
Faribault	16,937	102	106	$567,801	202	$6,760	1
Mille Lacs	18,670	160	296	$561,650	131	$3,928	
Isanti	25,921	96	124	$528,800	298	$6,078	
*Kanabec	12,802	50	44	$487,500	261	$9,949	2
Watonwan	11,682	61	68	$486,185	234	$9,724	
Beltrami	34,384	145	687	$477,480	240	$3,339	1
Lyon	24,789	139	173	$450,405	253	$4,596	
Martin	22,914	71	110	$413,170	358	$6,456	6
Chippewa	13,228	73	38	$402,900	186	$5,675	
Brown	26,984	71	100	$369,246	385	$5,275	
*Lake	10,415	29	89	$366,030	401	$14,078	
Traverse	4,463	26	3	$318,600	179	$12,744	
Koochiching	16,299	46	25	$315,080	362	$7,002	
Todd	23,363	107	99	$278,530	241	$2,871	
*Norman	7,975	78	23	$276,950	116	$4,014	
Hubbard	14,939	35	26	$276,700	439	$8,138	
Benton	30,185	110	242	$276,250	290	$2,656	
Mahnomen	5,044	38	14	$263,175	202	$10,527	
Pope	10,745	69	81	$262,500	207	$5,048	
Houston	18,497	66	261	$241,700	343	$4,476	
*Lake of the Woods	4,076	13	8	$235,500	340	$19,625	
*Dodge	15,731	71	69	$234,680	246	$3,667	
Jackson	11,677	57	60	$200,755	216	$3,718	
Murray	9,660	47	30	$192,050	242	$4,801	
McLeod	32,030	73	161	$187,410	500	$2,928	
Yellow Medicine	11,684	44	14	$150,200	292	$3,755	
Rock	9,806	38	63	$132,350	350	$4,727	
Grant	6,246	27	11	$124,600	250	$4,984	
Marshall	10,993	79	97	$92,375	151	$1,265	2
Wadena	13,154	32	49	$91,000	470	$3,250	
*Kittson	5,767	99	73	$89,800	69	$1,069	
Big Stone	6,285	47	40	$86,000	150	$2,048	
Clearwater	8,309	65	79	$42,500	146	$746	
Wilkin	7,516	33	37	$35,000	235	$1,094	
Roseau	15,026	20	24	$25,700	791	$1,353	
Cook	3,868	3	0	$3,500	1289	$1,167	
Red Lake	4,525	0	0	$0	0	$0	
		19,157	130,997†	$139,297,131	246	$7,838	60

*****Indicates counties with 100% participation.
**Red Lake County did not have any participating fire departments.
†Total may not equal "other non-fire" run totals due to statistical inconsistencies in elements from the Minnesota Fire Incident Reporting System.

FIRE DEPARTMENT RESPONSES AND DOLLAR LOSS AS REPORTED BY MFIRS DATA

City	Total Fire Runs	Total Other Runs	Dollar Loss
ADA	23	4	$50,350
ADAMS VOL	10	11	$1,000
ADRIAN	14	24	$3,200
AITKIN	33	47	$274,200
ALBANY	25	80	$0
ALBERT LEA	54	333	$558,085
ALBERT LEA TWP	6	0	$87,000
ALBERTVILLE	21	134	$1,500
ALBORN	5	29	$10,000
ALDEN	11	46	$165,500
ALEXANDRIA	64	46	$254,200
ALMELUND	11	45	$24,001
ALPHA	7	5	$1,000
ALVARADO VOL	15	27	$23,000
AMBOY	9	42	$0
ANDOVER	48	791	$332,200
ANOKA-CHAMPLIN	100	536	$385,070
APPLE VALLEY	62	844	$303,175
APPLETON	5	0	$656,000
ARCO	4	0	$20,000
ARGYLE	10	36	$23,025
ARLINGTON	17	14	$1,347,659
ARROWHEAD	11	33	$17,100
ASKOV VOL	12	0	$0
ATWATER	22	35	$153,300
AUDUBON	17	16	$4,000
AURORA	12	17	$8,400
AUSTIN	83	195	$868,935
AVON	31	29	$148,200
BABBITT VOL	14	21	$269,175
BACKUS VOL	9	8	$20,700
BAGLEY	25	24	$12,000
BALATON	19	7	$159,000
*BALSAM VOL	0	0	$0
BARNESVILLE	33	15	$65,500
BARNUM VOL	17	56	$104,000
BAUDETTE	11	8	$186,000
BAYPORT	25	314	$244,400
*BEAR CREEK	0	0	$0
BEARDSLEY	3	0	$0
BEARVILLE TWP	7	1	$0
*BEAVER BAY VOL	0	0	$0
BECKER VOL	49	168	$503,110
BELGRADE	8	1	$178,000
BELLE PLAINE	22	45	$32,000
BELLINGHAM	7	17	$7,000
BELTRAMI	9	9	$37,500
BELVIEW	9	7	$0
BEMIDJI	135	680	$419,066
BENSON	29	33	$50,600
BERTHA	5	2	$0
BETHEL	14	18	$1,500
BIG FALLS	1	0	$25,000
BIG LAKE	30	75	$116,000
BIGELOW	14	0	$16,500
BIRCHDALE RURAL	1	0	$0
BIRD ISLAND	11	6	$39,000
BIWABIK TWP VOL	2	0	$0
BIWABIK VOL	3	5	$210
BLACKDUCK	6	0	$41,200
BLACKHOOF	10	0	$48,000
BLOMKEST	20	10	$0
BLOOMING PRAIRIE	32	17	$157,200
BLOOMINGTON	232	1,105	$1,956,590
BLUE EARTH	29	47	$45,900
BORUP	6	0	$0
BOVEY	11	55	$5,000
BOWLUS	6	0	$43,000
BOYD	11	6	$33,600
BRAINERD CITY	136	352	$889,845
BRANDON	19	33	$130,600
BRECKENRIDGE	11	11	$0
BREITUNG	4	5	$15,000
BREVATOR	26	30	$0
BREWSTER	8	14	$449,000
BRICELYN	5	2	$18,000
BRIMSON AREA VOL	6	15	$0
BROOK PARK	5	2	$0
BROOKLYN CENTER	123	838	$30,050
BROOKLYN PARK	245	1,142	$1,798,985
BROOTEN	18	16	$158,000
BROWERVILLE	16	8	$0
BROWNSDALE	10	9	$160,200
BROWNSVILLE	9	30	$3,000
BROWNTON VOL	24	58	$5,500
BRUNO	6	0	$15,000
BUFFALO	45	116	$316,630
BUFFALO LAKE	9	0	$38,500
BUHL VOL	4	4	$11,010
BURNSVILLE	184	2,336	$1,146,178
BUYCK COMM VOL	2	0	$0
BYRON	9	24	$5,500
CALEDONIA	18	23	$48,000
CALLAWAY	5	0	$0
CALUMET	8	68	$0
CAMBRIDGE	65	68	$0
*CAMPBELL	0	0	$0
CANBY	8	0	$83,000
CANNON FALLS	30	164	$102,101
CANOSIA VOL	3	35	$0
CARLOS	6	1	$21,800
CARLTON VOL	31	35	$77,700
CARSONVILLE VOL	23	55	$54,000
CARVER	17	83	$338,708
CASS LAKE	64	38	$0
CENTENNIAL	112	768	$605,300
CENTER CITY	9	10	$75,000
CENTRAL LAKES VOL	3	3	$5,500
CEYLON	11	2	$164,120
CHANDLER	4	8	$3,300
CHANHASSEN	23	531	$71,210
CHASKA	47	824	$324,225
CHATFIELD	27	26	$439,625
CHERRY TWP	4	0	$25,100
CHISAGO CITY	12	7	$23,500
CHISHOLM	42	75	$314,500
CHOKIO	2	0	$66,500
CLARA CITY	15	17	$86,000
CLAREMONT	5	0	$1,350
CLARISSA	10	36	$113,000
CLARKFIELD	17	8	$0
CLEAR LAKE	19	100	$199,000
CLEARBROOK	20	51	$11,000
CLEARWATER	20	155	$224,337
CLEMENTS	10	0	$76,100
CLEVELAND	12	50	$75,000
CLIFTON TWP	11	6	$712,000
CLINTON	10	6	$1,000
CLINTON VOL	8	5	$0
CLONTARF	3	0	$18,000
CLOQUET	76	699	$430,965
COHASSET	32	109	$49,500
COKATO	19	27	$214,800
COLD SPRING	4	4	$600
COLERAINE	0	36	$0

City	Total Fire Runs	Total Other Runs	Dollar Loss
COLOGNE	9	0	$28,000
COLUMBIA HEIGHTS	71	1,883	$199,800
COLVIN TWP	2	0	$0
COMFREY	10	6	$37,862
COOK	29	43	$145,500
COON RAPIDS	170	3,726	$559,872
*CORRELL	0	0	$0
COSMOS	10	16	$7,600
COTTAGE GROVE	66	1,507	$125,750
COTTON VOL	5	33	$1,000
COURTLAND	14	18	$151,400
*COVILL AREA	0	0	$0
CRANE LAKE	1	0	$20,000
CROMWELL VOL	13	3	$15,400
CROOKED LAKE VOL	5	11	$15,000
CROOKSTON	29	318	$66,270
CROSBY VOL	16	37	$308,500
CROSSLAKE	9	110	$10,400
CULVER	26	5	$0
CURRIE VOL	5	0	$109,200
*CUYUNA	0	0	$0
DALBO	19	56	$277,500
DALTON	12	3	$9,500
DANVERS	6	3	$8,000
DARFUR	9	5	$105,050
DASSEL	27	178	$113,300
DAWSON	10	0	$550,000
DAYTON	17	185	$16,500
DEER CREEK	5	25	$10,500
DEER RIVER	41	37	$847,200
DEERWOOD	15	14	$10,000
DELANO VOL	16	0	$147,500
DELAVAN VOL	5	1	$187,000
DENT	10	0	$72,000
DETROIT LAKES	82	67	$336,100
DILWORTH	17	28	$32,200
DODGE CENTER	15	17	$2,000
DONNELLY	10	7	$516,000
DOVER	12	5	$11,600
DOVRAY	4	3	$20,000
DULUTH	469	5,695	$3,544,496
DUMONT	11	0	$174,600
DUNNELL-LK FREMNT	6	11	$0
EAGAN	145	774	$1,208,200
EAGLE LAKE VOL	19	70	$0
EAGLES NEST	0	2	$0
EAST GRAND FORKS	44	901	$5,158,410

City	Total Fire Runs	Total Other Runs	Dollar Loss
EASTON VOL	8	14	$5,000
ECHO	1	0	$5,000
EDEN PRAIRIE	108	1,230	$1,595,321
EDEN VALLEY	14	16	$16,000
EDGERTON	16	1	$12,000
EDINA	111	3,841	$2,719,206
ELBOW LAKE	4	1	$13,000
ELBOW-TULABY LKS	2	1	$0
ELGIN	14	6	$53,700
ELIZABETH	12	14	$13,500
ELK RIVER	77	279	$284,400
ELLSBURG VOL	7	19	$98,000
ELLSWORTH	13	18	$44,000
ELMER	7	0	$0
ELMORE	13	3	$65,700
ELROSA	4	16	$50,000
ELY	20	19	$78,250
ELYSIAN	12	38	$40,000
EMBARRASS VOL	17	34	$54,000
EMILY VOL	6	5	$300
EMMONS	10	26	$64,750
ERSKINE	9	0	$70,000
EVANSVILLE	15	52	$18,200
EVELETH	12	73	$1,000
EXCELSIOR	47	615	$1,064,500
EYOTA VOL	13	6	$147,000
FAIRFAX	14	0	$70,711
FAIRMONT	49	97	$228,050
FALCON HEIGHTS	6	127	$2,000
FARIBAULT	121	217	$1,467,325
FARMINGTON	33	80	$107,350
FAYAL	8	56	$1,000
FERGUS FALLS	77	112	$729,100
FERTILE	27	22	$61,700
FINLAND	6	4	$11,000
FINLAYSON	13	33	$18,300
FISHER	4	2	$1,000
FLENSBURG	3	0	$800
FLOODWOOD	16	11	$349,700
FOLEY	51	141	$175,850
FORADA TWP	10	31	$160,500
FOREST LAKE	90	284	$494,250
FORESTON	17	47	$0
FOSSTON	44	26	$205,200
FOUNTAIN	5	8	$0
FRANKLIN	12	5	$110,000
FRAZEE	37	11	$68,500

City	Total Fire Runs	Total Other Runs	Dollar Loss
FREDENBERG	10	42	$1,000
FREEBORN	3	0	$208,000
FREEPORT	2	0	$362,600
FRENCH TWP VOL	7	9	$41,210
FRIDLEY	121	2,146	$536,641
FULDA	14	11	$33,550
GARRISON	35	108	$24
GARVIN	15	1	$5,000
GARY VOL	5	5	$30,500
GAYLORD	14	8	$70,100
GHENT	7	18	$35,000
GIBBON	8	3	$49,770
*GILBERT	0	0	$0
GLENWOOD	36	55	$35,000
GLYNDON VOL	2	2	$0
GNESEN VOL	18	5	$500
GOLDEN VALLEY	78	602	$430,672
GONVICK	8	0	$0
GOOD THUNDER	14	0	$29,750
GOODHUE	18	17	$211,800
GOODLAND	4	9	$0
GOODRIDGE AREA	17	2	$68,400
GOODVIEW	5	17	$3,005
GRACEVILLE	18	13	$85,000
*GRANADA	0	0	$0
GRAND LAKE VOL	21	98	$50,300
GRAND RAPIDS	67	184	$343,304
GREENBUSH	15	8	$25,700
GREENWOOD TWP VOL	13	89	$296,000
GREY EAGLE	17	2	$47,780
GROVE CITY	13	0	$470,300
GUNFLINT TRAIL VOL	1	0	$3,500
HACKENSACK AREA	10	6	$69,500
HALLOCK	13	20	$28,000
HALSTAD	12	1	$106,800
HAM LAKE	89	358	$376,800
HAMBURG	11	34	$9,250
HAMEL	14	173	$114,100
*HAMPTON	0	0	$0
HANCOCK	22	5	$78,900
HANLEY FALLS	3	0	$0
HANOVER	12	4	$44,500
HARDWICK	1	0	$100,000
HARMONY	11	8	$66,000
HARRIS	29	11	$122,300
HARTLAND	2	0	$4,500
HASTINGS	126	399	$842,427

City	Total Fire Runs	Total Other Runs	Dollar Loss
HAYFIELD	27	21	$109,500
HECTOR	11	10	$313,000
HENDERSON	15	46	$149,100
HENDRUM	6	2	$4,500
HENNING VOL	13	6	$47,500
HERMAN VOL	5	1	$1,500
HERMANTOWN VOL	28	76	$115,900
HERON LAKE VOL	10	9	$0
HEWITT	1	0	$2,400
HIBBING	55	2,014	$391,090
HILL CITY	11	25	$0
HILLS	10	13	$0
HINCKLEY VOL	35	26	$71,400
HITTERDAL	4	0	$4,900
HOFFMAN	6	0	$107,000
HOKAH VOL	5	3	$0
HOLDINGFORD	20	62	$14,000
HOLLAND	5	0	$29,000
HOLYOKE VOL	1	0	$0
HOPKINS	38	448	$312,600
HOUSTON	14	22	$46,000
HOWARD LAKE	21	59	$217,500
HOYT LAKES	5	11	$30,200
HUGO	24	175	$484,500
IDEAL TWP	6	11	$11,500
INDUSTRIAL VOL	5	33	$0
INTERNATIONAL FALLS	24	17	$92,130
INVER GROVE HGTS	90	763	$283,320
IRONTON	2	2	$0
ISANTI VOL	12	0	$251,300
*ITASCA TWP	0	0	$0
IVANHOE	8	0	$0
JACKSON	24	33	$88,755
JANESVILLE	19	101	$133,000
JASPER	14	4	$0
JEFFERS	4	1	$12,500
JORDAN	20	71	$49,000
KABETOGAMA	2	0	$0
KANDIYOHI	14	41	$2,500
KARLSTAD VOL	25	35	$18,500
KASOTA	2	0	$160,000
KASSON	9	15	$82,050
KEEWATIN VOL	10	79	$128,500
KELLIHER VOL	4	7	$17,214
KELLOGG	19	8	$0
KELSEY VOL	1	0	$0
KENNEDY	5	3	$43,300
KENSINGTON	8	1	$13,700
KERKHOVEN	9	8	$65,000
KETTLE RIVER	6	1	$39,500
KIESTER	4	0	$8,001
KIMBALL	18	88	$711,506
KINNEY-GRT SCOTT	5	1	$15,000
LACRESCENT	12	177	$100,200
LAFAYETTE	21	7	$28,500
LAKE BENTON	12	4	$1,109,200
LAKE BRONSON	20	11	$0
LAKE CITY	37	58	$460,700
LAKE CRYSTAL	22	43	$68,400
LAKE ELMO	49	362	$245,100
LAKE HENRY	3	0	$0
LAKE JOHANNA VOL	79	388	$1,589,040
LAKE PARK	20	2	$110,000
LAKE WILSON	7	0	$9,500
LAKEFIELD	16	13	$111,000
LAKELAND VOL	4	1	$80,000
LAKEVILLE	93	521	$302,745
LAKEWOOD TWP	18	55	$14,650
LAMBERTON	10	6	$20,000
LANCASTER	36	4	$0
LANESBORO	16	12	$81,000
LAPORTE/LAKEPORT	2	1	$0
LASALLE	1	0	$0
LE CENTER	12	9	$110,000
LE ROY	3	2	$5,000
LEAF VALLEY TWP	8	0	$500
LESTER PRAIRIE	14	59	$68,160
LESUEUR	28	15	$399,250
LEWISTON	7	10	$16,500
LEXINGTON	16	132	$131,130
LINDSTROM	18	25	$25
LINWOOD VOL	36	139	$0
LISMORE	3	0	$0
LITCHFIELD	50	62	$225,350
LITTLE CANADA	43	128	$97,200
LITTLE FALLS	9	0	$335,000
LITTLEFORK	16	8	$184,250
LOMAN RURAL	4	0	$13,700
LONG LAKE	40	301	$183,500
LONG PRAIRIE	35	32	$0
LONGVILLE VOL	20	8	$0
LONSDALE	30	99	$161,700
LORETTO VOL	22	130	$13,900
LOWER ST CROIX VLY	25	226	$184,626
LOWRY	6	2	$0
LUTSEN TWP VOL	2	0	$0
LUVERNE	23	50	$32,350
LYND	7	0	$3,000
MABEL VOL	11	3	$13,100
MADELIA	10	17	$102,000
MADISON	11	14	$196,869
MADISON LAKE	14	51	$400,000
MAGNOLIA	4	0	$0
MAHNOMEN	31	13	$142,075
MAHTOMEDI	19	406	$68,450
MAHTOWA	7	6	$7,700
MAKINEN	8	3	$26,500
MANCHESTER	6	0	$52,250
MANKATO	127	1,882	$494,571
MANTORVILLE	7	14	$14,500
MAPLE GROVE	154	694	$1,707,027
MAPLE LAKE	27	79	$484,500
MAPLE PLAIN	24	318	$104,950
MAPLEWOOD	72	2,610	$708,736
MARBLE	2	39	$0
MARINE ON ST CROIX	8	48	$0
MARSHALL	41	119	$28,205
MAYER	6	42	$2,000
MAYNARD	14	0	$59,000
MC DAVITT	8	13	$77,000
MC GREGOR VOL	26	8	$376,600
MC KINLEY VOL	0	1	$0
MCGRATH	4	1	$125,000
MEADOWLANDS AREA	13	3	$102,000
MEDFORD VOL	11	63	$100,000
MEDICINE LAKE	0	27	$0
MELROSE	19	54	$126,600
MENDOTA HEIGHTS	41	214	$158,825
MENTOR	20	53	$0
MIESVILLE VOL	13	26	$65,500
MILACA	32	59	$155,800
MILLERVILLE	8	0	$0
MILROY	4	0	$0
MILTONA	20	36	$393,200
MINNEAPOLIS	1,546	19,393	$7,397,901
MINNEOTA	14	16	$38,500
MINNESOTA CITY	6	2	$0
MINNESOTA LAKE	1	0	$0
MINNETONKA	117	680	$2,804,320
MISSION TWP	4	76	$87,500
MONTEVIDEO	35	21	$240,900

City	Total Fire Runs	Total Other Runs	Dollar Loss
MONTGOMERY	16	17	$265,000
MONTICELLO	31	243	$313,100
MONTROSE	21	105	$35,000
MOORHEAD	77	1,989	$1,435,095
MOOSE LAKE	24	58	$635,000
MORA	35	36	$411,300
MORGAN	16	2	$35,625
MORRIS	4	9	$17,500
MORRISTOWN	26	8	$134,730
MORSE TWP VOL	5	1	$15,000
MORTON	5	0	$2,000
MOTLEY	18	89	$214,300
MOUND	16	317	$604,800
MOUNTAIN IRON	17	45	$36,050
MOUNTAIN LAKE	5	0	$240,500
MPLS/ST PAUL AIRPRT	44	2,507	$169,166
MYRTLE	6	2	$2,000
NASHWAUK	24	31	$551,300
NASSAU	7	0	$33,800
NERSTRAND VOL	6	1	$1
NEW AUBURN	4	0	$50,000
NEW BRIGHTON	66	259	$129,745
NEW GERMANY	6	35	$0
NEW LONDON	37	38	$47,550
NEW MARKET	21	110	$47,001
NEW MUNICH	3	14	$17,000
NEW PRAGUE	39	58	$418,125
NEW RICHLAND	4	0	$12,000
NEW SCANDIA	20	158	$241,400
NEW ULM	41	83	$150,473
NEW YORK MILLS	16	15	$721,200
NEWFOLDEN	11	8	$2,100
NEWPORT	35	242	$19,007
NICOLLET	21	61	$259,000
NIELSVILLE	2	0	$2,000
NISSWA	16	13	$0
NODINE VOL	10	26	$115,700
NORMANNA VOL	6	0	$175,000
NORTH BRANCH	40	60	$531,795
NORTH MANKATO	19	93	$38,850
NORTH ST PAUL	36	320	$125,589
NORTH STAR TWP	1	7	$0
NORTHFIELD	49	51	$229,025
NORTHLAND	6	3	$4,000
NORTHROP	2	0	$7,500
NORWOOD-YNG AMER	26	142	$118,950
OAKDALE	66	1,075	$602,600

City	Total Fire Runs	Total Other Runs	Dollar Loss
ODIN	5	0	$1,000
OGEMA	11	1	$8,000
OGILVIE	15	8	$76,200
OLIVIA	12	6	$96,900
ONAMIA	21	37	$101,500
ORONOCO	5	21	$0
ORR VOL	1	2	$0
ORTONVILLE	16	21	$0
OSAKIS	25	27	$17,750
OSLO	3	0	$0
OSSEO	2	0	$4,300
OSTRANDER	4	1	$8,500
OTTERTAIL	12	2	$25,000
OWATONNA	102	276	$547,931
PALISADE VOL	10	3	$0
PALO REGIONAL	6	49	$23,700
PARK RAPIDS	33	25	$276,700
PARKERS PRAIRIE	10	4	$62,000
PAYNESVILLE	31	10	$539,500
PELICAN RAPIDS VOL	1	0	$90,000
PEMBERTON	6	14	$365,000
PENNOCK	17	10	$10,000
*PEQUAYWAN LAKE	0	0	$0
PEQUOT LAKES	20	22	$278,300
PERCH LAKE VOL	10	24	$121,000
PERHAM	27	65	$13,005
PERLEY-LEE TWP	1	0	$0
PICKWICK AREA	6	2	$171,800
PIERZ	46	19	$416,800
PIKE-SANDY-BRITT	16	6	$45,700
PILLAGER AREA	15	83	$36,500
PINE CITY	41	15	$521,550
PINE ISLAND	33	150	$18,500
PINE RIVER	22	24	$144,700
PIPESTONE	24	32	$1,711,900
PLAINVIEW	15	21	$131,000
PLATO	11	27	$48,050
PLYMOUTH	141	1,070	$1,806,990
PORTER	14	6	$42,200
PRINCETON	90	153	$304,350
PRINSBURG	10	3	$25,400
PRIOR LAKE	64	422	$424,000
PROCTOR	20	27	$15,300
RAMSEY	50	308	$379,950
RANDALL	14	7	$1,005,500
RANDOLPH	9	14	$11,000
RAYMOND	4	0	$146,000

City	Total Fire Runs	Total Other Runs	Dollar Loss
RED WING	68	588	$218,351
REDWOOD FALLS	17	21	$186,000
REMER	13	8	$278,700
RENVILLE	9	17	$0
REVERE	1	0	$0
RICHFIELD	108	2,724	$388,120
RICHMOND	7	0	$500
RIDGEWAY COMM	6	17	$0
ROBBINSDALE	49	242	$109,735
ROCHESTER	273	4,725	$1,958,805
ROCHESTER-RURAL	57	131	$609,151
ROCKFORD	24	238	$0
ROCKVILLE	34	85	$83,300
ROGERS	27	261	$69,150
ROLLINGSTONE	5	18	$77,950
ROSE CREEK AREA	11	0	$90,000
ROSEMOUNT	42	272	$9,500
ROSEVILLE	98	529	$354,856
ROTHSAY	11	26	$35,000
ROYALTON	20	5	$0
RUSH CITY	33	31	$194,800
RUSHFORD	13	25	$45,300
RUSHMORE	7	7	$56,700
RUSSELL	3	0	$0
RUTHTON	5	0	$30,000
SABIN-ELMWOOD	11	13	$326,500
SACRED HEART	6	1	$22,000
SANBORN	15	2	$169,000
SANDSTONE VOL	18	16	$92,500
SARTELL	31	79	$271,925
SAUK CENTRE	39	27	$413,600
SAUK RAPIDS	59	101	$100,400
SAVAGE	63	252	$1,453,926
SCANDIA VALLEY	2	0	$60,000
*SCHROEDER	0	0	$0
SEAFORTH	2	0	$50
*SEDAN	0	0	$0
SHAFER	12	41	$223,000
SHAKOPEE	100	270	$922,250
SHELLY	5	7	$6,000
SHEVLIN	12	4	$19,500
SILICA AREA	0	4	$0
SILVER BAY	7	15	$260,000
SILVER LAKE	15	16	$25,500
SLAYTON	13	8	$16,500
SLEEPY EYE	4	1	$145,000
SOLWAY TWP	8	36	$70,000

City	Total Fire Runs	Total Other Runs	Dollar Loss
SOUTH BEND	6	18	$5,000
SOUTH HAVEN	23	19	$339,125
SOUTH ST PAUL	127	1,330	$255,285
SPICER	10	21	$7,000
SPRING GROVE	8	6	$44,500
SPRING LAKE PARK	263	988	$1,635,035
SPRING VALLEY	16	31	$24,900
SPRINGFIELD VOL	16	10	$35,911
SQUAW LAKE	5	3	$45,000
ST ANTHONY	31	808	$51,260
ST BONIFACIUS	23	131	$0
ST CHARLES	11	12	$0
ST CLAIR	14	71	$181,500
ST CLOUD	255	1,180	$1,062,996
ST FRANCIS	32	243	$270,000
ST HILAIRE	13	43	$37,000
ST JAMES	36	46	$278,135
ST JOHN'S UNIVERSITY	6	55	$6,000
ST JOSEPH VOL	26	208	$173,300
ST LEO	1	0	$20,000
ST LOUIS PARK	146	3,298	$1,390,556
ST MARTIN	9	7	$20,000
ST MICHAEL	1	0	$250,000
ST PAUL	1,444	11,055	$8,416,521
ST PAUL PARK VOL	26	54	$334,700
ST PETER	31	45	$147,050
ST STEPHEN	17	64	$257,200
STACY-LENT	37	32	$136,702
STAPLES	23	19	$115,350
STARBUCK	20	24	$84,000
STEPHEN	11	5	$11,050
STEWART	8	1	$40,000
STEWARTVILLE	28	38	$296,900
STILLWATER	61	726	$347,802
STORDEN	5	0	$86,000
STURGEON LAKE	18	3	$22,500
SUNBURG	7	0	$0
SWANVILLE	2	0	$151,000
TACONITE	2	10	$0
TAUNTON	4	0	$300
TAYLORS FALLS	12	7	$0
THIEF RIVER FALLS	54	85	$587,410
THOMPSON TWP	22	103	$151,500
TOIVOLA TWP	2	0	$400,000
TOWER	1	0	$0

City	Total Fire Runs	Total Other Runs	Dollar Loss
TRACY	29	12	$181,400
TRIMONT	1	0	$5,000
TRUMAN	2	0	$8,500
TWIN LAKES VOL	5	0	$121,100
TWIN VALLEY	20	4	$78,800
TWO HARBORS	16	70	$95,030
TYLER	10	4	$11,000
ULEN	8	1	$327,000
UNDERWOOD	18	49	$156,000
VADNAIS HEIGHTS	46	507	$366,900
VERGAS	12	2	$200,000
VERMILLION LAKE	7	6	$5,000
VERNDALE	14	41	$91,000
VERNON CENTER	1	0	$0
VESTA	5	3	$24,500
VICTORIA	14	150	$286,700
VILLARD VOL	7	0	$143,500
VINING	6	18	$0
VIRGINIA	30	2,071	$54,701
WABASHA	18	58	$25,000
WABASSO VOL	1	3	$0
WACONIA	18	272	$73,061
WADENA	18	8	$0
WAITE PARK	27	86	$1,585,200
WALDORF	9	23	$42,000
WALKER	20	12	$127,000
WALNUT GROVE	2	0	$0
WALTERS VOL	2	0	$60,000
WANDA	9	0	$79,500
WARBA-FEELEY-SAGO	11	2	$0
WARREN	29	21	$33,200
WARROAD	5	16	$0
WASECA	34	85	$409,005
WATERTOWN	26	213	$61,050
WATKINS	15	10	$29,200
WATSON	9	0	$17,000
WAVERLY	15	82	$212,000
WAYZATA	23	236	$309,500
WELLS	15	29	$35,200
WENDELL	12	9	$3,100
WEST CONCORD	8	2	$25,280
WEST METRO FIRE	122	1,368	$869,343
WEST ST PAUL	102	418	$360,975
WESTBROOK	9	2	$900
WHEATON	15	3	$144,000

City	Total Fire Runs	Total Other Runs	Dollar Loss
WHITE BEAR LAKE	128	396	$1,025,250
WILLIAMS	2	0	$49,500
WILLMAR	75	256	$399,109
WILLOW RIVER	19	9	$130,000
WILMONT	6	0	$50,500
WILSON VOL	10	24	$0
WINDOM	44	15	$275,200
WINGER	3	0	$8,000
WINNEBAGO VOL	20	10	$143,000
WINONA	66	1,402	$603,040
WINSTED	1	0	$200
WINTHROP VOL	11	7	$182,500
WOLF LAKE	10	2	$210,500
WOLVERTON	11	0	$0
WOODBURY	76	1,807	$427,450
WOODSTOCK	4	2	$25,000
WORTHINGTON	29	29	$99,900
*WRIGHT VOL	0	0	$0
WRENSHALL	10	32	$10,000
WYKOFF	14	0	$0
WYOMING	44	144	$1,584,500
ZIMMERMAN	38	47	$369,160
ZUMBRO FALLS	16	50	$188,350
ZUMBROTA VOL	20	25	$134,750

*These fire departments reported as having no fire/nonfire runs for 1999.

NON-REPORTING FIRE DEPARTMENTS

ALASKA
ALTURA
ANNANDALE
ASHBY
AVOCA
BADGER
BARRETT
BATTLE LAKE
BEAVER CREEK
BIGFORK VOL.
BLUFFTON
BOIS FORTE
BRAHAM
BROWNS VALLEY
BUTTERFIELD
CANTON
CLARKS GROVE VOL.
CLIMAX
CONGER
COTTONWOOD
CYRUS
DAKOTA
DANUBE
DEGRAFF
DENNISON
DEXTER VOL.
DUNDEE
EAGLE BEND
EAST BETHEL
EAST HUBBARD CO.
EITZEN
ELLENDALE VOL.
EVERGREEN
FEDERAL DAM
FELTON COMM.
FIFTY LAKES
FOXHOME
FROST
GARFIELD
GENEVA
GLENCOE
GLENVILLE
GRAND MARAIS VOL.
GRAND MEADOW
GRAND PORTAGE
GRANITE FALLS
GREANEY-RAUCH-SILVERDLE
GREEN ISLE
GRYGLA
HANGAARD TWP.
HANSKA
HAWLEY
HAYWARD
HENDRICKS
HIDDEN VALLEY
HOLLANDALE
HOVLAND
HUTCHINSON
IONA
ISLE
JACOBSON
KENNETH VOL.
KENT-ABERCROMBIE
KENYON
KERRICK
KILKENNY
LAKE GEORGE
LAKE LILLIAN
LEWISVILLE
LONDON
LOUISBURG
LUCAN
LYLE
MAPLE HILL
MAPLETON
MAPLEVIEW
MARIETTA
MAZEPPA VOL.
MCINTOSH
MENAGHA
MIDDLE RIVER
MILAN
MURDOCK
NETT LAKE
NEVIS
NORTHOME
OAK GROVE
ODESSA
OKABENA
OKLEE
ORMSBY
PLUMMER
PRESTON
RED LAKE
RED LAKE FALLS
RICE
RICE LAKE VOL.
ROCHESTER AIRPORT
ROSEAU
ROUND LAKE
SCANLON VOL.
SEBEKA
SHERBURN
SKYLINE
SOLWAY
STURGEON TWP.
TINTAH
TOFTE
TWIN LAKES
UPSALA
WANAMINGO
WATERVILLE
WAUBUN
WELCOME
WHITE EARTH VOL.
WOODLAKE

STATE FIRE MARSHAL ANNUAL REPORT

TO: All Minnesota Fire Chiefs, Fire Service State and Local Officials

FROM: Tom Brace, State Fire Marshal JRB

SUBJECT: 1999 Year in Review

In 1999, 85% of all state fire departments reported into the Minnesota Fire Incident Reporting System (MFIRS). Our Division is implementing the new NFIRS 5 standard in Minnesota and was able to provide free vendor software to all fire departments in the state. The software was free; however, there was a nominal fee for the first year support of the software. Training on the new software has been, and will continue to be, conducted throughout the state, and classes are posted at our web site. Most fire departments began reporting on the new system in January, 2000.

The residential fire safety inspection program saw the retirement of their supervisor, Roger Jemming, at the end of 1999. Glen Bergstrand, inspector in the Duluth area, was named supervisor of this program. Reduced staffing, for lack of funding, has taxed the residential inspection team to the maximum. Several measures are being considered to prioritize mandated inspections and reduce special request inspections.

Minnesota Uniform Fire Code Training was provided in 1999. Our Division received great response to these classes and also great reviews for a job well done. A CD, on updated code requirements, was completed and is available by contacting this office.

The fire/arson investigation team lost a long time investigator, Richard Brolsma, Osage, MN, who retired in 1999. Dick's territory was divided among other investigators and no replacement was hired for his area. Ron Rahman, who had worked for the State Fire Marshal Division for many years before leaving to work for a private insurance agency, returned to our Division in 1999. Ron is the investigator for the entire northwest section of the state. While the number of fires investigated in 1999 decreased, more time is being spent on arson fires and prosecutions. Almost $13 million in property loss was attributed to arson in 1999.

The Division is continually required to do more with less financial resources. Budget constraints are severely impacting our Division, positions are required to be left vacant to pay for day-to-day program expenses. Despite our fiscal resources, our mission remains unchanged - the dedicated staff of the State Fire Marshal Division continues to serve the citizens of Minnesota to protect lives and property from fire. We hope you find Fire in Minnesota 1999 a valuable tool. For updated news and information from our Division, please check our web site: www.dps.state.mn.us/fmarshal.

BRIEF HISTORY OF THE STATE FIRE MARSHAL DIVISION

1905 Legislation authorizing Governor to appoint State Fire Marshal for two-year term. Funding through tax levy on Insurance companies. (Town Mutuals Exempt)

1907 Amendment authorizing two deputy State Fire Marshals. Authorization to pay fire departments $1 for reports submitted to the State Fire Marshal.

1913 All former acts repealed and new State Fire Marshal Department was created. Governor appointed Fire Marshal and two deputies.

1919 The Appointing Authority was given to the Commissioner of Insurance.

1925 Legislative action made the Commissioner of Insurance the Ex-Officio State Fire Marshal.

1937 Tax levy to fund the State Fire Marshal Department was raised to ½% of all insurance premiums to include Town Fire Insurance Company and Farmers Mutuals.

1941 Legislature directed all monies collected by the State Fire Marshal for tax and license fees, etc., to be turned over to the General Fund. Fire Marshal Department to be operated under an appropriation by legislative action.

1969 Legislative action created a Department of Public Safety.

1970 The State Fire Marshal Department moved into the Department of Public Safety to be known as the State Fire Marshal Division (SFMD).

1975 Legislature authorized adoption of the Minnesota Uniform Fire Code (MUFC).

1978-79 Legislative action enabled local fire departments to enforce the MUFC without local adoption.

1978 Ten positions added to implement hotel/motel/resort inspection program.

1980 Minnesota is the first state in the nation to require smoke detectors in new and rental residential properties.

1989 1988 MUFC was adopted. Three more positions were added to the SFMD: Two day care inspectors and one public educator/data.

1990 Legislation added five new positions to the SFMD to conduct school inspections in Minnesota.

1992 New program added to license fire sprinkler contractors, designers, and fitters. New program to develop operation of Hazardous Material Response Teams.

1993 Legislative action updated arson statutes. Legislation requires a smoke detector in every dwelling.

1995 Licensing of operators of public fireworks displays. One fire investigator position added.

1996 The Attorney General formed a task force to study the crime of arson in Minnesota. The Division received a grant of $400,000 to study arson as it relates to the criminal or abusive use of alcohol and/or drugs.

1998 As a result of the Arson Task Force, two new positions were added to the SFMD: One arson investigation trainer and one juvenile firesetter interventionist.

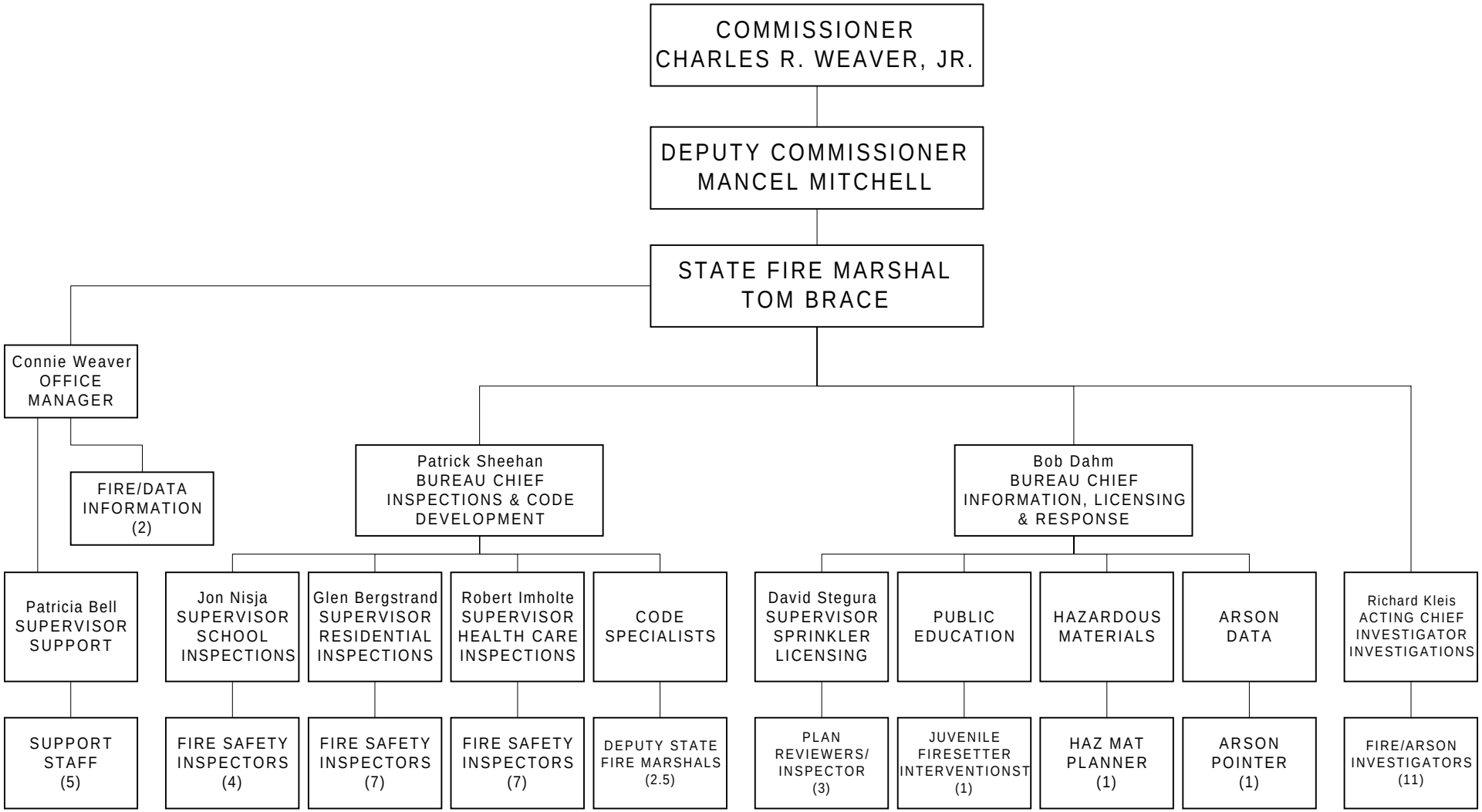
1998 One inspector for the Fire Protection Team was added to start July 1, 1998.

1999 The arson data specialist position was filled. Legislation added funding for a part-time code specialist position, to be hired in FY 01.

STATE OF MINNESOTA

DEPARTMENT OF PUBLIC SAFETY

STATE FIRE MARSHAL DIVISION



Two vacancies at the time of printing.

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FIRE/ARSON INVESTIGATION TEAM

Education continues to be a priority for the fire/ arson investigator team.

The fire/arson investigation unit, headed by Bureau Chief David Bahma in 1999 and currently supervised by Rick Kleis, consists of twelve investigators, one trainer and one arson data specialist. Investigation deputies are subject to call 7 days a week, 24 hours a day. All investigators work from home offices in regional locations.

- The arson data specialist (pointer system) position was filled in October 1998. This system is now online and functioning as data is provided and entered into the pointer system. The "pointer" database provides links to detailed information maintained by local criminal justice agencies, provides administrative expertise relative to fire/arson investigation reports, interviews, statistical data and report analysis regarding arson investigation. The Division continues to encourage fire departments to contact us with information. The more information we have in the database, the better the program will work for us.

- The juvenile firesetter interventionist position, filled in 1998, works closely with the fire/arson investigation team and is currently setting up a program that will be used as a state-wide tool to ensure consistent help for juvenile fire problems.

- The arson training coordinator, working closely with the Bureau of Criminal Apprehension, continues to provide excellent arson-investigation training for Minnesota law enforcement and fire service personnel. Classes are routinely filled throughout the year.

1999 staffing for the investigation team resulted in one investigator retiring and one investigator leaving state service. State Fire Marshal budget constraints allowed for only one deputy position to be filled, which forced the Division to realign territories and gave our investigators larger areas to cover.

Arson continues to be the leading cause of structure fires in 1999.

The Division is noting an increase in the number of homicides committed and attempts by perpetrators to cover homicide by arson and suicide. We may find 1999 to have been an anomaly; statistical comparisons in the next several years may clarify this unusual and tragic trend.

State Fire Marshal investigators assisted fire officials and law enforcement agencies by investigating 480 fires in 1999, which resulted in over $51 million in property loss. While the dollar loss for total fires investigated decreased, arson dollar loss increased by 32%. Of the 480 fires investigated, 176 were determined to be arson.

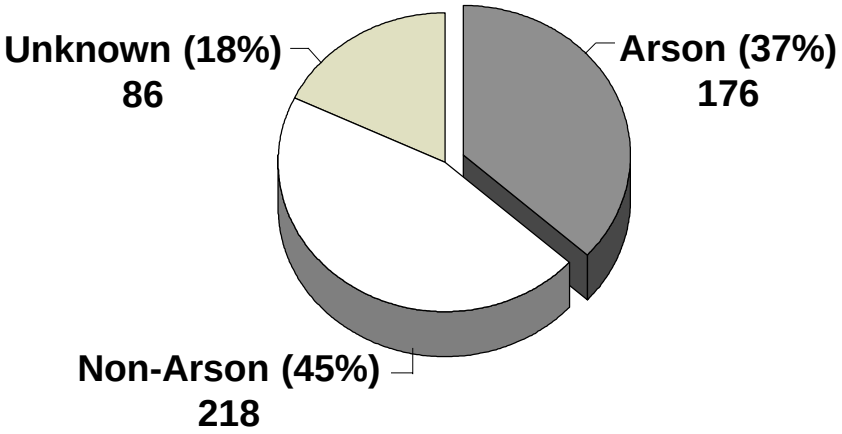
FIRE/ARSON INVESTIGATIONS BY PROPERTY TYPE

	1997 Causes		1998 Causes		1999 Causes			
	Total Fires	Total Arson	Total Fires	Total Arson	Total Fires	Total Dollar Loss	Total Arson	Arson Dollar Loss
One/Two Family Dwellings	338	100	313	114	279	$19,540,356	94	$ 4,450,550
Apartments	23	9	20	4	23	3,557,000	10	2,556,000
Hotels/Motels/Resorts	8	4	6	2	2	2,160,000	1	160,000
Institutional	6	3	7	4	0	0	0	0
Educational	2	1	7	5	5	32,100	5	32,100
Places of Assembly	14	8	8	4	8	1,019,000	5	391,000
Restaurants	9	5	11	6	4	781,000	1	1,000
Retail/Office	30	9	23	11	25	5,490,443	13	2,211,443
Industrial/Manufacturing	16	5	17	12	10	7,258,000	1	650,000
Agricultural	14	1	9	0	7	2,985,850	0	0
Storage Facilities	66	18	60	26	71	8,277,400	20	1,915,900
Special Structures/Other	17	15	13	8	23	303,250	13	302,250
Mobile/Vehicle Property	38	22	38	28	23	133,720	13	66,500
TOTAL	636	188	582	200	480	$51,538,119	176	$12,736,743

Last year's dollar loss average per arson fire was $44,967; this year's average is $72,368.

Almost $13 million in property loss is attributed to arson in 1999. The dollar loss for storage facilities more than doubled from 1998. Also, last year's dollar loss average per arson fire was $44,967; this year's the average is $72,368--a 61% increase! Time spent on each case is increasing; advanced technology and more in-depth investigations allow for a full effort to increase the number of arson convictions.

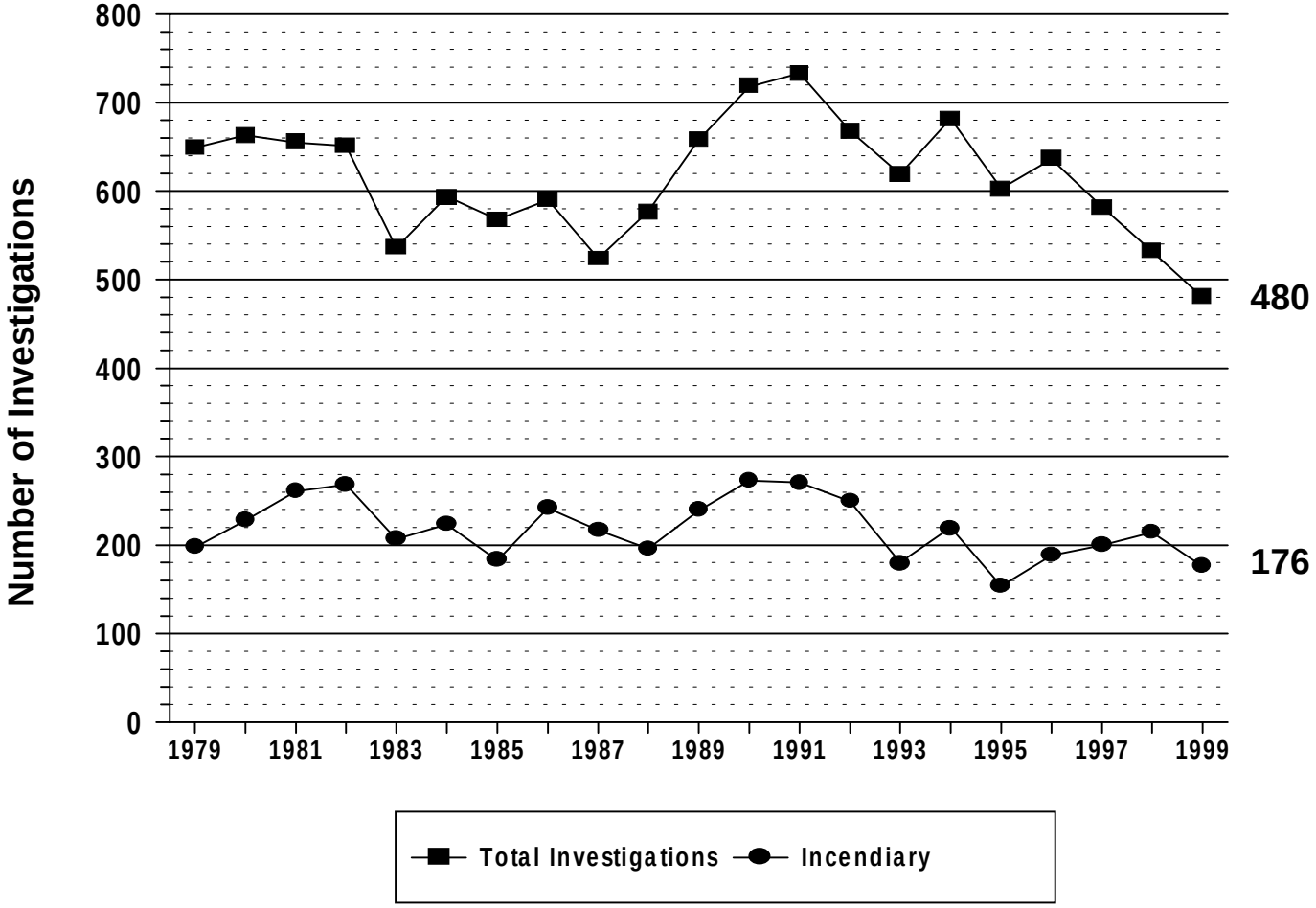
1999 Fire Investigation Accidental vs. Incendiary



Breakdown of Arson Investigations:

	Arson	Non-arson	Unknown	Total
Structure	163	211	76	450
Vehicle	13	7	3	23
Unknown	0	0	7	7
Total	176	218	86	480

Fire Investigation 1979 - Present



16,021 violations were found in 7,647 inspections in 1999.

FIRE SAFETY INSPECTIONS

Deputy State Fire Marshal-Inspectors conducted a total of 7,647 inspections and follow-up inspections in 1999.

SFMD FIRE SAFETY INSPECTIONS 1999, BY TYPE OF OCCUPANCY

	No. of Facilities	No. of Follow-ups	No. of Bldg. Inspections	No. of Orders	No. of Violations
CHILD CARE					
Family child care	1,827	344	1,831	278	6,964
Foster child care	456	137	465	108	1,934
Child care centers	61	31	62	14	269
	2,344	**512**	**2,358**	**400**	**9,167**
LICENSED HEALTH CARE FACILITIES					
Nursing homes	542	80	554	11	133
Supervised living facilities >7	229	33	246	19	94
Adult foster care facilities	488	45	492	37	1,245
Class B nursing homes	38	11	41	4	13
Supervised living facilities <6	101	11	102	1	18
Group homes	2	0	2	0	1
Adult day care facilities	8	2	8	2	17
	1,408	**182**	**1,445**	**74**	**1,521**
HOTELS/MOTELS/RESORTS					
Resorts	277	408	431	181	1,265
Motels	245	262	266	166	702
Hotels	93	127	95	60	468
	615	**797**	**792**	**407**	**2,435**
RESIDENTIAL					
Boarding/Lodging	80	24	83	26	236
Apartments	30	41	30	26	148
One/two family dwellings	23	9	23	12	97
Dormitories	27	15	35	13	95
	160	**89**	**171**	**77**	**576**
MEDICAL FACILITIES					
Hospitals	117	14	119	10	24
Surgical centers	13	1	13	0	0
	130	**15**	**132**	**10**	**24**
EDUCATIONAL FACILITIES					
Schools	**342**	**538**	**346**	**132**	**1,685**
COMMERCIAL					
Public assembly	25	22	30	16	89
Offices	33	11	44	9	65
Restaurants	7	12	10	7	17
Industrial/Manufacturing	9	12	12	3	7
Service stations	1	1	1	0	0
Retail	9	7	10	1	7
	84	**65**	**107**	**36**	**185**
OTHER PROPERTY					
Flammable/Combustible liquid	92	100	92	59	169
Prisons/Jails	63	28	146	28	186
Special properties	14	0	14	0	0
Storage	4	3	6	5	18
L.P. facilities	2	6	2	3	7
Fire Stations	1	0	1	0	0
Other properties	30	23	33	5	48
	206	**160**	**294**	**100**	**428**
TOTAL INSPECTIONS	**5,289**	**2,358**	**5,645**	**1,236**	**16,021**

FIRE AND LIFE SAFETY INSPECTION

- **Residential Team**

The vast majority of residential inspections are for day care and child care facilities.

The residential fire safety inspection team, composed of 8 deputies, inspects all licensed hotels, motels and resorts throughout the State and conducts inspections of family/group child care, family/group foster care, child care centers, complaints and other special request inspections. Hotels/motels are inspected every 3 years; resorts are inspected every 4 years. Follow-up inspections are conducted at each facility where fire safety violations are recorded until all violations are corrected. Training is provided to child care providers and county licensors on fire code requirements and fire safety education. Fire code training is also provided to fire departments and other code professionals. Residential team deputies provide consultation on code requirements and fire safety issues to building design officials, contractors, attorneys, public officials and the general public.

The variety and increasing number of inspections in different occupancies, each with their own unique fire safety situations and code requirements, keeps the residential team challenged and sharp.

Roger Jemming, supervisor of the residential fire safety inspection team, retired January 2, 2000. The residential team misses Roger's wisdom, insight, and experience. We all hope Roger enjoys his well-deserved retirement immensely. Glen Bergstrand became the residential supervisor upon Roger's retirement.

The residential team assisted in developing inspection information fact sheets on code requirements and documenting inspection practices for Division policies. This will improve inspection consistency for the benefit of State Fire Marshal Division staff, municipal fire departments, building contractors, designers and owners. A CD is now available with these policies and information fact sheets from the State Fire Marshal Division.

Reduced staffing has taxed the residential inspection team to the maximum. Mandated inspections can not be completed in all areas of the State on the triannual time frames we try to achieve. Consequently measures are being considered to reduce the number of special request type of inspections being submitted. Inspection priorities are given to facilities required to be licensed for lodging people.

Progress is still under way on achieving code compliance on State Fair Buildings. Violations recorded in 1992 have been 90% corrected. With the large volume of people visiting exhibits in State Fair buildings and potential for serious hazards, fire safety must continue to be a high priority.

Every hospital, health care facility, and licensed residential group home in Minnesota is inspected annually.

- **Health Care Team**

The Health Care Section of the State Fire Marshal Division has the responsibility for conducting annual fire and life safety inspections in 1,150 health care facilities licensed by the Minnesota Department of Health, as well as approximately 100 residential group homes licensed by the Minnesota Department of Human Services. In addition, the Health Care Team is responsible for inspecting, on a one-time-only basis, adult day care, adult foster care, and developmental achievement centers. When necessary, the Health Care Section also assists the residential team with inspections of home-based day care facilities.

In 1999, the Health Care Section was supervised by Patrick Sheehan and is currently supervised by Robert Imholte. This team includes one clerical staff person in the headquarters office, and seven Deputy State Fire Marshal Inspectors located throughout the state.

The Health Care Team enforces the Minnesota Uniform Fire Code (MUFC) as a part of the Minnesota Department of Health licensing requirements for health care facilities. This team also enforces the fire safety requirements of the Federal Health Care Financing Administration for those hospitals, nursing homes, and supervised living facilities that receive Medicare/ Medicaid reimbursement for the patients and residents of these facilities. These federal inspections are conducted under a contract with the Department of Health which administers the federal enforcement program in Minnesota.

In addition to inspection duties, the health care inspectors regularly provide fire safety in-service training to facility staff, give presentations at health care associations' conferences, and provide demonstrations on sprinkler systems using the fire sprinkler demonstration trailer that is now owned by the State Fire Marshal Division.

In 1996, under a contract with the Minnesota Department of Corrections, the Health Care Team assumed the responsibility for inspecting state-owned prisons. In 1999, the team also assumed the responsibility for the inspection of the state's county jails. Up until 1999, there were 10 state-owned prisons and one privately owned facility in the state. The construction of one additional state-owned facility in Rush city was completed in 1999. One member of the team is specifically assigned to handle the prisons, which are inspected on a request basis. These inspections are conducted by the inspector in whose district they're located. Various members of the team provide backup to the inspector covering the prisons, so that the health care inspections in his assigned area remain up-to-date.

During 1999, the Health Care Team inspected 1,577 buildings in 1,538 hospitals and health care facilities, as well as buildings in the eleven prison facilities.

PUBLIC SCHOOL INSPECTION PROGRAM

School inspections revealed 1,579 fire code violations in 342 schools in 1999.

The Public School Inspection Program completed nine years of operation in 1999. This program was established by the Minnesota State Legislature in 1990 and requires the State Fire Marshal to inspect each of the state's roughly 1,750 schools once every three years. These inspections cover public elementary schools, secondary schools (middle schools, junior high schools and high schools), area learning centers, and charter schools.

The primary focus of this program is to eliminate the fire and life safety violations in public school buildings that have historically contributed to disastrous events. Emphasis is placed on the life safety of the school's occupants: students, teachers, other school staff, and members of the community. Due to the age, construction, and use of many of the state's school buildings, policies were developed which allow the use of automatic fire protection systems (primarily automatic sprinklers and automatic fire alarms) as alternatives to correct many of the fire and life safety deficiencies found in these buildings. The State Fire Marshal is proud to report that dozens of school fires have been detected early and, in many other cases, extinguished by fire protection systems that have been installed as a result of this program.

The 1990 legislation also allowed local fire departments to continue to inspect the schools in their jurisdiction under a contract with the State Fire Marshal. In 1999, there were about 20 fire departments that conducted their own school inspections.

The Public School Inspection Program is staffed by a Fire Safety Supervisor, three field-based Deputy State Fire Marshals, one School Plan Reviewer, and a part-time clerical support person. The program works closely with, and is funded through, an inter-agency agreement with the Minnesota Department of Children, Families and Learning (DCFL).

In the 1998-1999 school year, there were 347 school districts in the state, 1,752 public school buildings, and 39 charter schools. These school districts provide education to over 850,000 students in grades K-12. In addition, there are approximately 55,000 teachers and administrators and thousands more employed in staff support roles. Many of the state's school buildings also function as community education and recreation facilities after normal school hours. This program provides enhanced fire and life safety for almost two million students, staff and residents who occupy the state's school buildings.

School inspections revealed 1,579 fire code violations in the 342 school facilities inspected in 1999. The following is a breakdown of the types of fire safety deficiencies observed:

Exiting/Egress Deficiencies:	413
Problems with Fire Protection Systems/Features:	282
Improper Fire-rated Construction:	148

Excessive or Improper Storage of Combustibles:	184
Electrical Hazards:	152
Other Fire/Life Safety Deficiencies:	400

In addition to conducting inspections, the School Inspection Team also conducted 538 follow-up inspections to ensure that the items identified on previous inspections had been corrected. Another important function of the School Inspection Program is performing plan reviews of major school construction and renovation projects. This is a unique function of the State Fire Marshal Division, which works very closely with DCFL to ensure that the appropriate fire safety features are being installed and that school districts are not paying for unnecessary or overly expensive fire protection. This program has paid for itself over the years by saving districts hundreds of thousands of dollars annually.

There were 131 plan reviews conducted in 1999; the majority of these plans were for remodeling projects in public schools. Additions to school buildings and compliance with fire code orders also generated a significant number of these reviews. The plan reviewer maintains a close working relationship with the State Building Codes and Standards Division and spends many hours each week consulting with school officials, architects, engineers, and contractors.

During 1999, there were ten school fires causing in excess of $10,000 each. These fires happened in the following buildings:

Name of School	City	Dollar Loss
McKinley Elementary School	Ham Lake	$100,000
Blaine High School	Blaine	$100,000
Armstrong High School	Plymouth	$ 90,000
Armstrong High School	Plymouth	$ 50,000
St. Francis Junior High	St. Francis	$ 50,000
Elementary School (Unoccupied)	Jenkins	$ 25,000
Grand Rapids High School	Grand Rapids	$ 18,000
Eden Prairie High School	Eden Prairie	$ 10,000
Central High School	Duluth	$ 10,000

CODE DEVELOPMENT/PLAN REVIEW

The Code Development/Plan Review Section of the State Fire Marshal Division is staffed by two Deputy State Fire Marshal – Fire Protection Specialists. One of these two deputies is also a registered Fire Protection Engineer. These positions provide consultation and technical assistance in matters related to fire safety to local/state fire and building officials, property owners/managers, architects, engineers, contractors and the general public. In an average month, the fire protection specialists handle over 500 requests for information regarding fire safety statutes, fire code requirements, and fire-safe practices.

Program calls for licensing fire protection contractors who sell, design, install, modify, or inspect fire protection systems.

The fire protection specialists also conduct plan reviews of certain types of hazardous installations, particularly aboveground fuel storage tanks and liquefied petroleum (LP) gas installations. In 1999, there were 139 plan reviews conducted.

In addition to the consultation and plan review duties, the fire protection specialists conduct fire safety training for fire service groups, safety professionals and the public. Each year, fire safety information is provided to hundreds of people through dozens of fire safety presentations.

Following adoption of the 1998 Minnesota Uniform Fire Code, the State Fire Marshal Division conducted Fire Code Update seminars for more than 300 people at 10 different locations throughout the state. Attendees included State Fire Marshal staff, fire and building code officials, architects, engineers, fire protection system contractors, and representatives from other governmental agencies. All seminar attendees received a compact disk, *"1998 MUFC Handbook on CD,"* which is an impressive collection of resources for fire prevention in an electronic format. Copies of this CD are still available at the State Fire Marshal Division.

As a normal part of their duties, the fire protection specialists interact with many other safety officials. They represent the State Fire Marshal Division on committees and task forces. As such, they are an integral part of the Division and often called upon for their expertise. The fire protection specialists are very knowledgeable about emerging trends and new technologies in fire protection.

FIRE PROTECTION LICENSING SECTION

The Minnesota Fire Protection Contractor Licensing Law (Minnesota Statute 299M.01-12) authorizes the State Fire Marshal to regulate the fire sprinkler industry. The law requires the licensing of contractors and certification of sprinkler fitters. The rules that were promulgated as a result of the law require fees to be collected for licensing and permitting of fire protection-related work. The Fire Protection Licensing Section also investigates complaints, inspects sprinkler installations and provides education and information services to the sprinkler industry, public officials and the public.

The Fire Protection Licensing Section is headed by Bob Dahm, supervised by Dave Stegura, and includes two plan review/code specialists, one field inspector and one clerical support person.

Licensing of fire sprinkler contractors and certifying journeyman sprinkler fitters began on February 21, 1994. In 1999, 59 contractors and 8 design contractors were licensed. In addition, 508 journeyman sprinkler fitters and 43 limited journeyman sprinkler fitters were certified during the year. Litigation was filed on February 22, 1994 that restricted the state rule requiring apprentice sprinkler fitter participation in a federal or state approved training program. In March of 1996, the federal ruling eliminated the ability of the State Fire Marshal Division to register and/or require federal or state approved training of apprentices.

The State Fire Marshal Division performs sprinkler system plan review and issues permits for 640 communities in Minnesota. Cities may issue fire protection system permits if they meet program and training documentation requirements. The Division issues fire protection system permits for all installations not performed by cities and the State Building Codes Division. In 1999, the Fire Protection Licensing Section performed the following activity:

	1996	1997	1998	1999
Licenses/Certificates:				
Sprinkler Contractors	56	59	53	59
Design Contractors	3	4	7	8
Journeymen	476	490	481	508
Limited Journeymen	68	61	63	43
Permits Issued	352	327	364	386
School Review Assistance	25	11	6	6
Complaint Investigation	62	13	29	20
Field Inspections	34	17	38	142
Generated Revenue:				
Permits	$102,756	$119,465	$137,149	$156,161
Surcharges	106,951	119,889	111,961	180,620
Licenses	78,460	79,900	78,825	78,425
Misc.			2,801	14,339
TOTAL	**$288,167**	**$319,254**	**$330,736**	**$429,545**

The Fire Protection Licensing Section supports training and education through seminars and presentations. The Advisory Council on Fire Protection Systems provides input regarding training and education needs. In 1999, the staff provided presentations at four association conferences and lectured at eight fire code update classes.

PUBLIC DISPLAY FIREWORKS OPERATOR CERTIFICATION

307 Fireworks Operators have been certified since the certification program began.

The Minnesota State Legislature passed a law (MN Statute 624.22) effective January 1, 1996 requiring the State Fire Marshal Division to adopt guidelines relating to fireworks display safety and develop a process for certification of fireworks operators.

The law requires fireworks displays conducted in Minnesota be supervised by a fireworks operator certified by the State Fire Marshal Division. Fireworks operators may become certified by passing a written examination administered or approved by the State Fire Marshal. This examination is based on statutes, codes and nationally recognized standards relating to the safe practices of storage, handling and display of fireworks. Examinations are conducted at State Fire Marshal headquarters in St. Paul.

In Minnesota, a state where fireworks are illegal, *fireworks losses since 1990 caused:*
- *nearly $1.4 million loss*
- *364 injured*
- *59% of the injuries were children*

Currently there are 307 certified fireworks display operators. Of those, 200 are certified for outdoor fireworks displays, 13 are certified for proximate (indoor) displays and 94 are certified to conduct both outdoor and proximate fireworks displays.

Following every fireworks display, the certified operator is required to submit a Fireworks Display Report to the State Fire Marshal Division. In 1999, 950 display reports were submitted. These reports provide information on the type, size and quantity of pyrotechnic devices used, property damage, injuries and product defects. This information is used to assess the impact of controlled fireworks displays and to help identify operational problems and defective products.

Through fireworks display reporting and other fireworks reporting data, we have learned that since 1990 there have been 364 reported injuries, most of which were male youth between 1 and 19 years of age. During this same period, there was over $1.3 million in property destroyed.

The fireworks statute states "it shall be unlawful for any person to offer for sale, expose for sale, sell at retail or wholesale, possess, advertise, use, or explode any fireworks." The term "fireworks" includes firecrackers, bottle rockets, roman candles, sparklers, party poppers, whipper snappers, and snap-n-pops. The only legal items in the state are fireworks for public display (for which a permit is required) and caps for toy guns.

HAZARDOUS MATERIALS PROGRAM

Regional Response Teams

Hazardous Material Response Team Program calls for statewide system of 4 Emergency Response Teams supported by 6 Chemical Assessment Teams.

The Hazardous Materials Regional Response Team Program utilizes local public and private sector organizations, under contract with the Minnesota Department of Public Safety, to provide specially trained and equipped personnel who respond to support local authorities during hazardous materials incidents. The Hazardous Materials Section of the State Fire Marshal Division is responsible for the development, implementation, and administration of the operational components of the program. Overall program administration is shared with the Division of Emergency Management.

A total of ten public and private agencies serve as regional teams. Emergency Response Teams (which also serve as Chemical Assessment Teams) include the Duluth Fire Department, Moorhead / Fargo Fire Departments, Rochester Fire Department, and the St. Paul Fire Department. Chemical Assessment Teams include the Arrowhead HazMat Team (Grand Rapids Fire Department), North Metro HazMat Team (Fridley, Coon Rapids, and Spring Lake Park / Blaine / Mounds View Fire Departments), Hopkins Fire Department, Mankato Fire Department, St. Cloud Fire Department, and one private entity; West Central Environmental Consultants, Inc.- Morris. A new contract cycle began on July 1, 1999 with each team electing to renew its contract for a one year period ending June 30, 2000. *(Contracts were subsequently re-issued for the July 1, 2000 to June 30, 2002 period.)*

Teams responded to a total of seventeen incidents during 1999. Types of incidents included fires involving chemicals and chemical reactions, railroad and highway transportation accidents, fixed facility releases, and clandestine drug labs. Major responses included an explosion in a water treatment facility in Oakdale involving a potential chlorine release in a residential area, an uncontrolled chemical reaction at a fixed facility in St. Louis Park, a hydrochloric acid spill at a hotel swimming pool in Willmar, and the accidental mixture of propane and anhydrous ammonia at an agricultural facility in Wabasso. The most common types of assistance requested were air monitoring, substance identification and technical advice.

Monitoring equipment was upgraded during the year with the provision addition of photo-ionization detectors (PIDs), single gas chlorine monitors to all teams. Orientation courses for these new instruments was provided.

Teams and individual members participated in a variety of training and exercise activities during the year which included advanced hazardous materials incident management and chief officer courses, continuing attendance at the American Association of Railroads railroad tank care specialist training *(supported by Minnesota railroads)*, clandestine drug lab response training, a variety of domestic terrorism courses and exercises, radiological incident response training, hazardous materials chemistry, and numerous local exercises conducted throughout the state.

The Team Advisory Committee's Long Range Planning Work Group completed a review of various program areas and made recommendations to the full committee and state program staff. Those recommendations will be considered by staff during 2000.

Hazardous Materials Staff

Hazardous Materials Specialist Kristin Rollwagen joined the staff during the year, assuming the majority of the Division's HazMat duties. Kristi is a welcome addition to our staff and brings a variety of education, training and experience to the program. Since her arrival she has continued her training which includes certification in clandestine drug lab response by the U.S. Drug Enforcement Administration, and participation in the American Association of Railroad's railroad tank car specialist course and the National Fire Academy's hazardous materials incident management class.

HazMat staff were involved in numerous activities, most notably the provision of fire and other public safety service and industry training in the recognition and response to clandestine drug lab incidents. More than 40 such programs were provided, either individually or in cooperation with the Bureau of Criminal Apprehension. Staff also participated in numerous local and state HazMat exercises including the Metro area domestic terrorism drills conducted in Minneapolis and St. Paul, as well as the actual activation of the State Emergency Operations Center during the Y2K rollover.

FIRE DATA

MFIRS data collection is critical in determining where life safety efforts and resources are placed.

The Fire Data Analysis team headed by Bob Dahm, Bureau Chief, and supervised by Connie Weaver includes Nora Gierok, Irene Moore, and Ernie Scheidness. This team collects and analyzes approximately 150,000 incident reports annually. They also provide technical assistance to the 790 Minnesota fire departments. This team tracks major incidents as they occur and begins the process of providing data and information to local fire service leaders and the media regarding similar incidents and/or trends as they develop.

The team also provides special reports to local fire departments that request comparative data for budget justifications, public education, or community efforts to further the adoption of local codes and ordinances. Arson fires in Minnesota continue to be watched very closely and data compiled by this team is being used to develop strategic plans and trend analysis to combat this problem. Also, incidents in the high-risk fire death groups (such as the elderly, disabled, and young children) are being monitored to provide information on how best to address the fire safety concerns of these target groups.

Additionally, the team has been heavily involved with implementing the new version of MFIRS through the distribution of Firehouse Software® in Minnesota and presenting training on the new MFIRS and the software throughout the state. Please see the following section of this report for more information on the distribution of the new software for reporting incidents.

Data collection through the Minnesota Fire Incident Reporting System (MFIRS) is a major program in the Division. Data is critical in determining where efforts and resources should be placed. Efforts to pass legislation relating to the life safety of Minnesotans have been greatly assisted by the data received from the fire service through the MFIRS reporting. The number of fire departments participating in MFIRS has increased significantly in the past five years, and has provided a wealth of information which exerts a major influence on the direction of statewide fire and emergency response efforts.

Departments reporting by electronic means provided 90% of all reports in 1999.

There were 674 fire departments that reported in 1999, a very slight increase in MFIRS participation. Of the reporting departments, 215 did so electronically, and they provided 90% of all reports in 1999. We then see that 32% of departments reported electronically but their reports represent 90% of the incidents reported. We anticipate this electronic incident reporting to increase with the new MFIRS/NFIRS version 5 as implemented by the distribution of Firehouse Software® in Minnesota.

We sincerely encourage each fire department to join our efforts and support the MFIRS system. The data we collect can assist departments in justification of staffing, equipment, training, and prevention needs for their communities. Please contact our office for assistance in getting started with MFIRS reporting. The Fire Data Team members are always ready to help with technical and other reporting questions.

As the new NFIRS version gets closer to reality, fire departments will be kept apprised of any changes which may affect them.

The New National Reporting System

The standards for NFIRS 5 have now been released by the United State Fire Administration (USFA). They are available from USFA via their World Wide Web site at www.usfa.fema.gov. Several vendors have obtained conditional certification of their incident reporting software as of the publication of this report.

The plan to implement the new NFIRS 5 standard within Minnesota has been launched and includes the following.

1. Departments may receive free special state version Firehouse Softwareò from the State Fire Marshal Division. The software is free to the department, however there is a nominal fee for the first year support of the software. The free software will be distributed via the annual Fire Chiefs' Conference, at training sessions to be scheduled throughout the state or by mail order to the State Fire Marshal Division.

2. Training on the new software and the NFIRS 5 standard continues to be scheduled throughout the state. The training takes place within the regions as established by fire department and fire chiefs' organizations. Training sessions are announced via the State Fire Marshal Division web site and by mail within each region as the training is scheduled. The training is in cooperation with the Minnesota Department of State Colleges and Universities and mostly takes place in computer lab at their facilities.

3. As the departments are trained and their software distributed, they may begin recording their incidents using the new software. They may also then send their computer files to the State Fire Marshal Division via Internet email attachment process or by mailing the Division a diskette with the incident data on it. Before a department actually sends the Division their incident data, we request they contact us first to make certain all is set up properly. They may call Ernie Scheidness at 651/215-0512 or email him at ernie.scheidness@state.mn.us.

4. Those departments not currently using or planning to use technology to report their incidents will be kept at NFIRS version 4 paper reports. Versions 4 and 5 of NFIRS can exist side by side for some time to come. As the paper reporting departments acquire technology to do their reporting, State Fire Marshal Division will supply them with software as described above so they may start reporting their incidents via automation.

5. The State Fire Marshal Division will work with departments using custom software to assist them to move to the NFIRS 5 reporting standard. Those departments are encouraged to check the web site mentioned above for the complete documentation of the NFIRS 5 standard so that it may be built into any new system development of their reporting systems. These departments are further encouraged to contact us to discuss their system development plans.

Departments having questions regarding the implementation of NFIRS 5 within Minnesota are encouraged to contact Ernie Scheidness at the State Fire Marshal Division. Also, any recent news of the NFIRS 5 implementation and training will be posted at our web site: www.dps.state.mn.us/fmarshl/fmarshl.html.

PUBLIC EDUCATION

In 1999, the State Fire Marshal Division, together with the fire service communities, continued its efforts to help Minnesotans achieve safer, healthier lives and environments. Fire and life safety education is an on-going challenge to provide the consistent, repetitive messages that make fire safety a way of life.

Also in 1999, the State Fire Marshal Division and the Eveready Battery Corporation co-sponsored a program which provided 10,000 batteries to at-risk Minnesota families to ensure they had the smoke detection they need in their homes. This program placed the 9-volt batteries in the front line fire apparatus of all 790 fire departments throughout the state, intending that they be installed in smoke alarms that were inoperable due to worn or missing batteries discovered on a fire response. The vast majority of fire deaths occur in homes with smoke alarms that are missing or not working. This lifesaving program, coupled with the second element, the planned and practiced exit drill, is the best tool we can provide Minnesotans towards reducing injury and loss of life due to fire.

Throughout the year the State Fire Marshal Division works side by side with many proactive fire service organizations to provide a lasting message to the public. Many new and exciting opportunities are being explored and in 1999 many events brought these organizations together. Some of the events of 1999 included:

Win the race against fire…At the Brainerd International Raceway the first weekend in July, Brainerd Fire Chief Kevin Mahle led his crew alongside Smokey the Bear and Sparky the Fire Dog to bring the fire safety message to the race fans. Several hundred children and adults learned to escape from a structure fire, properly build and extinguish campfires, and many other practical safety messages.

Firefighter Night at the Races…Held at I-94 Speedway for the second year, this event not only provides the same educational opportunities as the BIR event, but also offers discounted admission to the Public Safety professionals in honor of their hard work and dedication to community.

Fire Safety with the St. Paul Saints…Once again the MN Fire Chiefs Association Public Education Committee, the DNR, and the State Fire Marshal Division put their combined efforts together to reach the public. The safe escape house was the focus of the many safety messages offered and baseball fans truly enjoyed the chance to learn and have fun as well.

State Fire Marshal remains committed to public education efforts to reduce the Minnesota fire problem.

Governor's Fire Prevention Day… Under the guidance and influence of a very effective committee, the Governor's Council on Fire Prevention and Control, this was the first opportunity the Minnesota Fire Service has had to reach over 120,000 people in a single day with our message. This event brought volunteers from 38 fire departments around the state, totaling 217 people who worked tirelessly throughout the day at many locations at the State Fair. Included in the day's activities were a static display of apparatus, staffed by fire service personnel sharing information with the fairgoers, an award winning burn rehabilitation exhibit sponsored by Hennepin County Medical Center, and an emotional flag raising/memorial service with the St. Paul Honor Guard performing their duty with the utmost of distinction. There were also displays of fire memorabilia, a seniors safety program, and a Fire Explorer Challenge which delighted the spectators. And on this day, a historical day in fire and life safety education in Minnesota, a record breaking 1000+ youth learned the valuable lessons taught in the Safe Escape house. This premiere fire safety event promises to grow and provide a fabulous chance for the people of Minnesota to learn lifesaving messages in a fun and interesting manner.

Firefighter Day at the Dome… The Minnesota Twins and a variety of fire service organizations host another tribute to the fire service with discount ticket prices and a large display and educational program on Kirby Puckett Place. From the safe escape house to the Minnetonka Fire Departments heavy rescue and trench rescue exhibit, there were sound educational opportunities for hours prior to the baseball game. The St. Paul Honor Guard again made the opening ceremonies a huge success and Commissioner Weaver of the MN Department of Public Safety tossed out the first pitch.

The Division hosts many media events and press conferences throughout the year. We continually utilize the window of opportunity in fire incidents to provide the public information necessary to avoid such events. We receive a lot of feedback from the public, who, in turn, call their local fire departments for additional information or assistance.

The State Fire Marshal Division continues to make educating the public a priority and to make a fire safe community for all who live, work, or play in our great state, and would like to thank the Minnesota fire service for their past and future dedication to fire prevention.

For information or to share an idea on any fire and life safety issue, please feel free to contact Deputy State Fire Marshal Daniel Bernardy at (651)215-1754 or daniel.bernardy@state.mn.us

JUVENILE FIRE SETTING

Children using fire inappropriately is still a major cause for concern.

The problem we face with juvenile firesetting has no simple solution. In fact, the majority of the issues is not with the children at all, but with the perspective of society. Once we stop sweeping this behavior under the rug with beliefs that "it's just a phase they're in" or "it's normal; we all did it and we turned out just fine," then we can move forward with the solution. People inside and outside the fire service may be unaware of the complex issues that are behind juvenile firesetting.

Children who start fires are categorized in one of four general areas. The areas begin with curiosity, a normal but still dangerous fascination with fire. Next is the crisis category; in this category a child is attempting to reach out due to some traumatic occurrence in his or her life. The delinquent category occurs when a child has set the fire with intent to draw attention from peers or authorities to his/her "power" through destruction. Finally, the pathological category is a truly psychological disorder with a variety of symptoms and other problems. No matter what the reason for this unlawful behavior, the result is the same — injury, death,

Fires Involving Children Playing With Fire*

	1999
Fires	357
Deaths	2
Civilians Injured	23
Firefighters Injured	4
Dollar Loss	$2.6 Million

*Due to a new reporting system, one major metropolitan city was unable to report their 4th quarter incidents for 1999.

Within which category they belong is determined through a structured interview and assessment process. It is extremely critical to perform a thorough and complete interview of the child and his/her parents, as well as to examine their environment, to come to an appropriate conclusion of their situation.

What is principally important is that every child who has set a fire is identified, taken through a comprehensive fire safety program, is made accountable to the justice system, receives the appropriate referral, and complies with a restitution plan. Referral may be made to one of many agencies (mental health, social services, child protection, etc.). The available statistical data shows that up to 81% of the children who set fires will repeat this behavior if proper intervention is not attained. This leads us to conclude that early intervention and treatment will prevent future criminal behavior and save countless injuries, lives, and dollars of property loss.

After a great deal of research and development the Minnesota Juvenile Firesetter Program was completed and introduced in October of 1998. Beginning with Hennepin County, a modified version was put into action by their Juvenile Firesetter Task Force. The Hennepin County F.I.R.E.S. (Fire Intervention and Related Educational Support) Program is the product of a very dedicated and concerned group of professionals who through perseverance and diligence organized and trained instructors from various agencies throughout the county. To date there have been several successful intervention classes involving the firesetting youth and their guardians, as well as an avenue for referral. The F.I.R.E.S. program, both through its development and its implementation, has served as somewhat of a pilot to aid in the construction of the statewide model.

The strategic plan for implementation includes developing regional task forces that will provide all of the components necessary for successful intervention. The success of this program depends on the support and cooperative efforts of many agencies within the regions. The task forces will be comprised of several agencies including the fire service, the juvenile justice system, police departments, mental health agencies, and various social service divisions.

The release of the program to the other regions, which took place in October of 1999, marked the beginning of the statewide implementation. These regions are supported and divided by the boundaries of the Minnesota Service Cooperatives, formerly known as the ECSU (Educational Cooperative Service Units) system and will be housed at their regional headquarters in Thief River Falls, Virginia, Fergus Falls, St. Cloud, Staples, Marshall, North Mankato, and Rochester. The metropolitan counties will be considered a region unto themselves, therefore having their own task force and program. Regions will be prioritized for implementation by statistics and demographics, striving to have all regions operational by the end of the year 2000. Once in place, these coalitions must continually evaluate and modify their programs to ensure their effectiveness.

This statewide program model is a step by step guide designed to assist with an intervention from identification through follow up. To completely understand the model and the process it provides, and to utilize it to its fullest potential, simply read the manual in its entirety. No experience or training is required to follow this model; however, attending training when the opportunity presents itself would certainly benefit your agency. Of course, feel free to contact the State Fire Marshal's office with any questions that may arise.

What can be done by the parents/caregivers?

Teaching the child about his/her role with fire and the dangers of it must be done at the very earliest opportunity. Children usually begin to grasp this type of information at about age three. As children grow older, the messages will grow with them: Not touching matches and lighters, advancing to stop, drop & roll, crawling low under smoke, and home escape drills. Adults must take this initiative and not expect that a child will learn it somewhere else.

Taking responsibility by setting a good example is also very important. Using fire starting devices properly and controlling a child's access to these devices will greatly reduce the risk. Parents/Caregivers should point out how they use safety rules in everything they do; this will help to make fire safety "second nature" to the child.

Remember, a single match can be as deadly as a loaded gun in the hands of a child. It can destroy lives, property and dreams at an incredibly rapid speed.

ADMINISTRATIVE SUPPORT SERVICES

This dedicated group assures that the internal functions of the office run effectively and efficiently. They continue to provide exceptional service to our staff, the fire service, and the general public. Persons responsible for specific programs are:

Pat Bell – is the clerical support supervisor; she provides clerical support to the fire/arson investigators, keeps the Division payroll records, and is familiar with all office functions.

Andrea DuBay – provides support for the fire protection/sprinkler section.

Jeannie Eddy – is the main receptionist for the State Fire Marshal Division and Office of Pipeline Safety.

Randi Gehrke – generates inspection reports and corrective orders for the residential and school inspection team. She also provides support to fire service organizations such as the Governor's Council on Fire Prevention & Control.

Marian Whitney – is responsible for the support functions of the health care inspection team.

The clerical position that provides support for day care and foster care inspections, assists with residential orders and handles office inventory/supplies is currently vacant.

This brief description cannot begin to cover the scope of duties provided by these individuals. The competent assistance of these exceptional employees allows the individual teams to complete their duties and assignments. Fire Marshal management and professional staff gratefully acknowledge our invaluable support staff.

IN CONCLUSION...

We hope this report will assist you in identifying the services, programs and resources available through our Division and encourage you to contact us with any comments or concerns.

We look forward to working with the fire service, law enforcement agencies and other organizations as we continue to address the fire safety issues facing the citizens of Minnesota.