
Study Methodology

APPENDIX A

This appendix explains the process we followed to conduct this best practices review of fire services. It describes the steps we took, the general timeline we followed, and the assistance we received from fire service personnel and state and local government representatives.

BACKGROUND RESEARCH

In conducting this review we gathered information from a variety of sources. We began with a literature review of materials relevant to a broad range of fire department services. To help define the scope of this review, we invited fire personnel, state and local government officials, legislators, and others interested in fire department services to a roundtable discussion in June 1998. At this meeting, 54 participants, in addition to Legislative Auditor's Office staff, discussed key issues and presented ideas for topics to include in the review. We also spent time speaking with fire chiefs, visiting fire departments of different sizes located in various regions of the state to learn about their equipment and apparatus and observe their emergency responses, and interviewing state officials and others involved in this topic. We also attended meetings of fire service organizations to learn about current issues in the fire service.

TECHNICAL ADVISORY PANEL

Throughout this review, an 18-member panel comprised of fire service personnel and other professionals assisted us in our study. The role of this panel was to provide expertise and comments from the local fire departments' perspectives on various issues and draft materials as we conducted the study. To receive feedback from a variety of viewpoints, we selected technical panel members from various types and sizes of fire departments and different regions of the state, as well as representatives from state and local agencies. Members from the major fire organizations in the state served on the advisory panel.

We are grateful to the panel members for their advice and help. The Legislative Auditor's Office remains responsible for the content of this report; panel members may or may not agree with the conclusions and recommendations of our study. Table A.1 lists the individuals that served on our technical panel (titles indicate the person's position as our study began).

Table A.1: Technical Advisory Panel Members, 1999

Marilyn Arnlund, Fire Marshal, Maple Grove; Fire Marshal's Association of Minnesota (FMAM) Vice-President

Al Bataglia, Assistant Fire Chief, St. Paul Fire and Safety Services Department

Jeffrey Brennan, President, Minnesota Professional Fire Fighters

Duane Flynn, Fire Chief, Duluth Fire Department

David Ganfield, Member, Richfield Fire Department; Secretary, Minnesota State Fire Department Association (MSFDA)

Jeff Juntunen, Fire Chief, Esko Fire Department; Minnesota State Fire Chiefs' Association (MSFCA) Arrowhead Region 3 representative

Kim Kallestad, Fire Chief, Stillwater Fire Department

Kevin Leuer, Hazardous Materials Manager, Division of Emergency Management; District Fire Chief, Plymouth Fire Department

Tim Madigan, Faribault City Administrator

Charles McLaughlin, Captain, Crosby Fire Department; MSFDA Region 5 representative

Les Miller, Fire Chief, Rice Lake Township Fire Department

Jon Nisja, Code Development Bureau Chief, State Fire Marshal Division; FMAM President

Jerry Pawelk, Fire Chief, Lester Prairie Fire Department; MSFCA Region 10 representative

Tom Pressler, President, MSFDA; retired member of Bloomington Fire Department

Jerry Rosendahl, Fire Chief, Owatonna Fire Department; MSFCA Board of Directors Chair

Ulie Seal, Fire Chief, Bloomington Fire Department; MSFCA Parliamentarian

Dan Wilson, Fire Chief, Austin Fire Department

Nyle Zikmund, Fire Chief, Spring Lake Park - Blaine - Mounds View Fire Department; MSFCA legislative chair

Consultant

We retained a consultant to answer technical questions, comment on draft documents, and provide information on the strengths and weaknesses of various practices. He also joined us on a number of our site visits to fire departments around the state. Our consultant was **Gregg Davies**, former Carver County Emergency Management Director and Chaska Fire Department member.

SURVEY METHODOLOGY

To gather information on fire services in Minnesota, we surveyed fire departments and fire marshal offices on their operations, practices, revenues, and expenditures for the 1997 calendar year. We used the survey responses to supplement data obtained from the State Fire Marshal's Division, the Department of Revenue, and the State Demographer's office. We developed survey questions based on fire department standards compiled from our literature review, and pretested them with our technical panel members and other fire chiefs.

We developed two separate survey instruments: a full survey for larger fire departments and a shorter one to lessen the time burden for fire chiefs in small volunteer departments. We mailed the full 71-question survey to all departments that according to State Fire Marshal data were staffed by (1) entirely full-time members, (2) by a combination of full-time and volunteer or paid on-call members, or (3) volunteer or on-call departments in cities with populations greater than 8,000. We mailed a shorter 24-question survey to a stratified random sample of volunteer and paid on-call departments located in communities with less than 8,000 population. To ensure all geographic regions in the state were represented in the sample, we grouped these small departments according to the 13 economic development regions in the state and randomly selected 65 percent of fire departments in each region.

In mid-October 1998, we mailed surveys to 555 fire departments with an initial due date three weeks later. Along with the survey and cover letter, we

enclosed a letter from the Minnesota State Fire Chiefs' Association encouraging fire chiefs to respond. For a higher response rate, we mailed follow-up letters and surveys to fire departments that had not responded by the first due date. Staff also made phone calls to several hundred fire chiefs requesting they return a completed survey.

We received completed surveys from 88 of the 101 large volunteer or on-call, combination, and full-time departments in time for analysis, for a response rate of 87 percent. The results have a margin of error between plus or minus 4 percentage points. Because many respondents did not answer all questions in the survey, the margin of error may be larger for responses where the number of respondents is low. In addition, the practical difficulties of conducting any opinion survey may introduce other sources of error that cannot be measured.

Of the 454 small volunteer departments we surveyed, 307 returned surveys in time for analysis for a response rate of 68 percent. Survey results from our sample have a margin of error ranging between plus or minus 4 percentage points due to sampling error. The margin of error may be larger for responses to particular questions where the number of respondents is low. The departments selected to participate are listed below. At the end of this appendix, we list the aggregate results for both surveys.

Fire Departments Included in Survey

Table A.2 lists the fire departments to which we mailed our full survey. Full-time and combination departments are footnoted. All other fire departments are either volunteer or paid on-call departments located in communities with populations greater than 8,000. Three departments, Chisholm, Ely, and Eveleth, received our full survey even though these cities have populations under 8,000 population because State Fire Marshal data designated them as combination departments. We included their responses in our analysis of the full surveys.

Some local fire marshals operate independently of the fire departments in their community. With help

Table A.2: Full-time, Combination, and Large Volunteer or Paid On-Call Departments Receiving Survey

* Albert Lea ¹	* Crookston ¹	* Hopkins	* New Ulm	*St. Peter
* Alexandria	* Duluth ²	* Hutchinson	* North Mankato	*Sauk Rapids
Andover	Eagan	* International Falls	* North St. Paul	Savage
* Anoka-Champlin	East Bethel	* Inver Grove Heights	* Northfield	*Shakopee
* Apple Valley	East Grand Forks	* Lake Johanna Volunteer	* Oakdale	*South St. Paul ²
* Austin ¹	* Eden Prairie	* Lakeville	* Owatonna ¹	*Spring Lake Park-
* Bemidji ¹	* Edina ¹	* Little Canada	* Plymouth	Blaine-Mounds View
* Bloomington	* Elk River	* Little Falls	* Prior Lake	*Stillwater ¹
* Brainerd City ¹	* Ely ³	Mankato	* Ramsey	*Thief River Falls ¹
* Brooklyn Center	* Eveleth ³	* Maple Grove	* Red Wing ¹	*Vadnais Heights
* Brooklyn Park	* Fairmont	* Maplewood	* Richfield ²	*Virginia ²
* Buffalo	Faribault	* Marshall	* Robbinsdale	*Waseca
* Burnsville ²	* Farmington	* Mendota Heights	* Rochester ²	*West Metro
Centennial	* Fergus Falls	* Minneapolis ²	* Rochester Airport ²	Fire-Rescue District
* Chanhausen	Fort Snelling	* Minnetonka	* Rosemount	*West St. Paul ²
* Chaska	* Fridley ¹	Montevideo ⁴	Roseville	*White Bear Lake
* Chisholm ³	* Golden Valley	* Moorhead ²	* St. Anthony ¹	*Willmar
* Cloquet ²	* Grand Rapids	Mound	* St. Cloud ¹	*Winona ¹
* Columbia Heights ¹	* Ham Lake	* Minneapolis/St. Paul	* St. John's University	*Woodbury
* Coon Rapids ¹	* Hastings ¹	International Airport ²	* St. Louis Park ¹	Worthington
* Cottage Grove	* Hibbing ¹	* New Brighton	* St. Paul ²	

Note: An asterisk (*) depicts fire departments from which we received completed surveys in time for analysis.

¹Combination fire department staffed with 6 or more full-time members.

²Fire department staffed with all full-time members.

³Paid on-call fire department in communities with less than 8,000 population.

⁴Returned survey too late to be included in our analysis.

from the Fire Marshal’s Association of Minnesota, we identified 11 such fire marshals and mailed to them questions pertinent to fire prevention, inspections, and fire-code enforcement. Table A.3 lists the communities of these fire marshals.

Table A.3: Local Fire Marshal Offices Receiving Survey

* Blaine	* Mendota Heights
* Bloomington	New Brighton
* Fairmont	* Plymouth Fire Inspector
* Farmington	* Rosemount
* Inver Grove Heights	* Roseville
* Little Canada	* Spring Lake Park
* Maple Grove Fire Prevention Bureau	

Note: An asterisk (*) depicts fire marshal offices from which we received completed surveys by the response deadline.

Table A.4 lists the smaller community fire departments to which we mailed our shorter survey. These communities all have populations less than 8,000.

PERFORMANCE MEASURES FOR FIRE SERVICES

To help identify effective and efficient fire department practices, we reviewed statutes, rules, standards, and guidelines from the state and federal governments and from the fire service industry. We relied on these laws and standards to identify goals and actions for effective and efficient fire department service. We reviewed the actions for successful fire services with our technical panel and with focus groups of fire fighters, as described below.

Table A.4: Small Volunteer and Paid On-Call Departments Receiving Survey

* Adrian	* Browerville	* Cromwell Volunteer	* Floodwood	* Harmony
* Aitkin	Browns Valley	* Crooked Lake Volunteer	* Foley	Harris ¹
* Albany	* Brownsville	* Crosby Volunteer	* Forada Twp.	* Hawley
* Albertville	* Brownton Volunteer	Crosslake	* Foreston	* Hayward
* Alden	* Bruno	Culver	* Fountain	* Henning Volunteer
* Almelund	* Buffalo Lake	Currie Volunteer	Franklin	* Heron Lake Volunteer
* Alpha	* Buhl Volunteer	* Dalbo	* Fredenberg	* Hill City
Alvarado Volunteer ¹	Butterfield	* Dawson	* Freeport	* Hills
* Amboy	* Buyck Community	Dayton ¹	* French Twp. Volunteer	* Hitterdal
* Annandale	Volunteer	De Graff	Frost	* Hoffman
* Arco	Byron	* Deer Creek	* Fulda	Hokah Volunteer
* Argyle	Callaway	* Deerwood	Garfield	* Holdingford
* Arrowhead	Calumet	* Delavan Volunteer	* Garrison	* Holland
* Askov Volunteer	* Cambridge	Dennison	* Garvin	* Hollandale
* Atwater	* Campbell	* Dent	* Gary Volunteer	* Houston
* Audubon	* Canby	* Detroit Lakes	* Gaylord	Hovland
* Aurora	* Cannon Falls	* Dexter Volunteer	Geneva	* Hoyt Lakes
* Babbitt Volunteer	* Canton	* Dilworth	Ghent	Ideal Twp.
* Backus Volunteer	* Carlos	Dodge Center	* Gibbon	* Industrial Volunteer
* Balsam Volunteer	Carlton Volunteer	* Dover	Gilbert	* Iona
* Barnesville	* Carver	* Dumont	* Glencoe	* Ironton
* Barrett	* Cass Lake	* Dunnell-Lake Fremont	* Glyndon Volunteer	* Isanti Volunteer
* Baudette	Central Lakes Volunteer	* Eagle Lake Volunteer	Gnesen Volunteer	Itasca Twp. Volunteer
* Bear Creek	* Ceylon	* East Hubbard County	* Gonvick	Jackson
Bearville Twp.	Chisago City	Fire Protection District	* Goodhue	Jacobson
* Beaver Bay Volunteer	* Chokio	* Echo	* Goodland Volunteer	* Janesville
* Belgrade	* Clara City	* Eden Valley	* Goodridge Area	* Jasper
Bellingham	Claremont	* Eitzen	* Granada	Jeffers
* Beltrami	* Clarissa	Elbow Lake ¹	* Grand Lake Volunteer	* Jordan
Bena	Clarkfield	* Elgin	* Grand Marais Volunteer	* Kabetogama
* Bethel	* Clarks Grove Volunteer	* Ellsworth	* Grand Meadow	Kandiyohi
* Big Lake	Clearbrook	* Elmer	Grand Portage	Karlstad Volunteer
* Bigfork Volunteer	* Clements	* Elrosa	* Granite Falls	* Kasota
* Birchdale Rural	* Climax	* Elysian	* Grasston	* Keewatin Volunteer
Bird Island	* Clinton	Emily Volunteer	Greaney-Rauch-Silverdale	Kelsey Volunteer
Biwabik Twp. Volunteer	* Clontarf	* Emmons	* Greenbush	Kennedy
* Biwabik Volunteer	* Cohasset	* Erskine	Grygla	Kenneth Volunteer
Blackhoof	Cokato	* Evansville	* Gunflint Trail Volunteer	* Kensington
Blue Earth	* Cologne	Eyota Volunteer	Hackensack Area	Kent/Abercrombie Fire
Borup	* Comfrey	* Fairfax	Hallock	Protection District
* Bowlus	Conger	* Fayal	* Hamburg	* Kenyon
Boyd	* Cook	Federal Dam	* Hamel	Kerrick
* Brandon	Correll	* Fertile	* Hampton	Kilkenny
Breckenridge	* Cotton Volunteer	* Fifty Lakes	* Hangaard Twp.	Kimball
* Breitung	Cottonwood	Finlayson	Hanska ¹	* La Salle
Brimson Area	* Courtland	* Flensburg	* Hardwick	* La Crescent
Volunteer				

Note: An asterisk (*) depicts fire departments from which we received completed surveys by the response deadline.

¹Returned survey too late to be included in our analysis.

Table A.4: (continued)

* Lake Bronson	* Meadowlands Area	* Ogilvie	* Sacred Heart	Tyler
* Lake Crystal	Volunteer	Oklee	* St. Bonifacius	Ulen
* Lake Elmo	Medford Volunteer	* Olivia	* St. Charles	* Underwood
* Lake George	Medicine Lake	Ormsby	St. Clair	Upsala
Lake Henry	* Melrose	* Oronoco	* St. Francis	Vergas ¹
* Lake Wilson	* Miesville Volunteer	Ortonville	* St. Joseph Volunteer	* Vermilion Lake
* Lancaster	* Milaca	* Oslo	* St. Martin	* Vernon Center
* Lanesboro	* Milan	* Ottertail	* St. Paul Park Volunteer	Vesta
La Porte/Lakeport	* Millerville	* Palisade Volunteer	* St. Stephen	* Villard Volunteer
Le Center	* Milroy	* Palo Regional	* Sanborn	Vining
* Le Roy	* Minneota	Parkers Prairie	* Sandstone Volunteer	* Wabasha
* Le Sueur	* Minnesota City	* Paynesville	* Sauk Centre	* Wabasso Volunteer
* Lester Prairie	* Minnesota Lake	* Pelican Rapids Volunteer	Scandia Valley	* Waite Park
* Lewisville	Monticello	* Pemberton	Scanlon Volunteer	Waldorf
* Lexington	* Montrose	* Pequaywan Lake Area	* Seaforth	Walnut Grove
* Linwood Volunteer	* Mora	Pequot Lakes	* Sedan	Wanamingo
* Lismore	* Morgan	* Perch Lake Volunteer	* Shelly	* Wanda
* Litchfield	* Morris	* Perley-Lee Twp.	Shevlin	* Warba-Feeley-Sago
Littlefork	Morse Twp. Volunteer	* Pickwick Area	* Silver Bay	Warroad
London	Morton	* Pierz	* Silver Lake	Watkins
Long Lake	* Motley	Pine City	Slayton	* Watson Community
Lonsdale	Mountain Iron	* Pine Island	* Sleepy Eye	Fire Fighters Inc.
* Loretto Volunteer	Mountain Lake	* Pipestone	Solway Twp.	Waubun
Lower St. Croix Valley	Murdock	Plato	* South Bend	Welcome
Lutsen Twp. Volunteer	* Nashauk	Plummer	Spring Grove	* Wendell
* Luverne	* Nassau	* Porter	* Spring Valley	* West Brevator Volunteer
* Lyle	* Nerstrand Volunteer	* Preston	* Springfield Volunteer	* West Concord
Madelia	* Nevis	* Princeton	* Squaw Lake	* Westbrook
* Madison Lake	* New Auburn	Prinsburg ¹	* Staples	* Wheaton
* Magnolia	* New Germany	* Randall	Stephen	White Earth Volunteer
* Mahanomen	New London	* Randolph	Stewartville	Williams
Mahtomedi	New Market	* Raymond	* Storden	* Wilmont
* Makinen	* New Munich	* Redwood Falls	* Sturgeon Lake	* Wilson Volunteer
* Manchester	* New Prague	* Remer	* Sturgeon Twp.	* Windom
* Maple Hill	* New Richland	* Renville	Sunburg	Winger
* Maple Lake	* New York Mills	* Revere	* Swanville	* Winnebago Fire Service
* Maple Plain	Nielsville	* Richmond	Taconite	* Winthrop Volunteer
* Mapleton	* Nisswa	* Riverton	* Taylors Falls	Wolf Lake
* Maplevue	Normanna Volunteer	Rockford	Tintah	Wolverton
Marietta ¹	* North Branch	Rogers	* Tofte	* Wood Lake
* Mayer	North Star Twp.	* Rose Creek Area	Toivola Twp. ¹	Wright Volunteer
* Mazeppa Volunteer	* Northome	* Rothsay	* Tower	* Wykoff
McDavitt	Northrop	Round Lake	Trimont	* Wyoming
* McGrath	* Norwood-Young America	* Royalton	Twin Lakes	* Zimmerman
* McIntosh	Oak Grove	* Rushford	Twin Lakes Volunteer	* Zumbro Falls
McKinley Volunteer	* Odessa	* Rushmore	Two Harbors	

Note: An asterisk (*) depicts fire departments from which we received completed surveys by the response deadline.

¹Returned survey too late to be included in our analysis.

We also used these standards to develop measures of performance for fire services. In September 1998, we met with our technical advisory panel to validate these standards of performance. Based on the panel’s feedback, we revised the measures. Combined with data from fire departments’ survey responses, we used the measures to compare performance of Minnesota fire departments and identify departments reporting effective and efficient practices.

FOCUS GROUP METHODOLOGY

To gather reactions and feedback to the actions we identified for effective and efficient service, we sponsored small group meetings, or “focus groups,” of fire personnel in four locations around the state. In the focus groups, participants (1) reviewed the actions we identified as essential to high performance in fire departments, (2) suggested modifications, and (3) identified innovative practices and effective methods in their fire departments.

To organize and facilitate the focus groups, we hired an agency experienced in local government focus group research. The meetings were held in Albert Lea, Alexandria, Grand Rapids, and the Twin Cities in November 1998. Each group included 8 to 11 members from fire departments located in the vicinity of these communities. The participants were randomly selected from rosters supplied by nearby fire departments. For a variety of perspectives, we selected a cross-section of fire officers and fire fighters from all types and sizes of departments. To supplement the focus group responses, representatives of the St. Paul and Minneapolis Fire Departments were interviewed individually. Members of fire departments from 32 communities participated. Table A.5 lists them.

SITE VISITS OF SELECTED FIRE DEPARTMENTS

Using data from our survey and the State Fire Marshal Division to identify fire departments meeting our performance standards, we selected 11 departments to visit for in-depth interviews on their methods and practices. Based on survey responses,

Table A.5: Communities with Fire Departments Represented in Focus Groups

Albert Lea	Ham Lake
Alexandria	Hermantown
Austin	Loretto
Balsam	Lyle
Barrett	*Minneapolis
Bricelyn	North St. Paul
Canyon	Norwood - Young America
Carlos	Osakis
Cohasset	St. Anthony
Elrosa	*St. Paul
Ely	Scandia
Forest Lake	Shakopee
Freeborn	Stillwater
French Township	Villard
Fridley	Waseca
Grand Rapids	Wayzata

Note: An asterisk (*) depicts fire departments with representatives that were interviewed individually.

many fire departments around the state demonstrated effective and efficient services. Because we could not visit all of these departments, we chose a limited number representing different sizes, types, and geographic locations of fire departments.

In January 1999, we visited these departments to collect additional detailed information on their specific practices and programs. The site visits also helped reveal circumstances under which certain practices are transferable to other departments. During the interviews, we asked fire personnel to describe the advantages and disadvantages of the practices, initial startup and ongoing costs, and savings in time, personnel, or other resources. Those interviewed also offered tips and advice for other departments considering similar practices. At each visit we used a standard questionnaire with 11 open-ended questions to systematically collect the information. A copy of the site-visit questionnaire is included in this appendix.

LOCAL GOVERNMENT ADVISORY COUNCIL

When the Minnesota Legislature established the program of best practices reviews, it charged a local

government advisory council with recommending local government services for review. The council recommended the topic of fire services in 1997. Council members also reviewed a draft report. The individuals that currently serve on the Local Government Advisory Council are listed in Table A.6.

Table A.6: Local Government Advisory Council Members, 1999**Dave Childs**

Minnetonka City Manager

Don Helmstetter

Spring Lake Park Schools Superintendent

Tim Houle

Morrison County Coordinator

Lynn Lander

Hermantown City Administrator

Charles Meyer

St. Louis Park City Manager

Scott Neal

Northfield City Administrator

Brandt Richardson

Dakota County Administrator

Steve Sarkozy

Roseville City Manager

James Schug

Washington County Administrator

Lothar Wolter, Jr.

Norwood-Young America Township Clerk

Office of the Legislative Auditor

Fire Services: A Best Practices Review

SITE VISIT QUESTIONNAIRE

Staff: _____

Date: _____

Fire Dept.: _____

Phone: _____

Interviewee(s): _____

Title: _____

Title: _____

Best Practices:

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____
- (6) _____

1. Describe the practice. What is it? How does it work? When did you start it?
2. Why did you first begin the practice? What problems, if any, were you hoping to overcome?
3. Did the practice solve these problems? Why or why not?
4. Does the practice produce savings in time, money, labor, resources, or hassles? Can you quantify savings?
5. Have you found other advantages from using the practice?
6. Have you found any problems or disadvantages with the practice? Have you had to modify it over time to improve it?
7. Thinking back to when you began the practice, did you have any problems with the initial startup? If so, how did you overcome them?
8. What are the costs of the practice? How much time and how many personnel are involved?
9. Do you think other fire departments could also use the practice? Does a department have to be of a certain size or type to successfully use the practice?
10. What tips or advice would you offer to another fire department considering starting this same practice?
11. Do you have any additional thoughts or comments?
12. Unless you object, I'd like to use your name as a contact person and list your number in the final report for readers who may want additional information. Is this all right with you?

Yes

No

Fire Services: A Best Practices Review

Survey of Minnesota Fire Departments Office of the Legislative Auditor

Thank you for answering this survey of fire departments. Most of the questions pertain to the 1997 calendar year. We recognize that some questions may refer to data that you do not routinely collect, but we encourage you to provide us with estimated answers where you may not have precise data. Direct questions about the survey to Jody Hauer at 651/296-8501.

*Please return the completed survey in the enclosed postage-paid envelope by **November 25, 1998.***

Name: _____

Phone: _____

1. How was your fire department structured in 1997?

(Mark one box.)

Number	Percent	(N=88)
79	89.8%	1. Municipal department
7	8.0	2. Private nonprofit organization
0	0.0	3. Special fire protection district
2	2.3	4. Other (Please specify.) _____

We received responses from 88 of 101 full-time, combination, and volunteer or paid on-call departments in areas with populations greater than 8,000, for a response rate of 87.1 percent.

2. How satisfied were you that the number and location of your fire station(s) permitted the department in 1997 to respond within a satisfactory response time in your primary response area? (Circle one number for each statement.)

	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
a. Number of stations (N=87)	52	59.8%	20	23.0%	5	5.7%	6	6.9%	4	4.6%
b. Location of stations (N=83)	39	47.0	22	26.5	4	4.8	16	19.3	2	2.4

Comments: _____

3. Did any of the following apply to your department in 1997? If so, please list the cities and townships involved. (Circle one number for each statement and list communities if applicable.) (N=88)

	Yes		No	
	Number	Percent	Number	Percent
a. My department operated under a joint powers agreement (Cities and towns involved:)	6	6.8%	82	93.2%
b. My department was a consolidated department (Cities and towns involved:)	2	2.3	86	97.7
c. My department provided services by contract (Cities and towns involved:)	48	54.5	40	45.5
d. A joint powers agreement or consolidation was under development (Cities and towns involved:)	4	4.5	84	95.5

4. How many cities or townships in your primary response area had by 1997 adopted any ordinances or zoning codes that affect the provision of fire services, such as local adoption of the Uniform Fire Code, ordinances on fire resistant construction materials, charging fees for fire services, or permits for installing fire protection systems? (N=85)

Total	Median		Number	Percent	
103	1.0	a. Number of cities or townships	10	11.8%	b. Unknown or unable to estimate

5. What percent of the following buildings in your primary response area (including contract areas) do you estimate had full automatic sprinkler coverage in 1997? (Circle one response for each type of occupancy or "7" for not applicable if your area had no such occupancies.) (N=85)

Type of Building by Main Occupancy	100 to 76%		75 to 51%		50 to 26%		25 to 11%		10 to 5%		Less Than 5%		N/A		Unknown or Unable to Estimate	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
a. Occupancies storing or processing high-hazard materials, e.g., repair garages with open flames or welding, facilities with high quantities of hazardous materials	21	24.7%	12	14.1%	20	23.5%	9	10.6%	3	3.5%	12	14.1%	1	1.2%	7	8.2%
b. Low- and moderate-hazard industrial and storage occupancies, e.g., bakeries, dry cleaners	12	14.1	12	14.1	16	18.8	12	14.1	11	12.9	14	16.5	2	2.4	6	7.1
c. Professional and service occupancies, e.g., mercantile and educational occupancies, hospitals, correctional institutions, nurseries	26	30.6	18	21.2	19	22.4	5	5.9	5	5.9	7	8.2	0	0.0	5	5.9
d. Single- and two-family homes, family day care, and living facilities for 10 or fewer persons	0	0.0	0	0.0	0	0.0	3	3.5	4	4.7	61	71.8	6	7.1	11	12.9

APPARATUS AND EQUIPMENT

6. Did the department use a preventive maintenance program for its apparatus and equipment in 1997 with routine, scheduled maintenance in accordance with manufacturers' recommendations? (Mark one.)

Number	Percent	(N=88)
86	97.7%	1. Yes
1	1.1	2. No (Go to Question 9.)
1	1.1	3. A preventive maintenance program was under development (Go to Question 9.)

7. Which of the following components of a preventive maintenance program for apparatus and equipment did your department have in 1997? (Mark all that apply.)

Number	Percent	(N=86)
86	100.0%	a. Routine maintenance (checking engine oil level, tire pressure, etc.) following a set checklist
84	97.7	b. Complete records were kept of repairs and service to apparatus and equipment
64	74.4	c. Within 24 hours of use or repair, inspections were conducted of apparatus and equipment they carried
81	94.2	d. Regular service tests were made on pumper engines and other fire apparatus
59	68.6	e. The equipment maintenance program included a system for inventory control
75	87.2	f. Replacement equipment was scheduled and budgeted for
75	87.2	g. Regular service tests and structural examination of ground ladders, hoses, and other equipment
0	0.0	h. None of the above

8. What percentage of the maintenance scheduled in your preventive maintenance program during 1997 was completed as scheduled? (Mark one.)

Number	Percent	(N=86)
38	44.2%	1. 100% was completed as scheduled
31	36.0	2. 95 to 99% was completed as scheduled
9	10.5	3. 90 to 94% was completed as scheduled
6	7.0	4. 85 to 89% was completed as scheduled
2	2.3	5. less than 85% was completed as scheduled

9. Did your department have in place in 1997 a replacement plan for capital purchases that estimated the expected replacement year of apparatus based on their expected life cycles and their costs? (Mark one.)

Number	Percent	(N=88)
68	77.3%	1. Yes
12	13.6	2. No
8	9.1	3. An apparatus replacement plan was under development

10. What purchasing arrangements has your department used in the past 10 years to purchase apparatus such as pumpers, ladder trucks, tankers, brush trucks, rescue rigs, or other types of vehicles? (Mark all that apply.)

Number	Percent	(N=87)
87	100.0%	a. Developed specifications and selected vendors through bidding process
14	16.1	b. Bought or leased vehicles through the Federal Excess Property Program
2	2.3	c. Purchased apparatus jointly with another department
1	1.1	d. Used lease arrangement with another department
17	19.5	e. Used contributions from civic organizations or charitable gambling proceeds in making the purchase
2	2.3	f. Received apparatus in exchange for service provided by contract
8	9.2	g. Other (Please specify.) _____

11. What percentage of your pumper apparatus would you estimate are properly matched to your local road conditions and to local fire fighting pumper performance needs, such as local needs for certain pump ratings (gpm), tank capacities and discharge rates, hose and nozzle loads, etc.? (Mark one.)

Number	Percent	(N=88)
68	77.3%	1. 100% of our pumper apparatus are suited to our local road conditions and pumping performance needs
15	17.0	2. At least 75% of our pumper apparatus are well suited, but about 25% are either overloaded or underpowered for our needs
4	4.5	3. At least 50% of our pumper apparatus are well suited, but about half are either overloaded or underpowered for our needs
1	1.1	4. Less than 50% of our pumper apparatus are well suited, and more than half of our apparatus are either overloaded or underpowered for our needs
0	0.0	5. Unknown or unable to estimate

12. How adequate was the following, if available to your department at the end of 1997? (Circle one number for each category.)

Category	Very Adequate		Adequate		Inadequate		Equipment Not Available		Department Does Not Provide		Not Applicable to Our Department	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Protective clothing, hoods, helmets, goggles, gloves, and footwear appropriate to the tasks expected of each member (N=88)	73	83.0%	15	17.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
b. Protective breathing apparatus (N=88)	67	76.1	21	23.9	0	0.0	0	0.0	0	0.0	0	0.0
c. Standard attack hose (1.5 to 2.5 inch) (N=88)	72	81.8	14	15.9	2	2.3	0	0.0	0	0.0	0	0.0
d. Personal alert safety system to warn others when a firefighter is incapacitated (N=87)	58	66.7	21	24.1	3	3.4	0	0.0	4	4.6	1	1.1
e. For wildland fires, personal equipment for each fire fighter including a fire shelter, canteens, flares, and portable two-way radios (N=85)	2	2.4	15	17.6	12	14.1	4	4.7	5	5.9	47	55.3
f. Vehicles equipped with two-way radios (N=88)	72	81.8	14	15.9	2	2.3	0	0.0	0	0.0	0	0.0
g. For rural departments, year-round water drafting sites (N=85)	2	2.4	10	11.8	10	11.8	0	0.0	9	10.6	54	63.5
h. In areas with limited water supply accessibility, portable pumps (N=86)	5	5.8	30	34.9	5	5.8	3	3.5	3	3.5	40	46.5
i. Large diameter hose (3.5 inches or more) for moving rural water supplies or as back-up to gaps in municipal water systems when water mains are under repair (N=88)	60	68.2	24	27.3	0	0.0	0	0.0	3	3.4	1	1.1
j. Portable drop or folding water tanks (N=87)	35	40.2	21	24.1	1	1.1	3	3.4	3	3.4	24	27.6
k. Extrication tools, hydraulic tools, and torches (N=88)	54	61.4	31	35.2	2	2.3	0	0.0	0	0.0	1	1.1
l. Firefighter hand tools for cutting, striking, and prying (N=88)	59	67.0	29	33.0	0	0.0	0	0.0	0	0.0	0	0.0

13. How satisfied were you in 1997 with your department's system for alerting members to respond to an incident and the ability of your department's communication system (telephones, radio base station equipment, two-way radios, pagers, etc.) to perform in emergency situations and normal daily activities without excessive delays or interference? (Circle one number for each statement.)

	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
a. System for alerting members (N=88)	65	73.9%	16	18.2%	2	2.3%	4	4.5	1	1.1%
b. Department communication system (N=87)	55	63.2	22	25.3	3	3.4	4	4.6	3	3.4

14. What innovative or effective methods regarding the purchase or maintenance of apparatus and equipment are used by your department or other departments you are aware of? _____

MUTUAL AID

15. Which of the following activities were included in your department's mutual aid associations or automatic aid agreements during 1997 (not including services you provided by contract)? (Circle "1" or "2" or both numbers to indicate whether you provided and/or received mutual aid. Circle "3" if the activity was not included in mutual aid agreements.)

Number Percent (N=88)

- 1 1.1% 1. We did not participate in mutual aid or automatic aid (Go to Question 21.)

Activity	Provided Mutual Aid		Received Mutual Aid		Not Part of Mutual Aid	
	Number	Percent	Number	Percent	Number	Percent
a. Fire suppression (N=86)	82	95.3%	71	82.6%	1	1.2%
b. Technical rescues (N=86)	59	68.6	29	33.7	24	27.9
c. First Responders (N=85)	36	42.4	27	31.8	44	51.8
d. Emergency Medical Services (EMS) Basic or Advanced Life Support (N=85)	39	45.9	29	34.1	42	49.4
e. Hazardous materials responses (N=85)	48	56.5	40	47.1	24	28.2
f. Enforcement of fire codes and/or related local ordinances, including inspections (N=86)	21	24.4	12	14.0	61	70.9
g. Fire investigations (N=86)	25	29.1	25	29.1	50	58.1
h. Fire safety awareness efforts (N=85)	32	37.6	18	21.2	52	61.2
i. Public relations activities (N=85)	25	29.4	13	15.3	59	69.4
j. Training courses or seminars (N=86)	57	66.3	43	50.0	23	26.7
k. Drills and exercises (N=86)	64	74.4	56	65.1	16	18.6
l. Use of specialized equipment or apparatus (N=86)	61	70.9	42	48.8	20	23.3
m. Use of facilities (N=86)	51	59.3	32	37.2	32	37.2
n. Cooperative purchasing arrangements (N=85)	16	18.8	17	20.0	63	74.1
o. Exchanged information and expertise (N=86)	73	84.9	61	70.9	12	14.0
p. Other (Please specify.) (N=85)	3	3.5	3	3.5	81	95.3

16. Of the departments or communities participating in your mutual aid association(s), list those in which you actually responded to mutual aid requests during 1996 or 1997. (Use additional sheet, if needed.)

<u>Mutual Aid Association</u>	<u>Departments/Cities to Which We Responded with Aid</u>
a. _____ (association name)	_____ _____ _____
b. _____ (association name)	_____ _____ _____
c. _____ (association name)	_____ _____ _____
d. _____ (association name)	_____ _____ _____

17. Which of the following was part of your mutual aid association(s) in 1997? (Mark all that apply.)

<u>Number</u>	<u>Percent</u>	(N=86)
40	46.5%	a. Standard operating procedures that were agreed to by the participating departments
53	61.6	b. Familiarity of all departments' members with mutual aid procedures, equipment, and safety measures
77	89.5	c. A standard approach to incident command
67	77.9	d. Designated radio frequencies and standard radio procedures or other communications system for interdepartmental communications
43	50.0	e. Interagency training on an ongoing basis
23	26.7	f. Coordinated approaches to long-term planning
3	3.5	g. None of the above

18. If you participated in mutual aid through written agreements in 1997, which of the following was described in them? (Mark all that apply.)

<u>Number</u>	<u>Percent</u>	(N=83)
6	7.2%	a. We participated in mutual aid but had no written agreements
51	61.4	b. Incident command responsibility
43	51.8	c. Clarification of jurisdictional issues
57	68.7	d. Insurance coverage
45	54.2	e. Defined legal responsibilities
40	48.2	f. Financing arrangements (if any)
41	49.4	g. Standardized communications and protocols
9	10.8	h. We had written mutual aid agreements but they did not contain the elements above

19. How satisfied were you with the following characteristics of your 1997 mutual aid? (Circle one number for each characteristic or circle "6" if the characteristic was not available.)

Characteristics	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied		Not Available	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Access to or reaching additional fire fighters (N=85)	63	74.1%	13	15.3%	5	5.9%	1	1.2%	0	0.0%	3	3.5%
b. Coordination of fire fighters from multiple departments (N=83)	40	48.2	30	36.1	7	8.4	3	3.6	0	0.0	3	3.6
c. Use of apparatus/equipment from other departments (N=84)	60	71.4	12	14.3	8	9.5	1	1.2	0	0.0	3	3.6
d. Communication among departments (N=85)	32	37.6	32	37.6	9	10.6	8	9.4	1	1.2	3	3.5
e. Availability of staffing for prolonged or extraordinary incidents (N=80)	42	52.5	20	25.0	11	13.8	1	1.3	0	0.0	6	7.5
f. Response by other departments to your requests for aid (N=80)	64	80.0	9	11.3	3	3.8	2	2.5	0	0.0	2	2.5

20. What innovative or effective methods regarding mutual aid associations are used by your department or other departments you are aware of? (Use additional sheet, if needed.)

FIRE, RESCUE, EMS, AND HAZARDOUS MATERIALS RESPONSES

21. Did your fire department have an incident management system in place in 1997 with response plans that described your fire department's role and activities for fire suppression incidents? (Mark one.)

Number Percent (N=88)

68	77.3%	1. Yes, we had an incident management system with written response plans
13	14.8	2. Yes, we had an incident management system with response plans but they were not written
7	8.0	3. Incident management system with response plans was under development
0	0.0	4. No, we did not have an incident management system with response plans

22. How satisfied were you with (a.) the process of planning and providing water supplies for fire protection in your community, such as hydrant placement, and (b.) your involvement in that process? (Circle one number for each statement; circle "6" if it does not apply.)

Characteristics	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied		N/A	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
a. Process of planning water supplies for fire protection (N=88)	48	54.5%	28	31.8%	1	1.1%	6	6.8%	2	2.3%	3	3.4%
b. Fire department involvement in water planning process (N=87)	40	46.0	25	28.7	7	8.0	10	11.5	2	2.3	3	3.4

- 23. What credit for the water supply in your fire department's primary response area did the Insurance Services Office, Inc. assign as of 1997?** (Please provide the credit--ranging from 1 to 40--that applies to water supply only, not the overall ISO rating. Indicate the credit for each of your urban and rural areas or mark "NA" if not applicable in your area.) (N=82)

Median (N=41)	a. Total credits assigned by the ISO for water supply in urban areas	Unknown		N/A	
		Number	Percent	Number	Percent
36.6 Credits		34	41.5%	6	7.3%
Median (N=4)	b. Total credits assigned by the ISO for water supply in rural areas	38	46.3	24	29.3

- 24. Approximately what was your fire department's average response time in minutes to fire suppression calls for your primary response area in 1997 (starting from the time companies were alerted about the incident to the time a full response unit capable of initial attack arrived at the scene)?** (Fill in only one of the following. Fill in a. unless your department only records response times from the time a call comes in to the dispatcher, instead of the time fire fighters are alerted to an incident.) (N=88)

Median (N=63)		Number	Percent	
5.0 Minutes	a. Average response time starting from time companies were alerted	5	5.7%	c. Unknown or unable to estimate
Median (N=20)	OR			
5.7 Minutes	b. Average response time starting from the time the call came in to the dispatcher			

- 25. Did your fire department have written standard operating guidelines for fire suppression activities in 1997?** (Mark one.)

Number	Percent	(N=87)
75	86.2%	1. Yes, we had written standard operating guidelines
7	8.0	2. We had standard operating guidelines but they were not written (Go to Question 27.)
3	3.4	3. Standard operating guidelines were under development (Go to Question 27.)
2	2.3	4. We did not have standard operating guidelines (Go to Question 27.)

- 26. What information, if any, was included within your fire department's written standard operating guidelines for fire suppression activities in 1997?** (Mark all that apply.)

Number	Percent	(N=74)
70	94.6%	a. Procedures for designation of an incident commander and command structure
57	77.0	b. Procedures for on-scene duty and apparatus assignments
33	44.6	c. Duty roster of fire fighters and their assignments
54	73.0	d. Minimum staffing levels and equipment requirements (for number of suppression personnel for first alarm assignment and other activities)
41	55.4	e. Provisions for developing pre-attack plans
56	75.7	f. Procedures for fireground search and rescue
68	91.9	g. System of accounting for fire fighter whereabouts during responses
51	68.9	h. Communications plan
45	60.8	i. Information management system, such as standardized tactical reference worksheets or status boards
49	66.2	j. Procedures for using available water supplies
37	50.0	k. Pre-fire plans for all target hazards
64	86.5	l. Standard incident reporting system
43	58.1	m. Procedures for overhaul and salvage or mop up
0	0.0	n. None of the above

27. Did your fire department have a long-range strategic plan (or master plan) in 1997 looking beyond a three-year horizon that (a) contained financial and strategic planning for personnel, apparatus, and fire stations based on a risk analysis in the community and (b) described contingency plans to guarantee service in the event of a disaster? (Mark one.)

Number Percent (N=87)

28	32.2%	1. Yes, we had a written strategic plan or master plan containing these elements
14	16.1	2. We had a strategic plan or master plan containing these elements but it was not written
8	9.2	3. We had a written strategic plan or master plan but it did not contain these elements
11	12.6	4. A strategic plan or master plan was under development
26	29.9	5. No, we did not have a strategic plan or master plan

28. Approximately what percentage of the fire risks and structures in your primary response area were covered by documented pre-incident planning in 1997? (Mark one.)

Number Percent (N=86)

13	15.1%	1. 100 to 81%
9	10.5	2. 80 to 61%
19	22.1	3. 60 to 41%
10	11.6	4. 40 to 21%
29	33.7	5. 20 to 1%
3	3.5	6. Pre-incident planning was under development (Go to Question 30.)
3	3.5	7. We did not document pre-incident plan information for any fire risks or structures (Go to Question 30.)

29. What written information was compiled as part of your pre-incident planning? (Mark all that apply.)

Number Percent (N=81)

58	71.6%	a. A list of cooperating agencies and how to contact them
45	55.6	b. A master list of additional available resources of personnel, equipment, supplies, and facilities
48	59.3	c. Mutual aid agreements, automatic response agreements, and other protection agreements
58	71.6	d. Up-to-date maps of protection areas, including boundaries, roads, and other means of access and egress
17	21.0	e. Site location of heliports and airports, as needed for wildland fire fighting (where applicable)
45	55.6	f. Identification of the types and levels of fire risks, such as fuel type and loading in forested areas, aviation hazards, or buildings with hazardous contents
72	88.9	g. Building floor plans, diagrams, site plans, or maps of specific hazards
59	72.8	h. On-site fire control equipment
64	79.0	i. Names and phone numbers of persons responsible for the security of specific hazards
68	84.0	j. Identification of sprinklered buildings
22	27.2	k. Identification of fire flow needs (minimum water supply required)
51	63.0	l. Occupancy information of high-hazard buildings
70	86.4	m. Hydrant locations (wet or dry) and sewer maps
29	35.8	n. Identification of alternative water sources
53	65.4	o. Requirements for familiarity tours by fire fighters of special hazards
4	4.9	p. Appropriate minimum staffing levels during DNR "Fire Weather Watch" (where applicable)
1	1.2	q. None of the above

30. What practices, if any, did your fire department have as part of a health and safety program for your members in 1997? (Mark all that apply.)

Number Percent (N=88)

78	88.6%	a. Written protocols that describe safety procedures and limit the risk of exposure to infectious and hazardous substances during response operations
87	98.9	b. Provision of personal protective equipment to all personnel
86	97.7	c. Training and education of fire fighters in the use and limitations of personal protective equipment
66	75.0	d. Provision of an incident safety officer at each incident
53	60.2	e. Designation of a health and safety officer to manage the fire department health and safety program
68	77.3	f. Physical examination requirements for employment, including annual medical exams
78	88.6	g. Critical incident stress debriefing
51	58.0	h. Rapid intervention protocols to assist injured fire fighters
76	86.4	i. Requirement that apparatus are driven and operated only by trained and qualified personnel
69	78.4	j. Local training requirements based on level and type of risks in the response area
80	90.9	k. Ongoing training for specialized services, such as hazardous materials responses and rescue services, if applicable
0	0.0	l. None of the above

31. Which of the following, if any, did your fire department have in place for (1.) hazardous materials response or (2.) technical rescue activities in 1997? (Circle the appropriate number(s) for each statement. If your department did not offer hazmat or technical rescue services, mark the appropriate box below and circle responses only for the service you offered.) (N=87)

Number Percent

9	10.3%	1. We did not offer hazardous materials responses
15	17.2	2. We did not offer technical rescues

Practice	Hazardous Materials		Technical Rescue	
	Number	Percent	Number	Percent
a. Written emergency response plan that defines the fire department's roles during the incident	63	72.4%	38	43.7%
b. Written standard operating guidelines for conducting the services	57	65.5	32	36.8
c. Risk assessment for rescue needs and target hazards in the community	32	36.8	20	23.0
d. Minimum staffing level requirements according to OSHA and FEMA standards	40	46.0	26	29.9
e. Written pre-incident plans specified for all target hazards and potential rescue needs	23	26.4	8	9.2
f. Specialists (or contracts with them) to perform services in the event fire department does not provide service	43	49.4	18	20.7
g. None of the above	3	3.4	7	8.0

32. What was the average response time in minutes by first responders to emergency medical incidents for your primary response area in 1997 (starting from the time responders were alerted to the time the response unit arrived at the emergency)? (Fill in only one. Fill in a. unless your department only records response times from the time a call comes in to the dispatcher.) (N=85)

<u>Median (N=40)</u>		<u>Number</u>	<u>Percent</u>	
5.0 Minutes	a. Average response time from time first responders were alerted to incident	0	0.0%	c. Unknown or unable to estimate
OR				
<u>Median (N=11)</u>				
5.0 Minutes	b. Average response time starting from time call came in to dispatcher	33	38.8	d. Not applicable because department did not offer first response
		1	1.2	e. Not applicable because department did not receive calls for first responders in 1997

33. What was your fire department's average response time in minutes for responding to hazardous materials incidents--awareness and/or operations level responses--in 1997 (starting from the time a team was dispatched to the time the team arrived at the incident)? (Fill in only one. Fill in a. unless your department only records response times from the time a call comes in to the dispatcher.) (N=87)

<u>Median (N=48)</u>		<u>Number</u>	<u>Percent</u>	
5.1 Minutes	a. Average response time from time fire fighters were alerted	14	16.1%	c. Unknown or unable to estimate
OR				
<u>Median (N=15)</u>				
5.7 Minutes	b. Average response time starting from time call came in to dispatcher	2	2.3	d. Not applicable because department did not offer hazmat responses
		8	9.2	e. Not applicable because department did not receive hazmat calls in 1997 within its primary response area

34. What practices, if any, did your fire department follow in 1997 to evaluate the efficiency and effectiveness of fire department activities? (Mark all that apply.)

<u>Number</u>	<u>Percent</u>	(N=88)	
54	61.4%	a. Kept a log of all on-scene incident activities	
55	62.5	b. Maintained a management information system to record information on all fire department activities	
65	73.9	c. Conducted post-incident analysis and debriefing following emergency responses	
33	37.5	d. Measured progress toward department goals with a formal program of setting goals and objectives and measuring department performance	
16	18.2	e. Followed a quality assurance program	
51	58.0	f. Measured department progress informally through budget process, employee performance evaluations, contract renewals, etc.	
7	8.0	g. Other (Please specify.) _____	
5	5.7	h. None of the above	

35. What innovative or effective methods regarding the management of fire suppression, rescues, EMS, or hazmat responses are used by your department or other departments you are aware of?

PERSONNEL

36. Did your department have a recruitment program in 1997 that was structured according to the department's ongoing personnel needs? (Mark one.)

Number	Percent	(N=88)
38	43.2%	1. We had a recruitment program based on a structured assessment of ongoing needs for personnel
13	14.8	2. We had a recruitment program that was based on an informal assessment of personnel needs
26	29.5	3. We had an informal recruitment program used only upon a position vacancy
1	1.1	4. A recruitment program was under development
10	11.4	5. We did not have a program for recruiting department members

37. How satisfied were you that your recruitment process in place during 1997 produced candidates able to perform their required duties? (Mark one.)

Number	Percent	(N=88)
39	44.3%	1. Very satisfied
29	33.0	2. Somewhat satisfied
7	8.0	3. Neither satisfied nor dissatisfied
4	4.5	4. Somewhat dissatisfied
2	2.3	5. Very dissatisfied
7	8.0	6. We did not have a recruitment process

38. For each of the following services in 1997, approximately how many person-hours of department staff time were spent, and how many responses did the department make? Also indicate whether your department charged fees for any of these services. (If necessary, please check your records to verify number of hours and responses; if you do not record hours or number of responses, mark the "Don't Know" column. Include hours for fire marshal staff and support staff, where applicable, but exclude staff, such as city building inspectors, who were not part of or on contract with your department.) (N=84)

Service	Total	Total Responses	Did Not Offer		Don't Know		Department Charged Fees	
	Person-Hours Median	or Events Median	#	%	#	%	#	%
a. Fire suppression ^I	1,484.0 (N=48)	108.0 (N=76)	0	0.0%	2	2.4%	6	7.1%
b. False alarms	625.5 (N=46)	98.0 (N=70)	0	0.0	5	6.0	20	23.8
c. Technical rescues (e.g., vehicle extrications, water/ice rescues, etc.) ^{II}	252.0 (N=46)	31.0 (N=68)	4	4.8	4	4.8	8	9.5
d. EMS - First Responders ^{III}	351.0 (N=12)	102.0 (N=20)	32	38.1	5	6.0	1	1.2
e. EMS - Basic Life Support response services ^{IV}	*	222.5 (N=6)	46	54.8	4	4.8	2	2.4
f. EMS - Basic Life Support transport ^V	1,280.0 (N=5)	436.0 (N=6)	68	81.0	1	1.2	5	6.0
g. EMS - Advanced Life Support response services	*	*	65	77.4	2	2.4	2	2.4
h. EMS - Advanced Life Support transport ^{VI}	2,739.5 (N=6)	1,126.0 (N=9)	68	81.0	1	1.2	4	4.8
i. Hazardous materials response	82.0 (N=44)	19.0 (N=67)	1	1.2	4	4.8	13	15.5
j. Code enforcement (inspections and plan reviews)	695.0 (N=41)	649.0 (N=39)	12	14.3	8	9.5	15	17.9
k. Fire investigations	100.0 (N=47)	21.5 (N=46)	4	4.8	12	14.3	0	0.0

(Footnotes are explained at bottom of page 133.)

Question 38, continued ...

Service	Total	Total Responses	Did Not		Don't		Department	
	Person-Hours Median	or Events Median	Offer #	Offer %	Know #	Know %	Charged Fees #	Charged Fees %
i. Public education (e.g., school programs, fire-safe house) ^{vii}	200.0 (N=54)	(N/A)	2	2.4	13	15.5	1	1.2
m. Emergency manage- ment services	100.0 (N=26)	(N/A)	7	8.3	19	22.6	(N/A)	
n. Public relations activities ^{viii}	150.0 (N=47)	(N/A)	2	2.4	17	20.2	(N/A)	
o. Apparatus/equipment maintenance ^{ix}	466.0 (N=52)	(N/A)	2	2.4	15	17.9	(N/A)	
p. Building/grounds maintenance	365.0 (N=41)	(N/A)	6	7.1	18	21.4	(N/A)	
q. Hydrant maintenance/ inspection	50.0 (N=18)	(N/A)	28	33.3	9	10.7	(N/A)	
r. Reduction of flammable brush/vegetation	20.0 (N=13)	(N/A)	35	41.7	9	10.7	(N/A)	
s. Training and drills	2,923.0 (N=64)	(N/A)	0	0.0	7	8.3	(N/A)	
t. Administration	1,800.0 (N=47)	(N/A)	1	1.2	18	21.4	(N/A)	
u. Support staff (not assigned to a specific service)	1,250.0 (N=24)	(N/A)	9	10.7	18	21.4	(N/A)	
v. Standby time	257.5 (N=28)	(N/A)	6	7.1	21	25.0	(N/A)	
w. Other (Please specify below.)	2,223.0 (N=20)	(N/A)	1	1.2	4	4.8	0	0.0
x. TOTALS	10,893.5 (N=74)	817.5 (N=78)						

*Too few responses to report median.

ⁱ Medians may differ slightly from actual because a few respondents included false alarms, hazardous materials response, technical rescues, EMS-First Responders, and/or BLS activities in their fire suppression estimates.

ⁱⁱ Medians may differ slightly from actual because several respondents included EMS-First Responders and/or fire suppression activities in their technical rescue estimates.

ⁱⁱⁱ The person-hours median excludes 2 respondents and the responses median excludes 5 respondents who did not separate technical rescues, BLS, and/or ALS activities from their EMS-First Responder estimates.

^{iv} The responses median excludes 9 respondents who did not separate technical rescues, first responder services, BLS transport, and/or ALS activities from their BLS response services estimate.

^v The responses median may differ slightly from actual because 2 respondents included EMS-First Responders, BLS response services and/or ALS activities in their BLS transport estimate.

^{vi} Medians may differ slightly from actual because several respondents included EMS-First Responders, BLS, and/or ALS response services in their ALS transport estimates.

^{vii} Median may differ slightly from actual because 2 respondents included public relations activities in their public education estimates.

^{viii} Median may differ slightly from actual because 1 respondent included public education activities in the public relations estimate.

^{ix} Median may differ slightly from actual because 2 respondents included building and grounds maintenance in their estimates for apparatus and equipment maintenance.

39. If your department charged fees for services in 1997, under what circumstances were those fees imposed?
(Mark all that apply.)

Number	Percent	(N=86)
28	32.6%	1. The department did not charge fees for any services in 1997
18	20.9	2. The recipient of the service had insurance for the service provided
23	26.7	3. The department had responded to repeat false alarms at a particular occupancy
11	12.8	4. The department had to provide services due to reckless actions or violations of statutes or ordinances
15	17.4	5. Recipients of the service did not reside within the primary response area
20	23.3	6. The department granted permits
19	22.1	7. Other (Please specify.) _____

40. How many fire fighters, fire officers, and other staff were in your fire department or on contract to the department at the end of 1997? (Exclude any staff, such as a building inspector, who is not a member of, or on contract to, the fire department.) (N=88)

Number of Departments with Staff in Each Category		Number of Fire Fighters and Officers		Number of Other Staff (include support staff, if any)		TOTAL	
		Mean	Median	Mean	Median	Mean	Median
62	a. Full-time career members	(1) 18.5	2.0	(2) 1.9	0.0	(3) 20.3	2.5
74	b. Members earning stipend, hourly or on-call wage	(1) 32.0	30.0	(2) 0.1	0.0	(3) 32.1	30.0
5	c. Volunteers earning pension but no compensation for responses	(1) 3.2	0.0	(2) 0.0	0.0	(3) 2.3	0.0
2	d. Volunteers earning neither compensation nor pension	(1) 0.2	0.0	(2) 0.0	0.0	(3) 0.2	0.0

41. Was the chief's position a paid one in 1997? (Mark one.)

Number	Percent	(N=88)
88	100.0%	1. The chief was paid
0	0.0	2. The chief was not paid but earned a pension
0	0.0	3. The chief earned neither compensation nor a pension

42. Of the number of fire suppression responses reported in Question 38a above, what percentage were for grass or forest fires (including those fires fought under contract with the Department of Natural Resources)?

Median	(N=70)
5.0	% of suppression responses

43. How sufficient do you consider the number of on-call or volunteer members who were located within an area that allowed them to promptly respond to calls in 1997? (Mark one.)

Number	Percent	(N=88)
14	15.9%	1. The department did not use on-call or volunteer members (Go to Question 49.)
41	46.6	2. Very sufficient
26	29.5	3. Somewhat sufficient
2	2.3	4. Neither sufficient nor insufficient
4	4.5	5. Somewhat insufficient
1	1.1	6. Very insufficient

44. How did your department identify the practices and activities in 1997 that encourage volunteers to continue as members and the issues or problems that may cause volunteers to resign? (Mark all that apply.)

Number	Percent	(N=73)
23	31.5%	a. The department surveyed or questioned members about what motivates them and what does not
22	30.1	b. The department conducted exit interviews when volunteers resigned to determine their reasons for leaving
53	72.6	c. The chief used informal approaches that allowed members to speak their minds about problems
9	12.3	d. The department did not identify what motivates volunteers
8	11.0	e. A process to identify motivational factors was under development
9	12.3	f. Other (Please specify.) _____

45. How consistently did the following characterize your department's interactions with volunteers or on-call members in 1997? (Circle one for each statement.)

	Consistently		Sometimes		Rarely, If Ever	
	Number	Percent	Number	Percent	Number	Percent
a. Provided recognition to volunteers for jobs well done (such as in newsletters, at banquets, with press releases, etc.) (N=70)	34	48.6%	27	38.6%	9	12.9%
b. Took steps to maintain a good reputation and positive image to keep volunteers interested, such as maintaining apparatus and equipment as a point of pride (N=71)	59	83.1	7	9.9	5	7.0
c. Leadership consistently used a management style that encouraged member participation (N=70)	49	70.0	20	28.6	1	1.4
d. Stated an explicit mission and goals so volunteers knew what to expect (N=69)	37	53.6	26	37.7	6	8.7
e. Used a process for communicating relevant information so members were informed (N=72)	54	75.0	18	25.0	0	0.0
f. Used standard procedures for dealing equitably with grievances (N=68)	41	60.3	19	27.9	8	11.8
g. Required training that was relevant and fit the volunteers' time availability (N=71)	61	85.9	10	14.1	0	0.0
h. Offered monetary incentives per hour, per call, or as a stipend (N= 72)	66	91.7	3	4.2	3	4.2
i. Offered medical, death, or disability benefits to its volunteers (N=69)	47	68.1	7	10.1	15	21.7
j. Offered a retirement or pension plan for its volunteers (N= 72)	71	98.6	0	0.0	1	1.4
k. None of the above (N=1)	0	0.0	0	0.0	1	100.0

46. On the average, of those volunteers or on-call members contacted for incidents in 1997, what percentage would you estimate responded to an average incident? (Circle one.) (N=72)

	100 to 81%		80 to 61%		60 to 41%		40 to 21%		20% or Less		N/A	
	#	%	#	%	#	%	#	%	#	%	#	%
Percentage of volunteers responding when contacted	9	12.5%	17	23.6%	40	55.6%	5	6.9%	1	1.4%	0	0.0%

47. What was the retention rate of volunteers in your department over the past five years (1993 - 1997), disregarding retirements due to age or injury? (Circle one.) (N=73)

	100 to 81%		80 to 61%		60 to 41%		40 to 21%		20% or Less		N/A	
	#	%	#	%	#	%	#	%	#	%	#	%
Retention rate	46	63.0%	16	21.9%	5	6.8%	3	4.1%	2	2.7%	1	1.4%

48. Did members of your department in 1997 serve as “sleepers” who slept at the station in anticipation of response to overnight incidents? (Mark one.)

Number Percent (N=74)

19	25.7%	1. Yes
48	64.9	2. No
7	9.5	3. Not applicable

49. How well did your department’s training program and training requirements prepare your members to perform the following services in 1997? (Circle one number for each service. If your department did not offer that service, circle “2.”)

Service	Training Not Available		Did Not Offer Services		Members Demonstrated Above Average Mastery of Skills		Members Demonstrated Average Mastery of Skills		Members Demonstrated Below Average Mastery of Skills	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
a. Structural and vehicle fires (N=86)	2	2.3%	0	0.0%	63	73.3%	21	24.4%	0	0.0%
b. Wildland fires (N=84)	8	9.5	16	19.0	20	23.8	40	47.6	0	0.0
c. Operating apparatus (N=86)	0	0.0	0	0.0	48	55.8	38	44.2	0	0.0
d. Maintenance of apparatus and equipment (N=85)	1	1.2	4	4.7	38	44.7	40	47.1	2	2.4
e. Public education (N=86)	1	1.2	2	2.3	45	52.3	37	43.0	1	1.2
f. Inspection/code enforcement (N=86)	6	7.0	14	16.3	24	27.9	37	43.0	5	5.8
g. Fire investigation (N=86)	2	2.3	6	7.0	36	41.9	41	47.7	1	1.2
h. Technical rescues (N=85)	0	0.0	3	3.5	38	44.7	41	48.2	3	3.5
i. HazMat first responder-Awareness Level (N=85)	0	0.0	0	0.0	37	43.5	46	54.1	2	2.4
j. HazMat first responder-Operations Level (N=84)	1	1.2	15	17.9	31	36.9	34	40.5	3	3.6
k. HazMat Technician (N=85)	6	7.1	43	50.6	21	24.7	15	17.6	0	0.0
l. HazMat Specialist (N=85)	7	8.2	51	60.0	15	17.6	10	11.8	2	2.4
m. HazMat On-Scene Incident Commander (N=84)	5	6.0	27	32.1	23	27.4	27	32.1	2	2.4
n. First response (medical incidents) (N=81)	1	1.2	21	25.9	45	55.6	13	16.0	1	1.2
o. First aid and CPR (N=82)	1	1.2	7	8.5	52	63.4	21	25.6	1	1.2
p. EMT-Basic (N=86)	2	2.3	37	43.0	40	46.5	7	8.1	0	0.0
q. EMT-Intermediate (N=83)	2	2.4	63	75.9	16	19.3	2	2.4	0	0.0
r. EMT-Paramedic (N=81)	2	2.5	68	84.0	8	9.9	2	2.5	1	1.2
s. Use and limitations of personal protective equipment (N=85)	0	0.0	3	3.5	64	75.3	18	21.2	0	0.0

50. How satisfied were you in 1997 with the availability of training facilities (for training on ground ladders, live smoke and fire operations, apparatus operation, etc.) and members' understanding of the department's standards for training and operations? (Circle one number for each statement.)

	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
a. Availability of training facilities (N=88)	24	27.3%	24	27.3%	5	5.7%	23	26.1%	12	13.6%
b. Members' understanding of training & operation standards (N=88)	35	39.8	37	42.0	12	13.6	4	4.5	0	0.0

51. Which of the following, if any, describes your department's policies in effect in 1997 regarding training? (Mark all that apply.)

Number	Percent	(N=88)
67	76.1%	a. The department identified the training needs of individual members
66	75.0	b. The department ensured that members received the training that supported their individual needs
79	89.8	c. The department had an assigned training officer(s)
86	97.7	d. The department maintained fire fighter training records
50	56.8	e. The department measured the effectiveness of the training that it provided
57	64.8	f. The department assessed its members' proficiency in the subjects for which training was received
0	0.0	g. None of the above

52. What was the minimum number of fire fighters typically required by your department for performing duties in the hazardous area of structural fires in 1997? (Mark one.)

Number	Percent	(N=88)
8	9.1%	1. 1 to 3 fire fighters
48	54.5	2. 4 to 6 fire fighters
13	14.8	3. 7 to 9 fire fighters
19	21.6	4. 10 or more fire fighters

53. What innovative or effective methods regarding recruitment or use of personnel are used by your department or other departments you are aware of? (Use additional sheet, if needed.)
-

REVENUES AND EXPENDITURES

54. From which of the following sources did your department receive revenues in 1997? Approximately what percent of your total revenues in 1997 came from each source? (For each revenue source, circle "1" if you received revenues from that source and then indicate its approximate percentage of total revenues).

Source	Received Some in 1997?			Approximate Percentage of Total Revenues		(N=76)
	Number	Percent	(N=85)	Mean	Median	
a. Property taxes	81	95.3%	(1) Yes	81.6%	95.0%	
b. Fees for services	35	41.2	(1) Yes	2.6	0.0	
c. Charitable gambling proceeds, e.g., pull tabs	16	18.8	(1) Yes	1.4	0.0	
d. Contributions from civic organizations (Lions Clubs, Jaycees, etc.)	34	40.0	(1) Yes	.7	0.0	
e. Revenue from events (softball tournaments, dances, etc.)	13	15.3	(1) Yes	.8	0.0	
f. Revenues from contracts for services	40	47.1	(1) Yes	6.5	0.0	
g. Reimbursements for services provided	17	20.0	(1) Yes	.9	0.0	
h. State aid that came to department, not to relief association	10	11.8	(1) Yes	1.4	0.0	
i. Other (Please specify.)	6	7.1	(1) Yes	4.2	0.0	
				=====		
						100.0%
=====						
Number Percent (N=71)						
j. Did your department receive in-kind contributions, such as gifts of equipment, in 1997? (Mark one.)	23	32.4%	1. Yes			
	48	67.6	2. No			

55. What were your department's total operating expenditures in 1997 (excluding capital purchases of apparatus, land, computer hardware or other capital expenses)?

Median (N=83)
\$500,000.00 Total operating expenditures

56. Which of the following items were included in your estimate of 1997 operating expenditures reported above? (Mark all that apply.)

Number	Percent	(N=82)	
81	98.8%		a. Salaries, wages, or stipends paid to department members, contracted employees, and other department staff
57	69.5		b. Benefits (vacation, sick leave, etc.) paid to members and other staff
82	100.0		c. Supplies (e.g., office supplies, manuals, and equipment purchases not part of a capital purchase)
82	100.0		d. Training, drills, certification fees, and equipment used in training
70	85.4		e. Building space rental, maintenance, and utilities
81	98.8		f. Maintenance of vehicles and equipment
63	76.8		g. Administrative and overhead expenses (legal services, human resources services, etc.)
68	82.9		h. Insurance premiums
13	15.9		i. Other operating expenditures (Please specify.) _____

57. What do you estimate were your department's capital expenditures on purchases of apparatus over the most recent ten-year period of 1987-1997 (not adjusted for inflation)? (N=86)

Median (N=75)		
\$600,000		a. Total capital expenditures on apparatus and equipment (1987-1997)
Number	Percent	
11	12.8%	b. Unknown or unable to estimate

FIRE PREVENTION

This section of the survey is intended to be completed by the fire marshal, if one is designated. If the department has no fire marshal designated, the person completing the first section of this survey should also complete this section. In answering these questions, consider all staff who are either members of the department or its fire marshal office, or on contract with the department. Exclude staff, such as a building inspector, who is not a member of, or on contract to, the fire department.

PUBLIC EDUCATION

58. Approximately what percent of the population in your primary response area do you estimate received public education information or materials (including people reached by school programs, home inspections, fire safety information, etc.) from your department or its fire marshal office in 1997? (Mark one.)

Number	Percent	(N=86)
11	12.8%	1. 100 to 75 percent
18	20.9	2. 75 to 51 percent
21	24.4	3. 50 to 26 percent
31	36.0	4. 25 to 1 percent
5	5.8	5. Unknown or unable to estimate
0	0.0	6. Not applicable

59. Which of the following components of a public education program, if any, did your department or its fire marshal office have in 1997? (Mark all that apply.)

Number	Percent	(N=87)
51	58.6%	a. Identification of the most important local fire risks and hazards, and targeting of specific audiences based on community risks
57	65.5	b. Availability of a smoke detector program
84	96.6	c. Participation in the nationally observed annual Fire Prevention Week
78	89.7	d. Collaboration with school teachers and administrators in the fire prevention effort
73	83.9	e. Use of public education programs, tools, and literature available from other sources (NFPA's "Learn Not to Burn" program, a safe house, etc.)
34	39.1	f. Availability of materials published in languages spoken within the community
22	25.3	g. Monitoring of program's effectiveness on a routine basis
34	39.1	h. Designation of a public fire safety education officer, to coordinate all fire safety education programs, who meets professional qualifications in line with industry standards, such as NFPA 1035, <i>Standard for Professional Qualifications for Public Fire and Life Safety Educator</i>
69	79.3	i. Use of media and other community organizations for delivering fire safety messages
61	70.1	j. Availability and promotion of public education services and materials for use by individuals, businesses, and community organizations
21	24.1	k. Establishment of a program of fire-safety surveys in private homes
9	10.3	l. Other (Please specify.) _____
4	4.6	m. None of the above

60. Did your department or its fire marshal office have a juvenile fire-setter program in 1997? (Mark one.)

Number	Percent	(N=87)
44	50.6%	1. Yes
36	41.4	2. No
7	8.0	3. A juvenile fire-setter program was under development

INSPECTIONS/CODE ENFORCEMENT

61. Who was responsible for conducting fire code-related inspections in your primary response area in 1997?

(Mark one.)

Number	Percent	(N=87)
75	86.2%	1. The fire department, its fire marshal, or an agency contracted by the fire department conducted some or all fire code-related inspections
10*	11.5	2. Fire code-related inspections were conducted only by a county or city agency or some other agency not under contract with the fire department or part of the department's budget (Go to Question 65.)
2	2.3	3. Fire code-related inspections were not conducted (Go to Question 65.)

62. Please circle the percentage of new and existing buildings and premises in your fire department's primary response area that your department or its fire marshal office inspected or from which you received documentation of code compliance during 1997. (Circle "0" for not applicable if your department was not involved with that type of inspection. The following statements do not apply to single- and two-family homes and other occupancies where automatic fire-extinguishing systems are not required, or to hotels and other buildings under the State Fire Marshal's inspection jurisdiction.)

	100 to 76%		75 to 51%		50 to 26%		25 to 6%		5% or less		N/A	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Percent of existing buildings that you inspected in 1997 (N=77)	6	7.8%	10	13.0%	24	31.2%	21	27.3%	13	16.9%	3	3.9%
b. Percent of existing buildings from which you requested documentation of code compliance in 1997 (N=70)	5	7.1	6	8.6	15	21.4	16	22.9	13	18.6	15	21.4
c. Percent of existing buildings from which you received documentation of code compliance in 1997 (N=70)	4	5.7	7	10.0	13	18.6	19	27.1	15	21.4	12	17.1
d. Percent of new buildings constructed in 1997 for which you performed inspections or plan reviews (N=76)	55	72.4	7	9.2	7	9.2	3	3.9	2	2.6	2	2.6

63. Which of the following components of an inspection/code enforcement program, if any, did your department or its fire marshal office have in 1997 (excluding inspections conducted by the State Fire Marshal's Office of buildings such as schools, motels, nursing homes, etc.)? (Mark all that apply.)

Number	Percent	(N=76)
53	69.7%	a. Process for determining inspection priorities that targets life-safety and property hazards and specifies inspection frequency
27	35.5	b. Establishment of job performance requirements for inspectors consistent with industry standards, such as NFPA 1031, <i>Standard for Professional Qualifications for Fire Inspector</i>
23	30.3	c. Evaluation of inspectors based on their performance of job requirements, including scheduled field checks to determine the quality of inspections performed
71	93.4	d. Collaboration with other agencies, such as a building inspections agency, involved in code administration and enforcement
60	78.9	e. Interaction between code enforcement and fire suppression staff in developing prefire plans
57	75.0	f. Consultation with a fire protection engineer when necessary for plan reviews, interpretations, and variances (through a staff fire protection engineer, a contract, or the State Fire Marshal)
36	47.4	g. Establishment of a board of appeals to appeal orders issued under the fire code
66	86.8	h. Retention for at least three years of records of each inspection made
1	1.3	i. None of the above

*The analysis for questions 62-64 includes responses from 2 fire marshal offices that conducted code enforcement but were not included in their fire department budgets.

64. In which of the following ways, if any, was your department or its fire marshal office involved in the plan review process for new buildings constructed in your jurisdiction in 1997? (Mark all that apply.)

Number	Percent	(N=76)
60	78.9%	a. Participation in preconstruction meetings (taking place before construction plans were submitted)
68	89.5	b. Involvement in the plan review process once construction plans were submitted
58	76.3	c. Coordination of reviews with local building department and technical construction trades
50	65.8	d. Establishment of fire prevention sign-off authority on the construction permit
56	73.7	e. Participation in certificate of occupancy process
3	3.9	f. None of the above

INVESTIGATIONS

65. To what extent did your department or its fire marshal office rely on the State Fire Marshal's Office or local law enforcement for fire investigations in 1997? (Circle one number for each line.)

	Frequently		Sometimes		Rarely, If Ever	
	Number	Percent	Number	Percent	Number	Percent
a. State Fire Marshal's Office (N=86)	20	23.3%	47	54.7%	19	22.1%
b. Local law enforcement (N=85)	26	30.6	38	44.7	21	24.7

66. Of the total 1997 investigations of suspicious fire origins investigated by investigators from your department, approximately what percentage do you estimate were presented for prosecution? (Mark one.)

Number	Percent	(N=80)
2	2.5%	1. 100 to 81%
1	1.3	2. 80 to 61%
4	5.0	3. 60 to 41%
5	6.3	4. 40 to 21%
42	52.5	5. 20% or less
26	32.5	6. Not applicable because the State Fire Marshal's Office or local law enforcement conducted all criminal investigations

67. Which of the following components of an investigation program, if any, did your department or its fire marshal office have in 1997? (Mark all that apply.)

Number	Percent	(N=85)
65	76.5%	a. Guidelines for when to contact the State Fire Marshal
46	54.1	b. Establishment of general guidelines for conducting scene examinations, scene documentation, interviews and interrogation, post-incident investigations, and presentations of findings which are in line with industry standards, such as those outlined in NFPA 1033, <i>Standard for Professional Qualifications for Fire Investigator</i>
63	74.1	c. Ongoing training and professional information for investigators provided in the areas of investigation methodology, fire protection technology, and current code requirements
23	27.1	d. State Fire Marshal provided with a written statement of all the facts relating to the cause and origin of the fire within one week of fire's occurrence
77	90.6	e. Fire fighters instructed in aspects of arson scenes, how their actions impact the work of fire investigators, and cautionary measures they can take in the suppression, overhaul, and salvage of a fire scene
33	38.8	f. Fire fighters and peace officers from your jurisdiction jointly attended investigation training courses offered by the Bureau of Criminal Apprehension
3	3.5	g. None of the above

68. In approximately what percent of fires to which your fire department responded in 1997 would you estimate an investigator (including State Fire Marshal investigators) was on the scene of the fire immediately after the fire was extinguished (or earlier)? (Mark one.)

Number	Percent	(N=84)
17	20.2%	1. 100 percent
18	21.4	2. 90 to 99 percent
9	10.7	3. 80 to 89 percent
11	13.1	4. 70 to 79 percent
24	28.6	5. Less than 70 percent
5	6.0	6. Unknown or unable to estimate

69. How satisfied were you with the quality of the services your department or its fire marshal office provided in the following areas in 1997? (Circle one response for each service; if your office did not offer that service, circle "6" for not applicable.)

	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied		N/A	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Public education (N=86)	43	50.0%	28	32.6%	7	8.1%	5	5.8%	1	1.2%	2	2.3%
b. Inspection/code enforcement (N=87)	35	40.2	24	27.6	10	11.5	4	4.6	6	6.9	8	9.2
c. Investigation (N=87)	51	58.6	22	25.3	7	8.0	3	3.4	0	0.0	4	4.6

70. What innovative or effective methods regarding fire prevention activities are used by your department or other departments you are aware of? (Use additional sheet, if needed.)

71. Do you have any additional comments?

Thank you for completing this survey!

Please return the completed survey in the postage-paid envelope by November 25th to:

Legislative Auditor's Office
 Centennial Building - First Floor South
 658 Cedar Street
 St. Paul, MN 55155

Or fax to: 651/296-4712

Fire Services: A Best Practices Review

Survey of Minnesota Fire Departments Office of the Legislative Auditor

Thank you for answering this survey of fire departments. Most of the questions pertain to the 1997 calendar year. We recognize that some questions may refer to data that you do not routinely collect, but we encourage you to provide us with estimated answers where you may not have precise data. Direct questions about the survey to Jody Hauer at 651/296-8501.

Please return the completed survey in the enclosed postage-paid envelope by November 25, 1998.

Name: _____ Phone: _____

1. How was your fire department structured in 1997?

(Mark one box.)

Number	Percent	(N=304)
276	90.8%	1. Municipal department
20	6.6	2. Private nonprofit organization
5	1.6	3. Special fire protection district
3	1.0	4. Other <i>(Please specify.)</i> _____

We received responses from 307 of a sample of 454 volunteer or on-call departments in areas under 8,000 population, for a response rate of 67.6 percent.

2. Did any of the following apply to your department in 1997? If so, please list the cities and townships involved. (Circle one number and list communities if applicable.)

	Yes		No	
	Number	Percent	Number	Percent
a. My department operated under a joint powers agreement (Cities and towns involved:) (N=298)	42	14.1%	256	85.9%
b. My department was a consolidated department (Cities and towns involved:) (N=298)	11	3.7	287	96.3
c. My department provided services by contract (Cities and towns involved:) (N=298)	214	71.8	84	28.2
d. A joint powers agreement or consolidation was under development (Cities and towns involved:) (N=297)	3	1.0	294	99.0

3. Did your department have in place in 1997 a preventive maintenance program for apparatus and equipment that prescribed routine, scheduled maintenance? (Mark one.)

Number	Percent	(N=306)
231	75.5%	1. Yes
51	16.7	2. No
24	7.8	3. Preventive maintenance program was under development

4. Did your department have in place in 1997 a replacement plan for capital purchases that estimated the expected replacement year of apparatus based on their expected life cycles and their costs? (Mark one.)

Number	Percent	(N=305)
120	39.3%	1. Yes
147	48.2	2. No
38	12.5	3. Replacement plan was under development

5. What purchasing arrangements has your department used in the past 10 years to purchase pumpers, ladder trucks, tankers, brush trucks, or other apparatus? (Mark all that apply.)

Number	Percent	(N=301)
211	70.1%	a. Developed specifications and selected vendors through bidding process
106	35.2	b. Bought or leased vehicles through the Federal Excess Property Program
6	2.0	c. Purchased apparatus jointly with another department
2	0.7	d. Used lease arrangement with another department
173	57.5	e. Used contributions from civic organizations or charitable gambling proceeds in making the purchase
14	4.7	f. Received apparatus in exchange for service provided by contract
54	17.9	g. Other (Please specify.) _____

6. How many fire fighters, fire officers, and other staff were in your fire department or on contract to the department at the end of 1997? (Exclude any staff, such as a building inspector, who was not a member of, or on contract to, the fire department.) (N=305)

Number of Responding Departments		Number of Fire Fighters and Officers		Number of Other Staff (include support staff, if any)		TOTAL	
		Mean	Median	Mean	Median	Mean	Median
1	a. Full-time career members	(1) 0.0	0.0	(2) 0.0	*	(3) 0.0	0.0
186	b. Members earning stipend, hourly or on-call wage	(1) 11.0	2.0	(2) 0.2	0.0	(3) 11.2	2.0
144	c. Volunteers earning pension but no compensation for responses	(1) 10.1	0.0	(2) 0.1	0.0	(3) 10.2	0.0
21	d. Volunteers earning neither compensation nor pension	(1) 1.0	0.0	(2) 0.1	0.0	(3) 1.0	0.0

(Mark one response for each statement.)

e. The chief's position was a paid one	Number	Percent	(N=306)
1. Yes	196	64.1%	
2. No	110	35.9	

f. City or county inspectors (who were not fire department members or on contract through the department) performed building inspections	Number	Percent	(N=273)
1. Yes	67	24.5%	
2. No	206	75.5	

7. Which of the following, if any, did your fire department have in place for fire suppression, hazardous materials response, or technical rescue activities in 1997? (Circle a number in each column if the practice was available for that service and your department offered the service. If your department did not offer hazmat or technical rescue services, mark the appropriate box below and circle responses only for the services you offered.) (N=298)

Number	Percent	
145	48.7%	1. We did not offer hazardous materials responses
124	41.6	2. We did not offer technical rescues

*Too few responses to report median.

Question 7, continued ...

Practice	Fire Suppression		Hazardous Materials		Technical Rescue	
	Number	Percent	Number	Percent	Number	Percent
a. Written emergency response plan that defines the fire department's roles during the incident	159	53.4%	70	23.5%	54	18.1%
b. Written standard operating guidelines for conducting the services	165	55.4	69	23.2	59	19.8
c. Risk assessment for rescue needs and target hazards in the community	97	32.6	42	14.1	33	11.1
d. Minimum staffing level requirements according to OSHA and FEMA standards	112	37.6	46	15.4	31	10.4
e. Written pre-incident plans specified for all fire risks, target hazards, or potential rescue needs	84	28.2	39	13.1	33	11.1
f. Specialists (or contracts with them) to perform services in the event fire department does not provide service	39	13.1	47	15.8	23	7.7
g. None of the above	39	13.1	46	15.4	53	17.8

8. Which of the following activities were included in your department's mutual aid associations or automatic aid agreements during 1997? (Circle "1," "2," or both numbers to indicate whether you provided and/or received mutual aid. Circle "3" if the activity was not included in your mutual aid.) (N=301)

Number Percent

7 2.3% 1. We did not participate in mutual aid or automatic aid

Activity	Provided Mutual Aid		Received Mutual Aid		Not Part of Mutual Aid	
	Number	Percent	Number	Percent	Number	Percent
a. Fire suppression	279	92.7%	250	83.1%	5	1.7%
b. Technical rescues	106	35.2	109	36.2	160	53.2
c. First responders	156	51.8	127	42.2	118	39.2
d. Emergency Medical Services (EMS) Basic or Advanced Life Support	74	24.6	99	32.9	177	58.8
e. Hazardous materials responses	56	18.6	77	25.6	204	67.8
f. Enforcement of fire codes and/or related local ordinances, inspections	22	7.3	26	8.6	258	85.7
g. Fire investigations	33	11.0	55	18.3	224	74.4
h. Fire safety awareness efforts	76	25.2	43	14.3	213	70.8
i. Public relations activities	78	25.9	35	11.6	214	71.1
j. Training courses or seminars	158	52.5	149	49.5	106	35.2
k. Drills and exercises	201	66.8	180	59.8	75	24.9
l. Use of specialized equipment or apparatus	132	43.9	129	42.9	135	44.9
m. Use of facilities	123	40.9	98	32.6	160	53.2
n. Cooperative purchasing arrangements	23	7.6	24	8.0	267	88.7
o. Other (Please specify.)	0	0.0	1	0.3	293	97.3

9. How satisfied were you with the following characteristics of your 1997 mutual aid? (Circle one number for each characteristic or circle "6" if the characteristic was not available.)

Characteristics	Very Satisfied		Somewhat Satisfied		Neither Satisfied Nor Dissatisfied		Somewhat Dissatisfied		Very Dissatisfied		Not Available	
	#	%	#	%	#	%	#	%	#	%	#	%
a. Access to or reaching additional fire fighters (N=300)	239	79.7%	39	13.0%	13	4.3%	3	1.0%	2	0.7%	4	1.3%
b. Coordination of fire fighters from multiple departments (N=297)	186	62.6	75	25.3	25	8.4	5	1.7	0	0.0	6	2.0
c. Use of apparatus/equipment from other departments (N=295)	204	69.2	55	18.6	28	9.5	1	0.3	0	0.0	7	2.4
d. Communication among departments (N=299)	135	45.2	94	31.4	40	13.4	22	7.4	4	1.3	4	1.3
e. Availability of staffing for prolonged or extraordinary incidents (N=287)	123	42.9	71	24.7	53	18.5	6	2.1	2	0.7	32	11.1
f. Response by other departments to your requests for aid (N=299)	252	84.3	32	10.7	10	3.3	1	0.3	0	0.0	4	1.3

10. Approximately what was your fire department's average response time in minutes to incidents in your primary response area in 1997 (starting from the time companies were alerted to the time a full response unit arrived at the scene)? (Fill in only one response. Fill in a. unless your department only records response times from the time a call comes in to the dispatcher, instead of the time firefighters are alerted.) (N=292)

<u>Median (N=179)</u>		<u>Number</u>	<u>Percent</u>	
7.0 Minutes	a. Average response time starting from time companies were alerted	63	21.6%	c. Unknown or unable to estimate

OR

<u>Median (N=50)</u>	b. Average response time starting from the time the call came in to the dispatcher
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11. For each of the following services, approximately how many person-hours of staff time were spent in 1997, and how many responses did the department make? Also indicate whether your department charged fees for any of these services. (If necessary, please check your records to verify number of hours and responses; if you do not record hours or number of responses, mark the "Don't Know" column. Include hours for fire marshal staff and support staff, where applicable, but exclude staff, such as city building inspectors, who were not part of or on contract with your department.) (N=291)

Service	Total Person-Hours	Total Responses or Events	Did Not Offer		Don't Know		Department Charged Fees	
	Median	Median	Number	Percent	Number	Percent	Number	Percent
a. Fire suppression	213.0 (N=192)	13.0 (N=218)	0	0.0%	40	13.7%	93	32.0%
b. False alarms	14.0 (N=156)	3.0 (N=173)	8	2.7	49	16.8	17	5.8
c. Technical rescues ^I (e.g., vehicle extrications, water/ice rescues, etc.)	35.5 (N=132)	3.0 (N=145)	73	25.1	27	9.3	31	10.7
d. EMS - First ^{II} Responders	120.0 (N=89)	27.0 (N=107)	112	38.5	36	12.4	11	3.8

^I Medians may differ slightly from actual because two respondents included EMS-First Responders activities in their estimates for technical rescues.

^{II} Medians may differ slightly from actual because several respondents included BLS, ALS, and/or technical rescues in their estimates for EMS-First Responders.

Question 11, continued ...

Service	Total Person-Hours	Total Responses or Events	Did Not Offer		Don't Know		Department Charged Fees	
	Median	Median	Number	Percent	Number	Percent	Number	Percent
e. EMS - Basic Life ^{III} Support response services	150.0 (N=21)	46.5 (N=18)	218	74.9	16	5.5	1	0.3
f. EMS - Basic Life ^{IV} Support transport	2.0 (N=5)	1.0 (N=5)	249	85.6	12	4.1	3	1.0
g. EMS - Advanced Life Support response services	*	*	263	90.4	6	2.1	0	0.0
h. EMS - Advanced Life Support transport	*	*	263	90.4	7	2.4	1	0.3
i. Hazardous materials response	0.0 (N=98)	0.0 (N=100)	72	24.7	27	9.3	11	3.8
j. Code enforcement (inspections and plan reviews)	10.0 (N=42)	3.0 (N=35)	199	68.4	12	4.1	1	0.3
k. Fire investigations	8.0 (N=78)	2.0 (N=75)	105	36.1	40	13.7	2	0.7
l. Public education (e.g., school programs, fire-safe house)	20.0 (N=172)	(N/A)	40	13.7	35	12.0	0	0.0
m. Emergency manage- ment services	10.0 (N=56)	(N/A)	93	32.0	46	15.8	(N/A)	
n. Public relations activities	20.0 (N=132)	(N/A)	42	14.4	54	18.6	(N/A)	
o. Apparatus/equipment maintenance	60.0 (N=177)	(N/A)	7	2.4	59	20.3	(N/A)	
p. Building/grounds maintenance	30.0 (N=118)	(N/A)	39	13.4	61	21.0	(N/A)	
q. Hydrant maintenance/ inspection	10.0 (N=83)	(N/A)	88	30.2	46	15.8	(N/A)	
r. Reduction of flammable brush/vegetation	13.0 (N=62)	(N/A)	97	33.3	41	14.1	(N/A)	
s. Training and drills	441.0 (N=202)	(N/A)	2	0.7	45	15.5	(N/A)	
t. Administration	60.0 (N=136)	(N/A)	20	6.9	64	22.0	(N/A)	
u. Support staff (not assigned to a specific service)	0.0 (N=44)	(N/A)	79	27.1	62	21.3	(N/A)	
v. Standby time	10.0 (N=77)	(N/A)	46	15.8	73	25.1	(N/A)	
w. Other (Please specify below.) _____	57.0 (N=23)	(N/A)	17	5.8	27	9.3	0	0.0
x. TOTALS	894.0 (N=237)	32.5 (N=222)						

* Too few responses to report median.

^{III} Medians may differ slightly from actual because several respondents included EMS-First Responders, BLS transport, and/or ALS activities in their estimates for BLS response services. The person-hours median includes some numbers that are estimates based on a ratio of person-hours for BLS response services to person-hours for BLS transport.

^{IV} Medians exclude those responses that did not separate time spent on BLS transport from time spent on EMS-First Responders, BLS response, or ALS activities.

12. How consistently did the following characterize your department's interactions with volunteers or on-call members in 1997? (Circle one number for each statement.)

Characteristic	Consistently		Sometimes		Rarely, If Ever	
	Number	Percent	Number	Percent	Number	Percent
a. Provided recognition to volunteers for jobs well done (such as in newsletters, at banquets, with press releases, etc.) (N=282)	64	22.7%	137	48.6%	81	28.7%
b. Took steps to maintain a good reputation and positive image to keep volunteers interested, such as maintaining apparatus and equipment as a point of pride (N=287)	173	60.3	108	37.6	6	2.1
c. Leadership used a management style that encouraged member participation (N=284)	161	56.7	102	35.9	21	7.4
d. Stated an explicit mission and goals so volunteers knew what to expect (N=283)	121	42.8	126	44.5	36	12.7
e. Used a process for communicating relevant information so members were informed (N=285)	178	62.5	95	33.3	12	4.2
f. Used standard procedures for dealing equitably with grievances (N=276)	108	39.1	92	33.3	76	27.5
g. Required training that was relevant and fit the volunteers' time availability (N=283)	198	70.0	78	27.6	7	2.5
h. Offered monetary incentives per hour, per call, or as a stipend (N=280)	133	47.5	24	8.6	123	43.9
i. Offered medical, death, or disability benefits to its volunteers (N=276)	158	57.2	17	6.2	101	36.6
j. Offered a retirement or pension plan for its volunteers (N=287)	265	92.3	1	0.3	21	7.3
k. Used a recruitment plan that was structured according to the department's personnel needs (N=281)	130	46.3	77	27.4	74	26.3

13. Did your department offer or require training for all members expected to perform the following services in 1997? (Circle "1" if training was offered or required. If your department did not offer that service, circle "2.") (N=302)

Service	Training Offered or Required		Did Not Offer Service	
	Number	Percent	Number	Percent
a. Structural and vehicle fires	293	97.0%	0	0.0%
b. Wildland fires	232	76.8	60	19.9
c. Operating apparatus	298	98.7	2	0.7
d. Maintenance of apparatus and equipment	262	86.8	20	6.6
e. Public education	162	53.6	54	17.9
f. Inspection/code enforcement	58	19.2	211	69.9
g. Fire investigation	126	41.7	117	38.7
h. Technical rescues	184	60.9	77	25.5
i. HazMat first responder-Awareness Level	219	72.5	73	24.2
j. HazMat first responder-Operations Level	90	29.8	197	65.2
k. First response (medical incidents)	191	63.2	106	35.1
l. First aid and CPR	255	84.4	38	12.6
m. EMT-Basic	91	30.1	202	66.9
n. EMT-Intermediate	21	7.0	266	88.1
o. EMT-Paramedic	11	3.6	274	90.7
p. Use and limitations of personal protective equipment	254	84.1	34	11.3

14. On the average, of those volunteers or on-call members contacted for incidents in 1997, what percentage would you estimate responded to an average incident? (Circle one.) (N=301)

	100 to 81%		80 to 61%		60 to 41%		40 to 21%		20% or Less		N/A	
	#	%	#	%	#	%	#	%	#	%	#	%
Percentage of volunteers responding when contacted	36	12.0%	127	42.2%	114	37.9%	18	6.0%	2	0.7%	4	1.3%

15. What was the retention rate of volunteers in your department over the past five years (1993 - 1997), disregarding retirements due to age or injury? (Circle one.) (N=293)

	100 to 81%		80 to 61%		60 to 41%		40 to 21%		20% or Less		N/A	
	#	%	#	%	#	%	#	%	#	%	#	%
Retention rate	173	59.0%	64	21.8%	15	5.1%	13	4.4%	21	7.2%	7	2.4%

16. From which of the following sources did your department receive revenues in 1997? Approximately what percent of your total revenues in 1997 came from each source? (For each revenue source, circle "1" if you received revenues from that source and then indicate its approximate percentage of total revenues.)

Source	Received Some in 1997?			Approximate Percentage of Total Revenues	
	Number	Percent	(N=293)	Mean	Median (N=243)
a. Property taxes	229	78.2%	(1) Yes	53.5%	60.0%
b. Fees for services	123	42.0	(1) Yes	4.4	0.0
c. Charitable gambling proceeds, e.g., pull tabs	114	38.9	(1) Yes	8.1	0.0
d. Contributions from civic organizations (Lions Clubs, Jaycees, etc.)	94	32.1	(1) Yes	2.4	0.0
e. Revenue from events (softball tournaments, dances, etc.)	85	29.0	(1) Yes	3.3	0.0
f. Revenues from contracts for services	164	56.0	(1) Yes	23.1	5.0
g. Reimbursements for services provided	57	19.5	(1) Yes	1.3	0.0
h. State aid that came to department, not to relief association	48	16.4	(1) Yes	1.7	0.0
i. Other (Please specify.) _____	31	10.6	(1) Yes	2.2	0.0
j. Did your department receive in-kind contributions, such as gifts of equipment, in 1997? (Mark one box.)	Number	Percent	(N=276)		
	42	15.2%	1. Yes		
	234	84.8	2. No		

17. What were your fire department's total operating expenditures in 1997 (excluding capital purchases of apparatus, land, computer hardware or other capital expenses)?

Mean	Median	(N=257)
\$39,461.00	\$29,500.00	Total operating expenditures

18. Which of the following items were included in your estimate of 1997 operating expenditures reported above? (Mark all that apply.)

Number	Percent	(N=259)
183	70.7%	a. Salaries, wages, or stipends paid to department members, contracted employees, other department staff
16	6.2	b. Benefits (vacation, sick leave, etc.) paid to members and other department staff
240	92.7	c. Supplies (e.g., office supplies, manuals, and equipment purchases not part of a capital purchase)
253	97.7	d. Training, drills, certification fees, and equipment used in training
190	73.4	e. Building space rental, maintenance, and utilities
253	97.7	f. Maintenance of vehicles and equipment
179	69.1	g. Administrative and overhead expenses (legal services, human resources services, insurance, etc.)
20	7.7	h. Other operating expenditures (Please specify.) _____

19. What do you estimate were your department's capital expenditures on purchases of apparatus over the most recent ten-year period of 1987-97 (not adjusted for inflation)? (N=295)

<u>Mean</u>	<u>Median</u>	(N=217)
\$166,890.63	\$120,000.00	a. Total capital expenditures on apparatus and equipment (1987-97)

<u>Number</u>	<u>Percent</u>	
78	26.4%	b. Unknown or unable to estimate

20. Which of the following components of a public education program, if any, did your department have in 1997? (Mark all that apply.)

<u>Number</u>	<u>Percent</u>	(N=300)
100	33.3%	a. Identification of the most important local fire risks and hazards, and targeting of specific audiences based on community risks
114	38.0	b. Availability of a smoke detector program
229	76.3	c. Participation in the nationally observed annual Fire Prevention Week
204	68.0	d. Collaboration with school teachers and administrators in the fire prevention effort
136	45.3	e. Use of public education programs, tools, and literature available from other sources (NFPA's "Learn Not to Burn" program, a safe house, etc.)
46	15.3	f. Availability of materials published in languages spoken within the community
23	7.7	g. Monitoring of program's effectiveness on a routine basis
32	10.7	h. Designation of a public fire safety education officer, to coordinate all fire safety education programs, who meets professional qualifications in line with industry standards, such as NFPA 1035, <i>Standard for Professional Qualifications for Public Fire and Life Safety Educator</i>
134	44.7	i. Use of media and other community organizations for delivering fire safety messages
57	19.0	j. Availability and promotion of public education services and materials for use by individuals, businesses, and community organizations
18	6.0	k. Establishment of a program of fire-safety surveys in private homes
10	3.3	l. Other (Please specify.) _____
35	11.7	m. None of the above

21. Which of the following components of an inspection/code enforcement program, if any, did your department have in 1997 (excluding inspections conducted by the State Fire Marshal's Office of buildings such as schools, hotels, nursing homes, etc.)? (Mark all that apply.)

<u>Number</u>	<u>Percent</u>	(N=194)
137	70.6%	a. An inspection/code enforcement program was not provided by the fire department nor contracted through it
13	6.7	b. Process for determining inspection priorities that targets life-safety and property hazards and specifies inspection frequency
4	2.1	c. Establishment of job performance requirements for inspectors consistent with industry standards, such as NFPA 1031, <i>Standard for Professional Qualifications for Fire Inspector</i>
3	1.5	d. Evaluation of inspectors based on their performance of job requirements, including scheduled field checks to determine the quality of inspections performed
38	19.6	e. Collaboration with other agencies, such as a building inspections agency, involved in code administration and enforcement
28	14.4	f. Interaction between code enforcement and fire suppression staff in developing prefire plans
28	14.4	g. Consultation with a fire protection engineer when necessary for plan reviews, interpretations, and variances (through a staff fire protection engineer, a contract, or the State Fire Marshal)
3	1.5	h. Establishment of a board of appeals to appeal orders issued under the fire code
18	9.3	i. Retention for at least three years of records of each inspection made
9	4.6	j. Other (Please specify.) _____

22. Which of the following components of an investigation program, if any, did your department have in 1997? (Mark all that apply.)

Number	Percent	(N=289)
211	73.0%	a. Guidelines for when to contact the State Fire Marshal
54	18.7	b. Establishment of general guidelines for conducting scene examinations, scene documentation, interviews and interrogation, post-incident investigations, and presentations of findings which are in line with industry standards, such as those outlined in NFPA 1033, <i>Standard for Professional Qualifications for Fire Investigator</i>
41	14.2	c. Ongoing training and professional information for investigators provided in the areas of investigation methodology, fire protection technology, and current code requirements
53	18.3	d. State Fire Marshal provided with a written statement of all the facts relating to the cause and origin of the fire within one week of fire's occurrence
158	54.7	e. Fire fighters instructed in aspects of arson scenes, how their actions impact the work of fire investigators, and cautionary measures they can take in the suppression, overhaul, and salvage of a fire scene
26	9.0	f. Fire fighters and peace officers from your jurisdiction jointly attended investigation training courses offered by the Bureau of Criminal Apprehension
184	63.7	g. The department relied heavily on the State Fire Marshal's Office for investigations
27	9.3	h. None of the above

23. What innovative or effective methods regarding fire suppression, rescues, first response or EMS, hazmat, mutual aid, or fire prevention activities are used by your department or other departments you are aware of? (Use additional sheets if needed.)

24. Do you have any additional comments?

Thank you for completing this survey!

Please return the completed survey in the postage-paid envelope by November 25th to:

Legislative Auditor's Office
Centennial Building - First Floor South
658 Cedar Street
St. Paul, MN 55155

Or fax to: 651/296-4712