



FIRST
ANNUAL REPORT
Idaho Fire Statistics

January 1, 1982 - December 31, 1982

W.K. "Bill" Wallis
State Fire Marshal

Department of Insurance

DEPARTMENT OF INSURANCE
State of Idaho

Trent M. Woods
Director

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State Fire Marshal

FIRST ANNUAL REPORT
BY
STATE FIRE MARSHAL

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PART I

STATE FIRE MARSHAL

LEGISLATIVE REPORT

NARRATIVE & HISTORY:

After many attempts to implement the office of State Fire Marshal by state insurance directors, the insurance industry, and the fire service, it finally became a reality when on March 22, 1982, Governor John Evans signed HB 487 into law. This bill provided the Fire Marshal with funding from the insurance industry and placed the office in the Department of Insurance under the direction of the Director, Trent Woods. The bill also provided guidelines as to the qualifications of the Fire Marshal and gave the office the direction as to its function. The bill adopted the Uniform Fire Code statewide and made all fire chiefs assistants to the State Fire Marshal.

This latest attempt to set up the office of Fire Marshal got started when State Representative Larry Harris from Boise attended the National Legislative Conference on Arson in Dallas, Texas. He went there at the request of Representative Tom Stivers of Twin Falls. After he returned he called a meeting at the Statehouse with several fire officials in the immediate vicinity, along with several Representatives of the Legislature, to discuss the arson and fire problems in this state. It was the consensus of this group that in order to combat the growing arson and fire problem, the fire service needed a central authority to identify the arson and fire problems throughout the state and take measures to reduce them. Then, Representative Harris in a memo to Representative Stivers stated, "The prime officer to establish central authority would likely be the Idaho State Fire Marshal, a position authorized but unfunded and an equally important function will be a comprehensive state arson reference information service."

With input from the fire service, the insurance industry, and the Legislative Committee, HB 487 was drafted and after many amendments it passed both houses of the Legislature. There were many people involved in the passage of this bill; both government and industry worked hand-in-hand in its promotion as they fully recognized something had to be done to lessen or stop the growing fire losses in our state.

It is interesting to note that Idaho was one of only two states without a Fire Marshal, but the concern over the office goes back many years.

A report from the State Insurance Commissioner, C. D. Goaslind, dated January 1, 1909, states: "I believe that the present fire waste in this country is entirely unnecessary, and that to reduce some of it is essential, first, that the public should be brought to understand that property once destroyed by fire is gone forever, and is not, nor cannot be replaced by the distribution of insurance. Second, that the states should adopt and enforce a building code, which requires an improved type of safe construction. Third, that the various cities should adopt an ordinance governing construction and improvements of buildings and as regards the question of explosives and inflammables, regulating the storing of refuse, waste, etc. and to provide for the enforcement of such ordinance. Fourth, that the states establish and support the office of

Fire Marshal and confer on the Fire Marshal by law the right to examine the cause and origin of all fires, and in the event of arson or where crime has been committed, submit the facts to the grand jury or proper indicting body."

Again in January of 1921, State Director of Insurance, Howard J. Brace, in his report states: "We believe by creating a State Fire Marshals Department much can be accomplished towards the reduction of fire waste in Idaho. This recommendation has been made in many previous reports of the Insurance Commissioner of this state and the need for legislation along this line is more pronounced today than ever before."

Again on June 30, 1946, Edward B. McMonigle, Director of Insurance, states, "Most all our Western States now have a State Fire Marshal's Office under the director supervision of the Insurance Department and in those states an effective fire prevention program is carried on."

After 73 years, when it was first requested, the office of State Fire Marshal is now a reality. I hope all of us in the state will give the Fire Marshal our assistance and support in getting the job done in Idaho. ?

GOALS & OBJECTIVES:

In analyzing the role of state government as it relates to fire protection, a basic question becomes obvious: With the exception of protecting state wildlands fire protection is a local responsibility, and why should the state become involved in the first place?

For those living in the metropolitan areas, local fire protection seems quite adequate, with little or no outside assistance needed. In some cases this is true. Often overlooked, however, is the fact that out of 212 fire departments in our state only about 12 may fit the self-sufficient description and even they have problems applying their codes and prevention programs uniformly. The other 200 or so fire departments serve small communities with limited fire protection resources, especially in fire prevention matters.

The first six months that I have been in office have been spent collecting fire data, touring fire jurisdictions, and gaining a sense of direction as to how I can best serve the interests of the people of our state. Knowing our funding limitations and resources, I feel the following can be done in these categories:

1. Regulatory Functions

Regulatory functions is one of the largest areas in which we will have a role. Any state regulation which has a fire safety interpretation affects the overall fire protection provided to citizens. The very nature of a state, with its inherent powers, indicates that regulatory functions are primarily a state responsibility. The state may, of course, delegate to local jurisdictions the authority to exercise these responsibilities, and this will hold true in our case. Almost without exception, local fire jurisdictions, paid and volunteer alike, have

told me that they will carry out the fire inspection responsibilities in their jurisdictions. Knowing this, we have set up a fire inspector certification and training program and have already certified 132 inspectors throughout the state. This is only the beginning as I expect to certify hundreds more. This program will assure uniform training of inspectors and uniform enforcement of our fire code. Once this program is completed, we will maintain it and support our inspectors in their endeavors, while steering them along the same course.

2. Fire Cause Investigation: Arson

The biggest problem we have with arson in our state is a lack of training and expertise within the fire departments to recognize it. In other words, little or no investigative work is being done to determine what the fire cause is, either accidental or purposely set fires. This, again, is where we can take an active role. My plans are to educate local authorities, police and fire, in the following categories:

- A. Basic fire cause determination, photography, and preservation of all physical evidence.
- B. Filing an arson report, interviewing witnesses, preparing physical evidence for laboratory analysis, mapping the fire scene, sorting out suspects, and identifying profiles of arsonists.
- C. Preparing a case for the prosecutor, developing good working relations with the prosecutors, presenting the evidence in court, and using good courtroom demeanor.

With the arson training broken down into these categories, then the local police and fire authorities can assume a part of, or all the training, whichever would best fit their particular needs. When each category has been completed and an examination has been passed, an investigator would then be certified by my office as to his training level. This would assure uniformity of training and give the investigator credibility in court.

An arson report form has been developed by my office and has been distributed to all fire departments and the State Bureau of Investigative Services. In the very near future, we should have much better arson information.

3. Data Collection, Dissemination, and Analysis

How many fires are occurring? What do they burn? Where, when, and why do they start? The answers to these and a multitude of related questions depend entirely upon the collection and analysis of fire incident data.

In this area we can perform the following roles:

- A. Provide a centralized system with the capacity to collect, compute, organize, and disseminate local fire data for use by the individual reporting agencies.
- B. To analyze the reported data for use in the decision making processes associated with the state's interests (evaluation of building codes and fire related regulations, information for the Legislature, and establishment of fire education priorities).
- C. To contribute the state's fire experience to the National Fire Data Center.

Data collection is currently being done by Fire Service Training, a division of Vocational Education located at Twin Falls at the College of Southern Idaho. However, their funding for this project will soon be depleted. I have already made plans to assume this most vital program for my operation. Without this critical data, it would be impossible to direct programs for fire prevention in the most critical areas of need.

4. Public Education

The fire community now recognizes that if the number and severity of fires are to be reduced, people must be convinced that it is worthwhile to modify those aspects of their personal behavior which contribute to fire hazards.

Three roles we can perform in public education are:

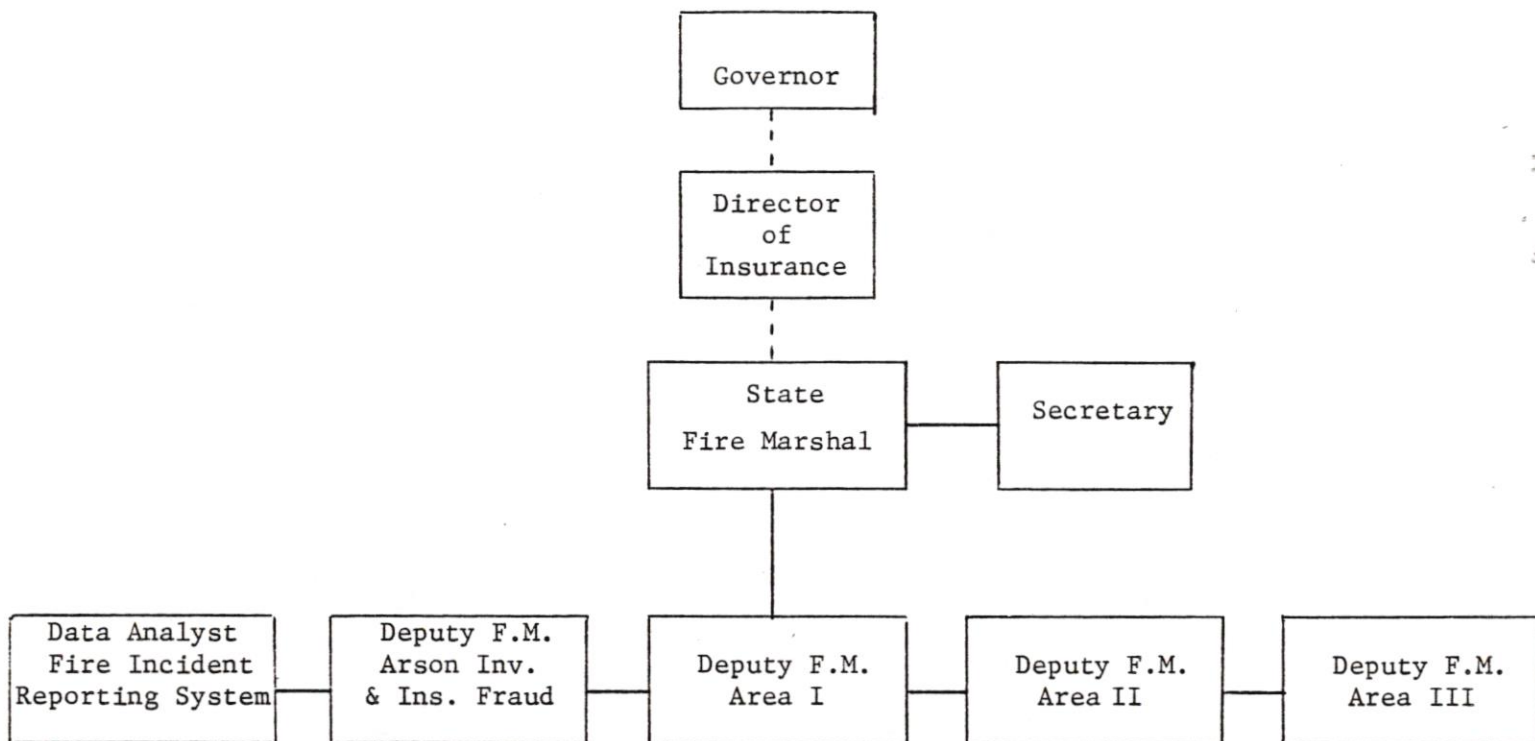
- A. Assist communities in identifying their fire problems.
- B. Provide a means for exchanging and pooling fire education experiences.
- C. Directly provide public information through the media and other means.

These four roles are the limit I feel can be accomplished in our state with the present funding capability. However, I firmly believe a difference can be made with the programs I have outlined. I also think the programs will be better received by the populace as they will be delivered through local authority. I see our role at the state level as one of education, support, and evaluation with the fire and police agencies.

In order to accomplish all of this, I will need a staff of seven people, including myself, to achieve the first three objectives. The fourth objective, public education, will probably need one staff member in the future. I will explain the staff and duties in the following organizational chart.

SIX MONTHS
RECAP OF ACTIVITY REPORTS FOR 1982
STATE FIRE MARSHAL

Fire Inspections	11
Arson Investigations	3
Business Meetings	113
Public Relations Appearances	10
Schools - Seminars Attended	5
Fire Code Interpretations	60
Letters Written	1,219
Long Distance Calls	136
Fire Losses Reported From Insurance	\$12,168,319



Three positions are now in place and functioning, that of the Fire Marshal, secretary, and the Deputy Fire Marshal in charge of arson and insurance fraud. The proposed new positions would be Deputy Fire Marshals for Areas I, II, and III, and the Data Analyst for the Fire Incident Reporting System.

The duties of the new deputy positions would be:

1. To carry the educational programs to the various fire and police agencies.
2. To support these agencies with their expertise and knowledge.
3. To evaluate them occasionally to help keep them on course.
4. To do fire investigations and inspections where no fire authority exists.

I believe this modest staff will serve to meet our objectives and would suffice for many years. With the funding limits defined in the law, only one or two more employees would be possible anyway.

I firmly believe that with the additional staff and the programs I have outlined, the fire loss can be decreased as much as 50%.

Bill Wallis

 BILL WALLIS
 STATE FIRE MARSHAL

BW:pr

PART II

STATE FIRE MARSHAL

DEPARTMENT OF INSURANCE
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A REPORT AND ANALYSIS OF FIRES IN IDAHO
(1 YEAR)
January 1, 1982 - December 31, 1982

This report is based on data gathered from the Idaho State Fire Incident Reporting System which is administered by Fire Service Training, an arm of State Vocational Education. There are currently 54 fire departments out of 212 that are reporting within this system. The 54 fire departments represent approximately 65% of the state's population and are located in every geographical area throughout the state. Therefore, the percentage figures that are presented in this report will closely represent not only the state's fire problems, but individual localities as well. This report is also the first full year's fire report of this kind for the State of Idaho.

ALL CALLS

A total of 6,515 calls were answered by the reporting departments. Of these calls, 3,007 were fires; 37 overpressure ruptures; 317 rescue; 980 hazardous conditions; 313 service calls; 952 good intent; 819 false alarms; and 90 calls not classified in the other categories. Mutual aid was given and received between fire departments 283 times during this time, indicating a cooperative effort of fire jurisdictions in our state regarding large fires.

CASUALTY SUMMARY

There were 53 civilian fire-related casualties of which 8 were reported as deaths. There were also 46 injuries of fire service personnel. A more in-depth study of this category is needed but, as yet, is not in the state computer programming. Plans are being made to do so, however.

ALL FIRES

Of the total 3,007 fires, there were 1,270 structure fires; 178 outside fires with value; 496 vehicle fires; 741 brush/grass fires; 276 refuse/garbage fires; 11 explosions; 19 spill fires; and 16 fires not classified as above. Extinguishment or fire fighting equipment had to be used 2,296 times or 76.35% of the time. The rest of the total required fire department personnel and equipment to investigate and/or abate a hazard that existed.

ANALYSIS: 76.35% of all reported fires required the use of fire fighters and fire fighting equipment, which indicates that most of the time fires are out of control and beyond the capability of the general public to control them upon the arrival of the fire department. The rest of the total indicates that the general public had to rely on fire departments to abate hazards that existed.

TOTAL FIRES BY MONTH

	Structure Fires	Vehicle Fires	Outside/Rest of Fires	Total
Jan.	126 - 9.92%	30 - 6.04%	13 - 1.04%	169 - 5.62%
Feb.	80 - 6.29%	19 - 3.83%	23 - 1.85%	122 - 4.05%
Mar.	71 - 5.59%	16 - 3.22%	62 - 4.99%	149 - 4.95%
Apr.	92 - 7.24%	35 - 7.05%	108 - 8.70%	235 - 7.81%
May	76 - 5.98%	38 - 7.66%	131 - 10.55%	245 - 8.14%
Jun.	76 - 5.98%	58 - 11.69%	181 - 14.58%	315 - 10.47%
Jul.	86 - 6.77%	54 - 10.88%	229 - 18.45%	369 - 12.27%
Aug.	64 - 5.03%	63 - 12.70%	238 - 19.17%	365 - 12.13%
Sep.	69 - 5.43%	44 - 8.87%	116 - 9.34%	229 - 7.61%
Oct.	102 - 8.03%	59 - 11.89%	72 - 5.80%	233 - 7.74%
Nov.	172 - 13.54%	37 - 7.45%	49 - 3.94%	258 - 8.57%
Dec.	256 - 20.15%	43 - 8.66%	19 - 1.53%	318 - 10.57%
	1,270	496	1,241	3,007

The percentages listed are of the totals in each category.

ANALYSIS: In the structure fire category, the winter months are by far the months with the most incidents. This is because of heating system caused fires as this report will show farther on. The summer months, however, had a higher total because of the outside increases due mostly to weed burning. The vehicle category shows some increases in the spring/summer months, probably because of increased vehicle use by the public. In looking at the whole year by month, there is really no month that fire departments don't have to be prepared for.

TOTAL FIRES BY DAY OF WEEK

	Structure Fires	Vehicle Fires	Outside/Rest of Fires	Total
Sunday	170 - 13.38%	64 - 12.90%	175 - 5.81%	409 - 13.60%
Monday	164 - 12.91%	78 - 15.72%	188 - 6.25%	430 - 14.29%
Tuesday	191 - 15.03%	66 - 13.30%	178 - 5.91%	435 - 14.46%
Wed.	180 - 14.17%	68 - 13.70%	175 - 5.81%	423 - 14.06%
Thurs.	200 - 15.74%	66 - 13.30%	156 - 5.18%	422 - 14.03%
Friday	191 - 15.03%	90 - 18.14%	168 - 5.58%	449 - 14.93%
Sat.	174 - 13.70%	64 - 12.90%	201 - 6.68%	439 - 14.59%
	1,270	496	1,241	3,007

ANALYSIS: There isn't any day of the week that stands out from the other. It again may point out that there is no day we can let down our guard.

TIME OF ALARM

0000-0400	135 - 10.62%	34 - 6.85%	90 - 7.29%	259 - 8.61%
0400-0800	117 - 9.21%	38 - 7.66%	32 - 2.59%	187 - 6.21%
0800-1200	215 - 16.92%	86 - 17.33%	126 - 10.21%	427 - 14.20%
1200-1600	235 - 18.50%	137 - 27.62%	414 - 33.57%	786 - 26.13%
1600-2000	295 - 23.22%	119 - 23.99%	346 - 28.06%	760 - 25.27%
2000-2400	271 - 21.33%	80 - 16.12%	225 - 18.24%	576 - 19.15%
	<u>1,270</u>	<u>496</u>	<u>1,233</u>	<u>3,007</u>

ANALYSIS: Incidences are significantly higher in the 8:00 A.M. - 12:00 P.M. area, 84.75%. This indicates that most fires are caused by careless acts of people, as these are the hours when people are active. I would suspect that the higher dollar losses are in the 12:00 P.M. - 8:00 A.M. time frame because few people would be around to report fires at their early stages.

SMOKE AND HEAT DETECTOR PERFORMANCE

Of the 1,270 structure fires reported, 843 or 66.37% did not have any detectors at all. Even residential properties did not have detectors in 63.29% of their total of fires. In the properties that did have detectors, there is a mixed success rate. For example:

Detector in room of fire and operated	53
Detector not in room of fire and operated	41
Detector in room of fire and not operated	12
Detector not in room of fire and not operated	54
Detector in room of fire/fire too small to operate	42

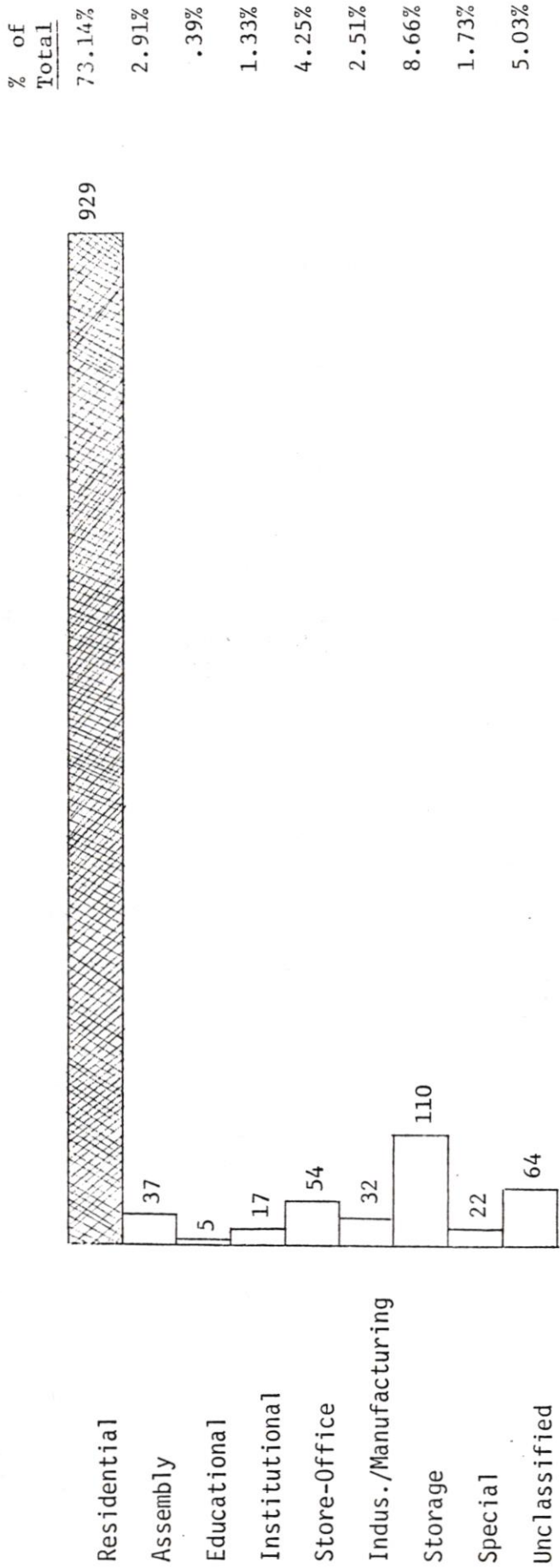
ANALYSIS: The most glaring statistic here is that we still show very few detectors in buildings that are involved in fire. It makes one wonder if more detectors were present if there would be as many reported fires, because some of them would be detected at an earlier stage and perhaps extinguished by the occupants. The example shows that detectors have to be maintained or they will not operate. I would suspect that batteries are not being replaced or people are unhooking the wired-in models when they sound an alarm from just being dirty. This whole area of detectors is going to need more emphasis from public education programs.

FIRE SPRINKLER PERFORMANCE

Of the 1,270 structure fires reported, only 25 sprinklered buildings were involved with fire. 7 sprinkler systems worked properly, while 4 did not, and in 14 occurrences the fires were too small to trip the sprinkler heads and were extinguished before the systems could operate.

ANALYSIS: It is not unusual to have this few sprinklered buildings when most of the total structures involved were residential (929). What is unusual is to find 4 systems that did not operate. The national average on sprinklers operating properly is 96% while ours shows 57% failure, 4 out of 7. Fire inspection personnel are going to have to insist that these systems be maintained as per code.

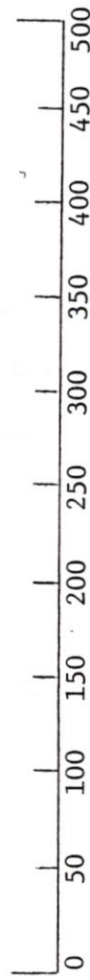
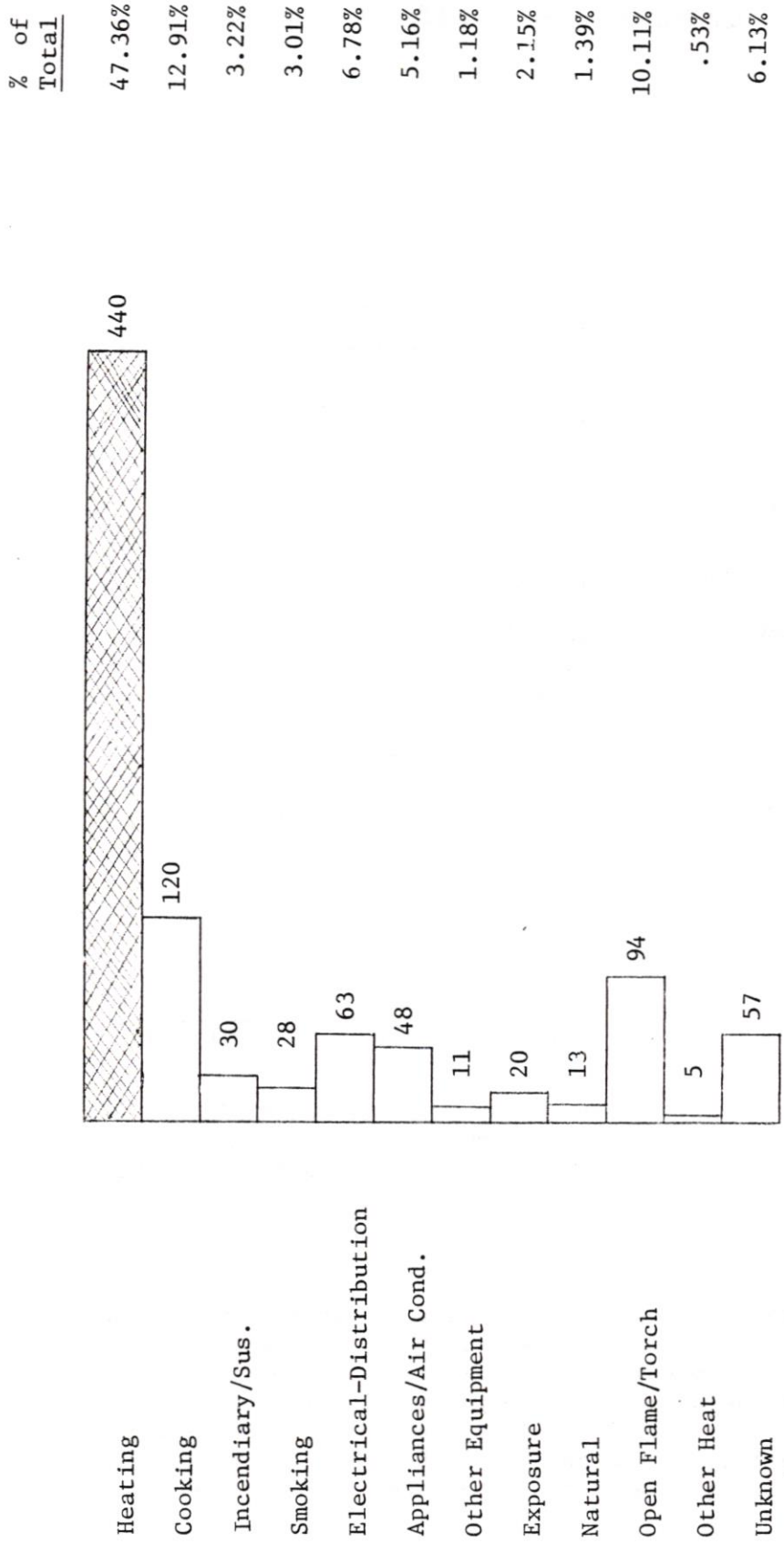
TOTAL STRUCTURE FIRES
(1,270 FIRES)



ANALYSIS: Residential properties far outnumber the other categories in total number of fires. Most of these properties are exempt from inspections by law, which indicates that inspection practices on the other types of properties are working well. It also indicates that we must give more priority to residential properties in our fire prevention programs.

CAUSES OF RESIDENTIAL PROPERTY FIRES

(929 FIRES)

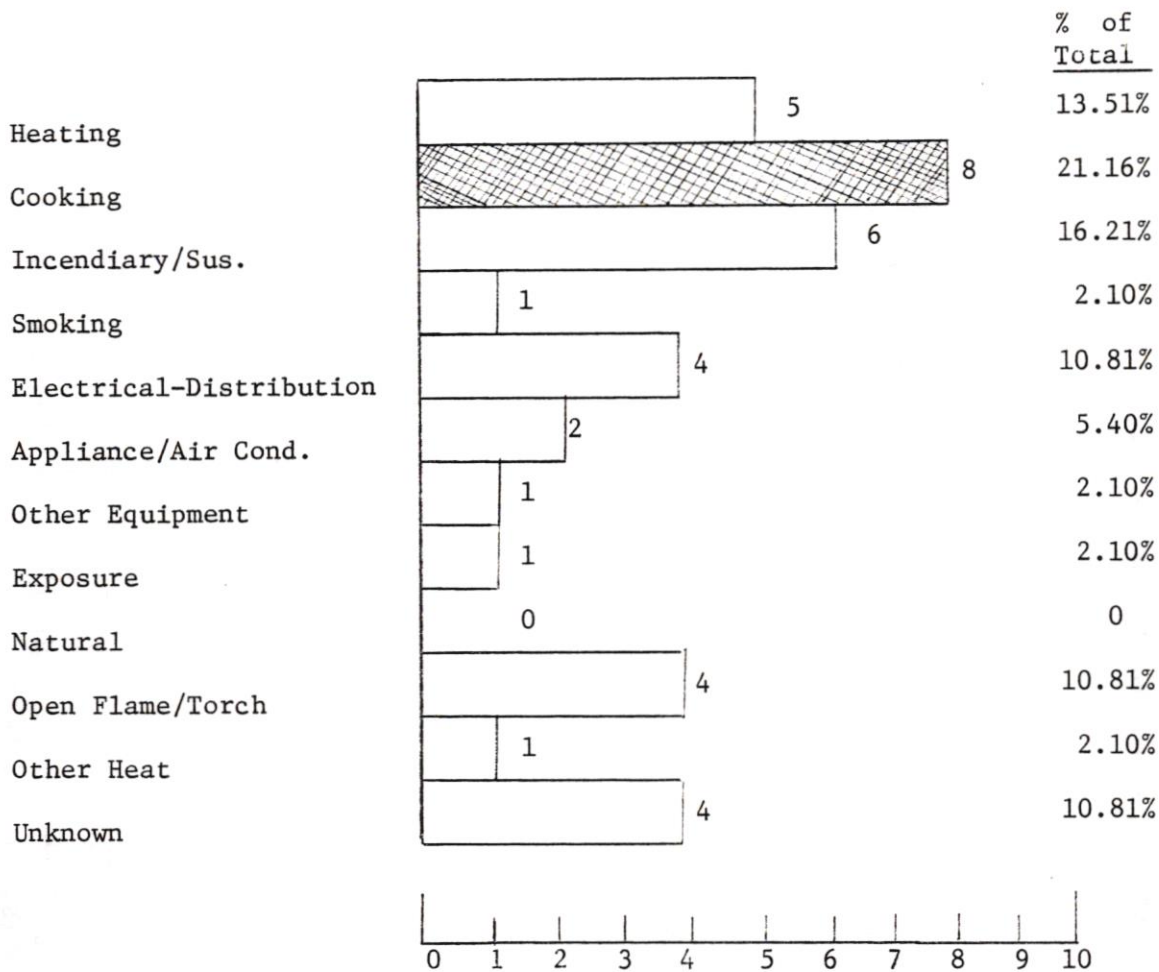


Residential Property Description: 1-2 Family Dwellings, Apartments, Hotels, Dormitories.

ANALYSIS: The heating problem far outweighs any other fire causes in this category. This problem has been brought on by the energy crunch, whereby people have been seeking alternative heating systems for their homes. The most sought after alternative has been wood heating systems which accounted for 345 fires or 37.14% of the total. Much more educational work needs to be done in this area, as well as inspections of stove installations by fire departments and insurance companies.

CAUSES OF ASSEMBLY PROPERTY FIRES

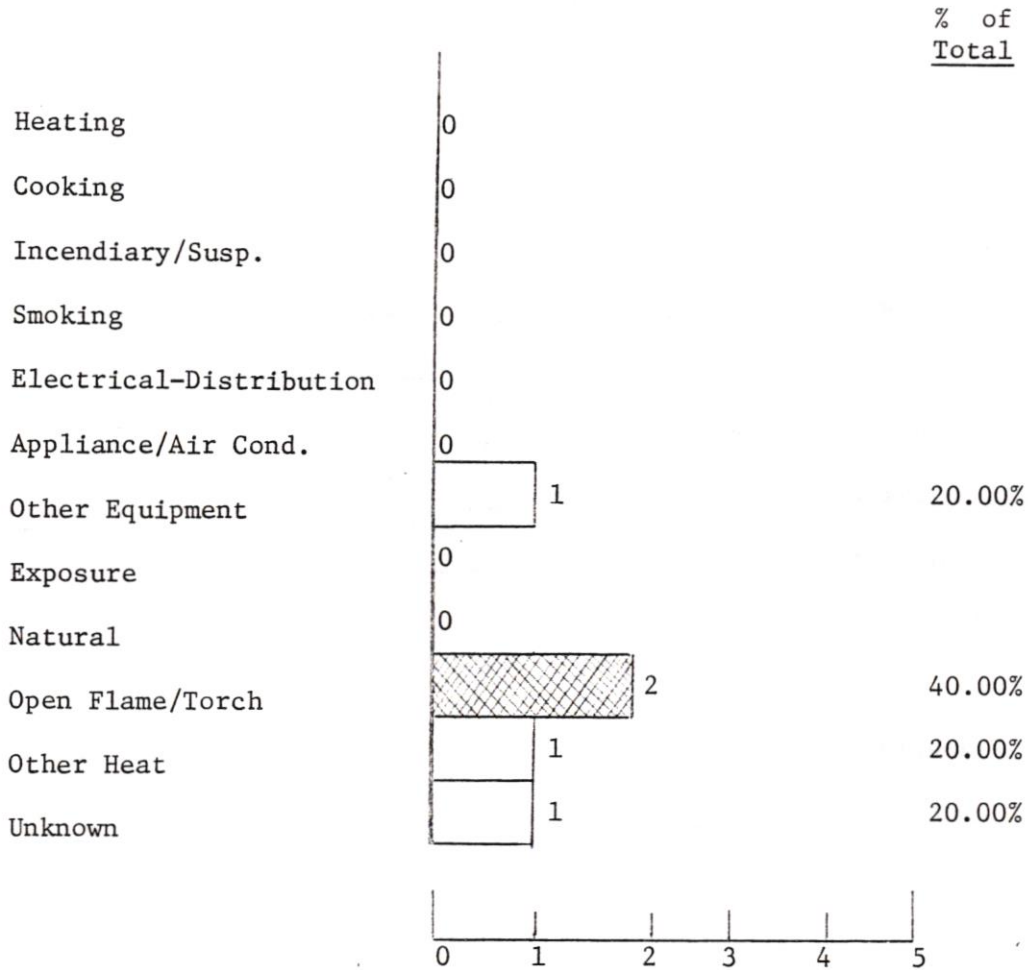
(37 FIRES)



Assembly Property Description: Bowling Centers, Gymnasiums, Churches, Eating-Drinking Places, or any place for the gathering of people for amusement recreation, social, religious, and similar purposes.

ANALYSIS: This is not a bad fire record considering the number of buildings that fit into this category in our state. However, these buildings must get very close inspections because of the potential life-safety hazards involved. The report indicates that heating and cooking facilities should be looked at more closely, as this type of equipment does deteriorate over the years.

CAUSES OF EDUCATIONAL PROPERTY FIRES
(5 FIRES)

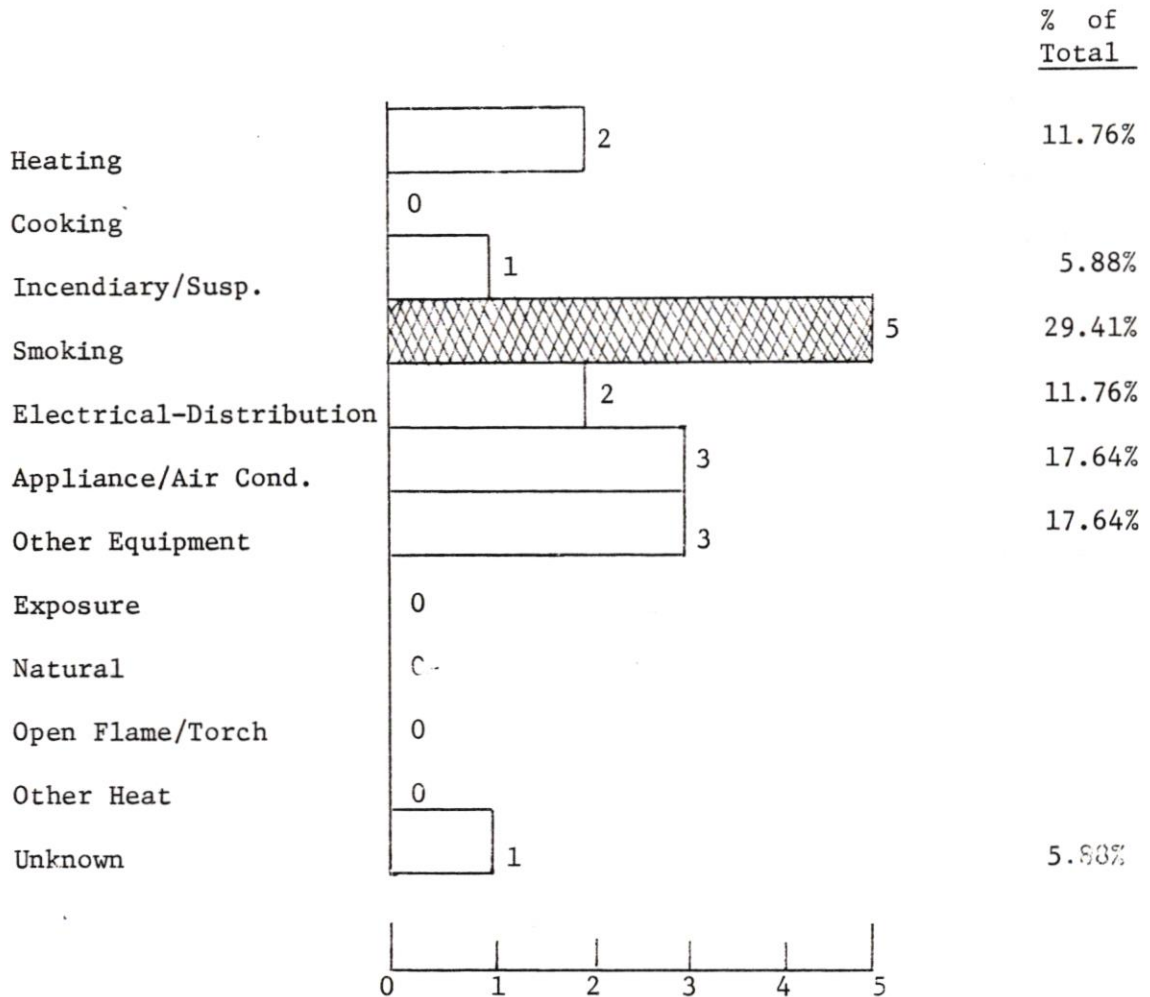


Educational Property Description:
Public and private schools of all kinds.

ANALYSIS: This category shows a very good fire record for the year. The reason for this is that these properties are heavily inspected and generally very well supervised by faculty and custodial staff. The causes and incidences are so few that one can only say, "keep up the good work."

CAUSES OF INSTITUTIONAL PROPERTY FIRES

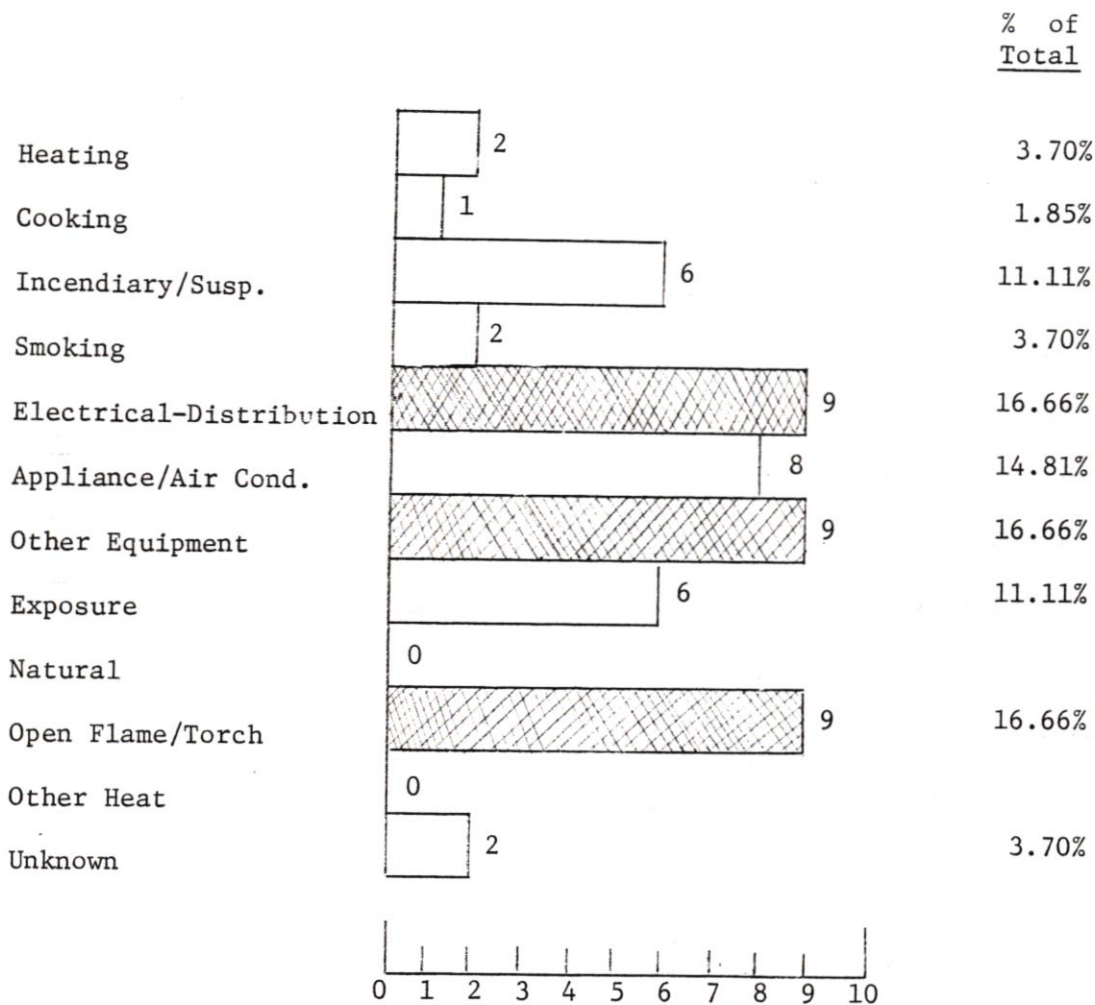
(17 FIRES)



Institutional Property Description:
Nursing homes, Hospitals, Prisons,
Jails, Sanitariums, care of the young
and aged.

ANALYSIS: Another good fire record in this category because these properties are heavily inspected and generally have around-the-clock supervision. Smoking is the leading cause here, and this should be emphasized during inspections. This property also has a high life-safety potential.

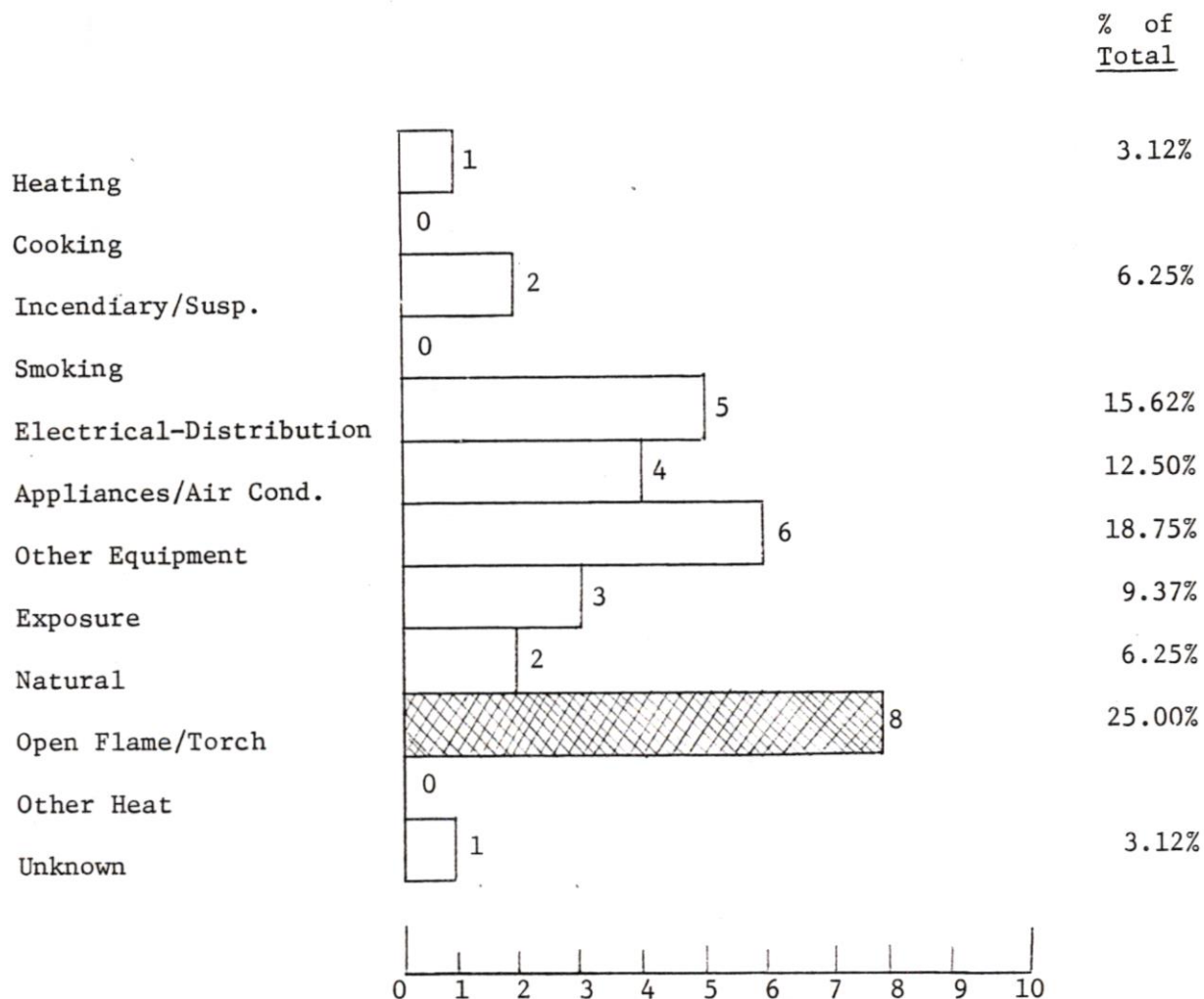
CAUSES OF STORE-OFFICE PROPERTY FIRES
(54 FIRES)



Store/Office Property Description:
Structures for the display, sale or repair of merchandise. Office properties are used for the transaction of business, keeping of public, private records.

ANALYSIS: Not a bad fire record for this category, again probably because they are generally inspected for fire hazards. The leading causes are electrical, appliances, and other equipment. These are all mechanical additions and do deteriorate with use and age. This indicates that these areas should be closely inspected. The other leading category is Open Flame, which could indicate some rubbish build-up which frequently takes place in these occupancies that handle a lot of freight.

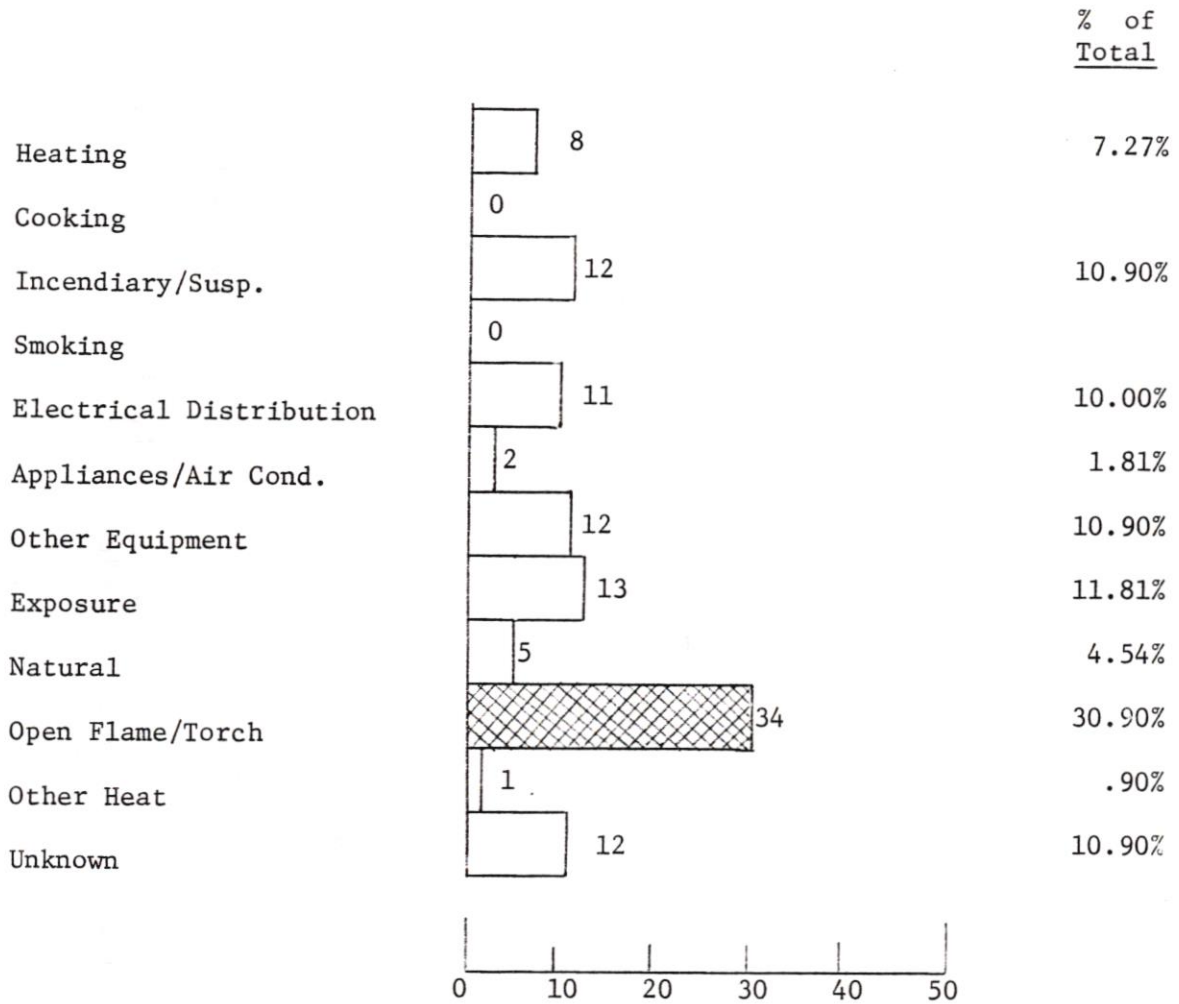
CAUSES OF INDUSTRIAL/MANUFACTURING PROPERTY FIRES
(32 FIRES)



Industrial/Manufacturing Property Description:
Factories making products of all kinds, processing, assembling, mixing, finishing, etc.

ANALYSIS: Not too bad a fire record, but the largest dollar losses in the state are found in this category. Also, this category would have the largest indirect losses, such as loss of jobs, tax base, etc. The report shows some carelessness with fire in the Open Flame/Torch area and problems in the electrical and mechanical area. These would be areas to watch for in your inspections.

CAUSES OF STORAGE PROPERTY FIRES
(110 FIRES)



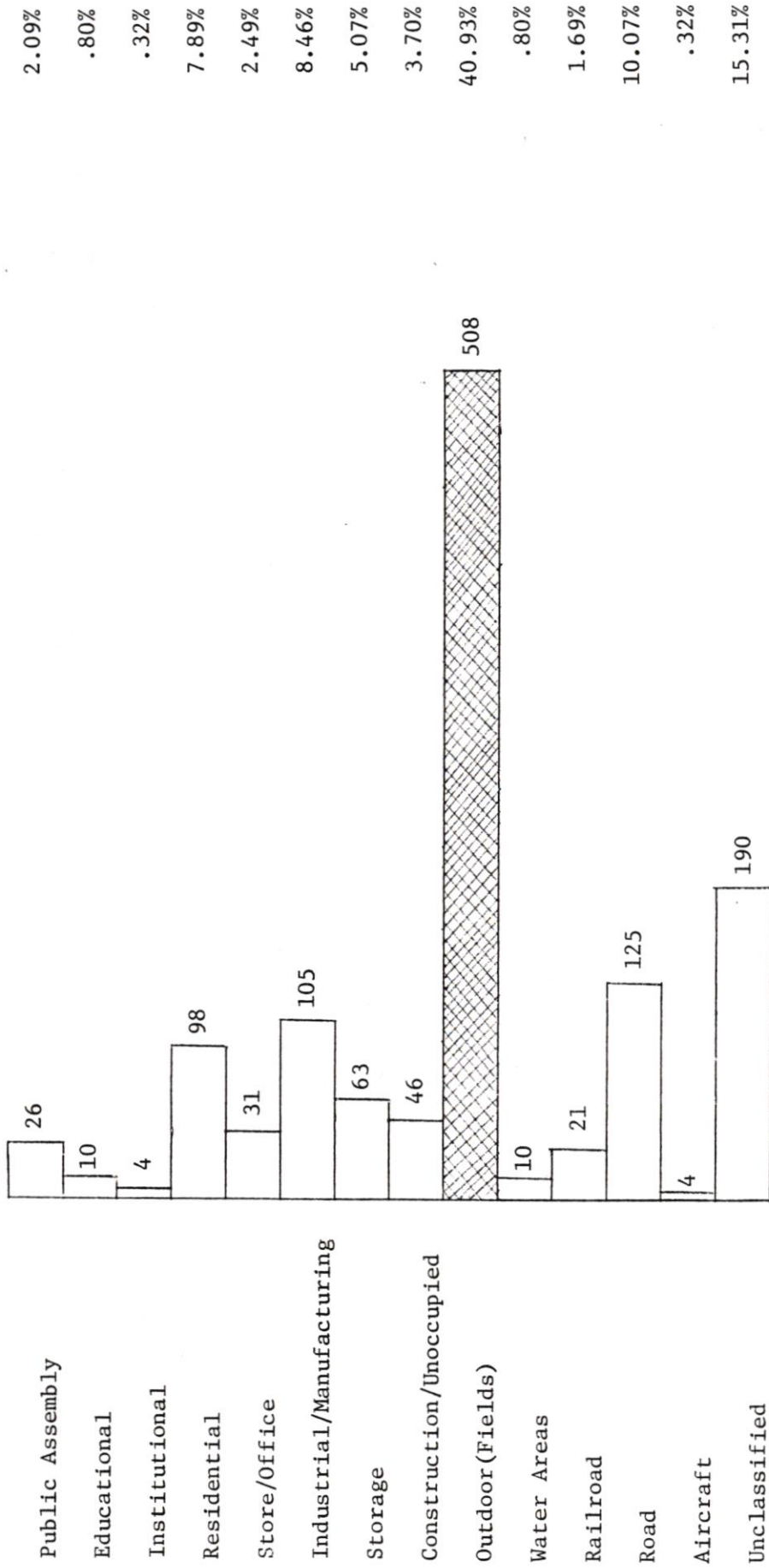
Storage Property Description:
Barns, Warehouses, Garages, Gasoline
Tanks, or all buildings used primarily
for storage or sheltering of goods,
merchandise, products, etc.

ANALYSIS: The leading cause in this category is Open Flame/
Torch, which runs the gamut from welding to open burning.
This means plain carelessness by people in these occupancies.
There also seems to be a high incidence of arson in this
category as well; this could bear watching. Still, consider-
ing the many properties of this type in Idaho, this is not too
bad a fire record.

OUTSIDE FIRES BY PROPERTY USE

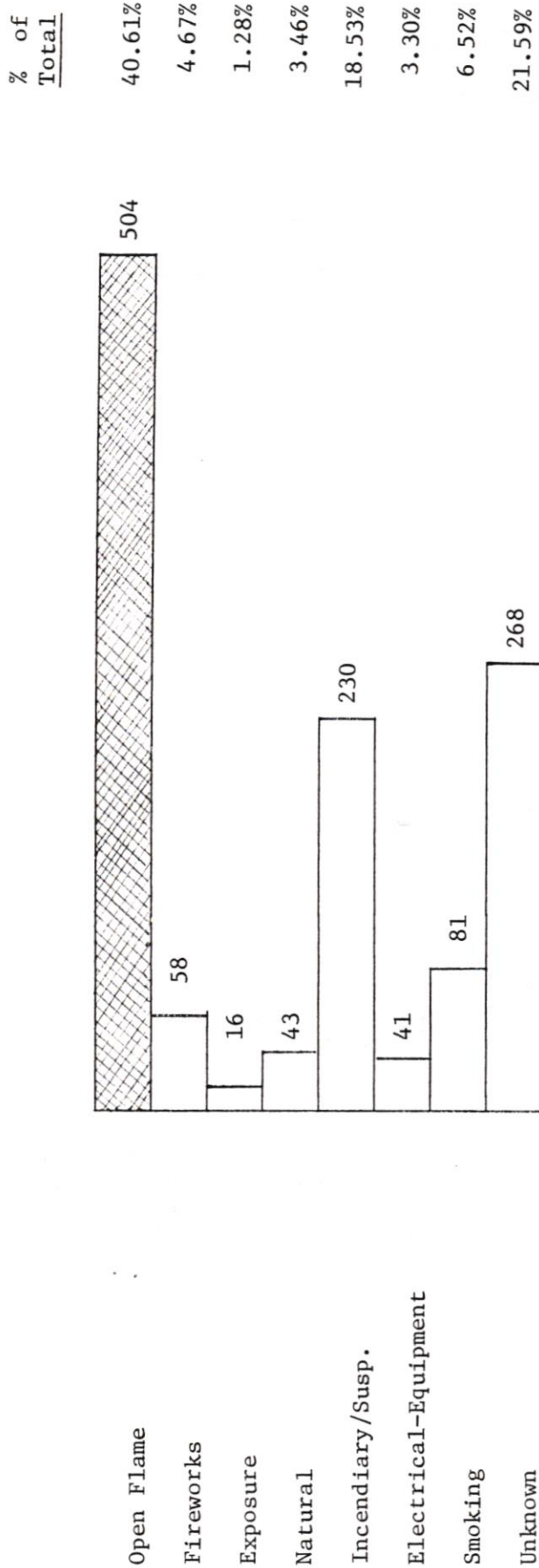
(1,241 FIRES)

% of
Total



ANALYSIS: This is a large amount of total fires that could be reduced with a good community clean-up campaign. Almost all of these fires are attributable to a build-up of rubbish and weeds. Removal of these fuel sources is the only way to rid ourselves of these fires. A lot of these fires are attributable to people who are burning weeds off fields, fence rows, and ditches on a windy day and the fire gets away from them. A good preventive measure here would be a burning permit program and only allowing burning on calm days.

CAUSES OF OUTDOOR PROPERTY FIRES
(1,241 FIRES)

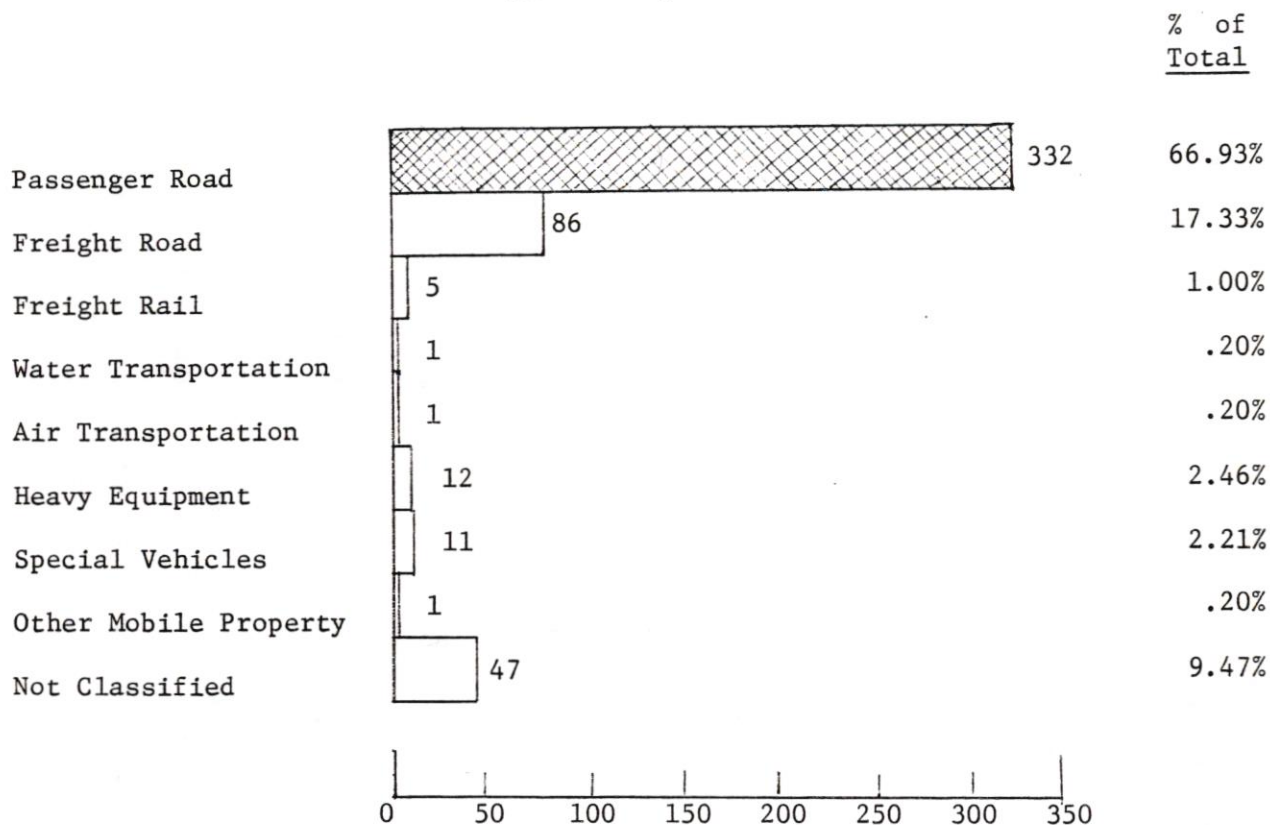


Outdoor Property Description: Vacant, idle, open fields, signs, fence rows, ditch banks, garbage piles, etc.

ANALYSIS: Open Flame being the leading cause fortifies that generally these fires start out as a controlled burn. There is a high incidence of arson in this category as well, which is generally an act of mischief in these type of fires. Also, a lot of unknown causes indicate that fire cause investigations may be a low priority in this category. It shouldn't be.

VEHICLE FIRES

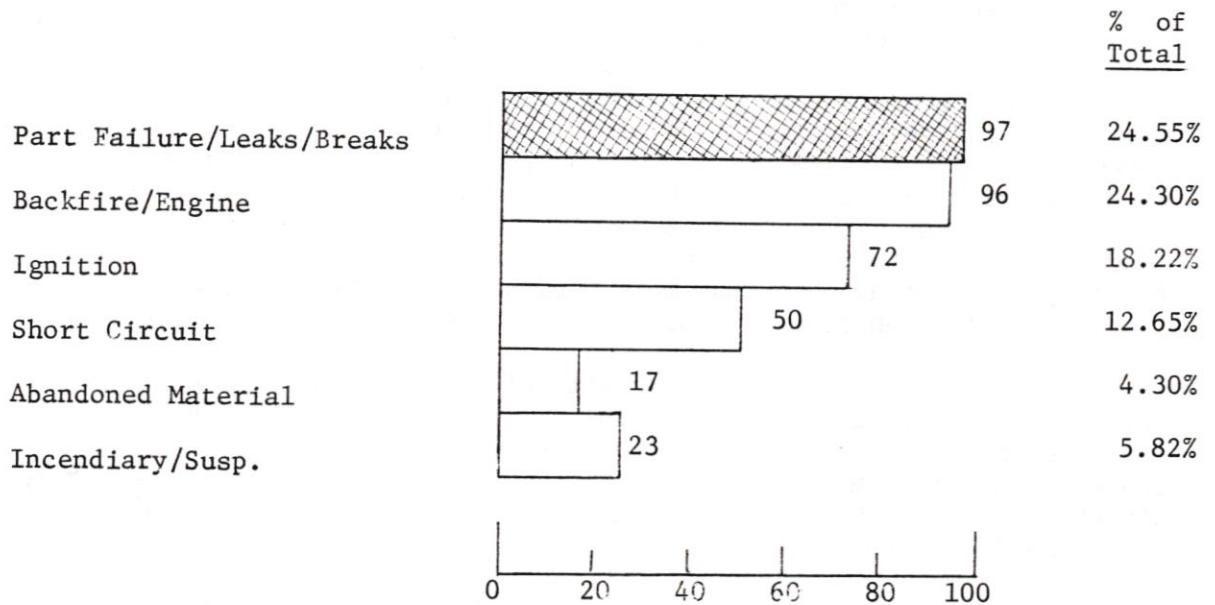
(496 FIRES)



Vehicle Description: Automobiles, Trucks, Airplanes, Railroad Cars, Ships, Heavy Equipment, Travel Trailers, etc.

ANALYSIS: Passenger vehicles are by far the leading properties involved in this category, probably because they would outnumber the rest considerably. Freight road vehicles are next. Combining these two properties, we have 84.26% of the total. It looks as though anything that travels on the highways is far more hazardous than the other means of travel.

CAUSES OF VEHICLE FIRES
(6 MOST FREQUENT FIRE CAUSES)



ANALYSIS: The most preventable cause here would be the backfire/engine category. Most of these fires are attributable to out-of-tune engines and lack of an air cleaner on the carburetor. The others show perhaps a lack of maintenance or even faulty manufacturing. I feel there is also a much larger arson problem with vehicles than this report shows. I don't think enough investigative work is done here.

SUMMARY:

In analyzing the entire year's fire experience, one thing is quite evident. The properties that are being inspected according to the fire code have much fewer fires than the other properties. Residential properties, for example, total 929 incidences against 1,270 total structure fires. Residential properties are exempt from inspections by law in the 1 - 2 family dwelling category. The other properties are being inspected by fire jurisdictions in the more densely populated areas. The biggest fire losses for the year occurred in areas of the state where no inspection practices are being done. These properties accounted for approximately \$8,200,000 of the total estimated state loss of \$15,846,354, and this total loss is considering vehicle and outside fires as well. The \$8,200,000 figure is for only three structures that were reported to be preventable fires. Had inspection practices been done in those areas, I feel these fires wouldn't have occurred.

This whole report only proves the worth of good code enforcement and prevention practices. I will be working for the day when these things can be done statewide. I can see millions of dollars being saved in direct fire losses, as well as countless millions more in indirect losses. Indirect losses is a term used to describe loss of jobs, tax base, increased insurance premium, and personal taxes as a result of fire.

I feel that, overall, Idaho has a fairly good fire record, especially in the areas where fire prevention is being practiced. However, prevention is going to have to become a part of the fire service delivery system in all areas of the state someday if we are going to stay ahead of the game. I also feel that public fire education is going to have to be emphasized more, as the highest number of fire causes is still by people doing careless things.

Respectfully submitted



Bill Wallis
State Fire Marshal

BW:pr