

Fire Company Capacity, 2001 and 2012

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In 2012, the Center for Rural Pennsylvania and the Pennsylvania Fire and Emergency Services Institute (PFESI) conducted a mail survey of Pennsylvania fire chiefs to identify firefighter recruitment and retention patterns and measure the capacity of fire companies to meet their communities' emergency needs.



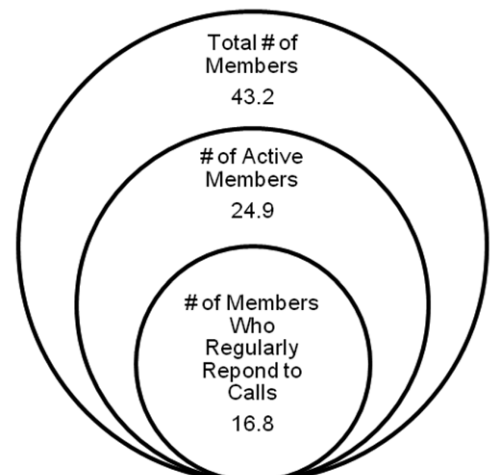
This report is the second in a series that shares the findings from the survey. The first report focused solely on recruitment and retention issues, while this report looks at fire company capacity. The results of the survey were compared with a similar survey of fire chiefs conducted in 2001 by the Center and PFESI. According to the 2012 survey results:

- Companies had an average of 16.8 firefighters who regularly responded to calls;
- 53 percent of fire chiefs said there was an increase in the number of calls to which their company responded over the past 2 years;
- 43 percent of fire chiefs said their companies were unable to respond to some calls over the past 2 years;
- The most difficult time for fire companies to respond to calls was weekday mornings and afternoons;
- 67 percent of fire companies required firefighters to participate in monthly training; and
- 33 percent of companies discussed or considered consolidation over the past 2 years.

Findings Number of Firefighters

In 2012, fire chiefs reported having an average of 43.2 members. Of these members, 58 percent, or an average of 24.9 per company, were considered "active" by the chiefs. Among the active members, 67 percent, or an average of 16.8, regularly responded to calls.

Average Number of Firefighters, 2012



Survey Objectives and Methods

Objectives

The Center for Rural Pennsylvania and the Pennsylvania Fire and Emergency Services Institute conducted two statewide surveys of fire chiefs in the spring of 2001 and 2012. With a few exceptions, the questions in both surveys were identical.

The objectives of both surveys were to identify patterns in recruitment and retention of firefighters across Pennsylvania and to measure the capacity of fire companies to meet their communities' emergency needs. This report focuses on fire company capacity and any changes have occurred over an 11-year period.

The first report, *Pennsylvania Firefighters: Recruitment and Retention, 2001 and 2012*, was published in November 2012 and focused on the first objective of identifying patterns in recruitment and retention. That report is available on the Center's website at www.rural.palegislature.us/documents/factsheets/2012_Firefighter_Survey_R&R.pdf.

The 2001 survey results, which were published in January 2002, are available on the Center's website at www.rural.palegislature.us/documents/factsheets/Fire_Survey_2002.pdf.

Methods

The 2001 and 2012 surveys were mailed to all Pennsylvania fire company chiefs in both paid and volunteer fire companies.

In 2001, the sample population for the survey was 2,462 fire companies. From the sample population, 883 usable surveys were returned, for a response rate of 36 percent. The margin of error was 2.6 percent at the 95 percent confidence level.

In 2012, the sample population was 2,290 fire companies. Out of the sample population, 601 usable surveys were returned, for a response rate of 26 percent. The margin of error was 3.4 percent at the 95 percent confidence level.

Data limitations

Under-representation of paid fire companies: While the survey was sent to all fire companies, paid fire companies may be under-represented in the results since the majority of Pennsylvania fire companies (93 percent) are made up of volunteers (Governor's Center for Local Government Services).

Different definitions of fire company member and active fire company member: In field testing the

survey in 2001, some chiefs considered all members to be active, while others considered only those who regularly respond to calls as active. To avoid confusion, the Center included definitions in the 2001 and 2012 surveys and added three separate questions on membership. The first asked for the total number of members; the second asked for the total number of "active members"; and the third asked for the total number of members who regularly respond to calls. Despite the questions and definitions provided, the results indicate that some respondents did not make the distinction between active members and members. Therefore, unless otherwise noted, this analysis profiles members who regularly respond to calls.

2001 and 2012 survey responses are only comparable at the aggregate level: The responses to both surveys were anonymous, so individual responses from fire companies in 2001 could not be compared with individual responses in 2012. Responses were, therefore, compared in aggregate.

A chief's opinion may be different from rank-and-file members: In many ways, the position of fire chief is one of management. His or her views and opinions may differ from those who actually join or leave.

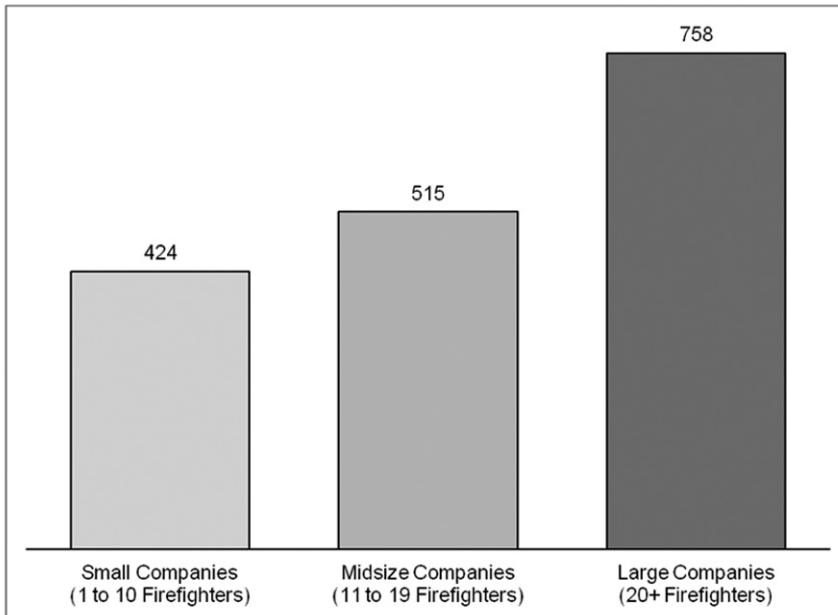
Recoding/calculating variables

Rural/urban: The Center classified fire companies as rural or urban based on the county in which they were located. Rural fire companies were in counties where the population density was below the statewide average of 284 persons per square mile. Urban fire companies were located in counties where the population density was at or above the statewide density.

Net change in firefighters: The Center calculated the net change in firefighters by subtracting the number of new members who joined the company in the past 2 years from the number of those who left the company or became inactive during the same period. In both the 2001 and 2012 surveys, questions that were left blank on membership, age cohorts, fundraising events, the number of female members, fire calls, new members, and members who left were interpreted to mean "none" and were therefore coded as zero.

This analysis focuses on firefighters who regularly respond to calls. In the analysis, the terms "firefighter" and "member" are synonymous.

Average Number of Fire Calls Over the Past 2 Years by the Number of Firefighters Who Regularly Respond to Calls, 2012



Number of Fire Calls

In 2012, fire chiefs said their companies responded to an average of 551 calls over the past 2 years. Comparable data were not available for 2001. Urban fire companies responded to more calls (692) than rural companies (428). The number of fire calls was positively correlated with the number of firefighters who regularly responded to calls, so a company with more firefighters typically responded to more calls than a company with fewer firefighters.

Change in Calls

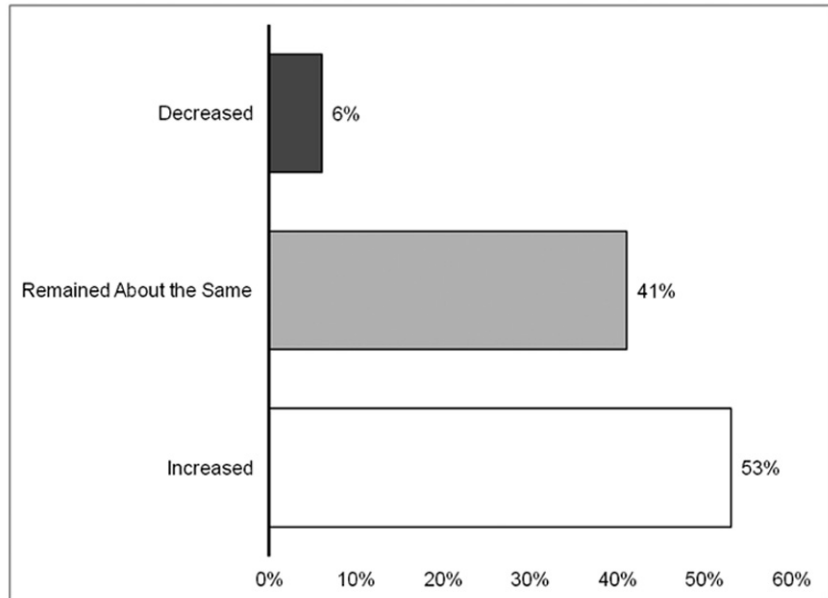
Fifty-three percent of fire chiefs said the number of fire calls increased during the past 2 years; 6 percent said there was a decline in calls; and 41 percent said the number of calls were about the same.

Among companies with an increase in calls, 55 percent were located in an urban county and 58 percent had an annual budget of less than \$100,000. These companies responded to 604 fire calls and had an average of 16.2 firefighters.

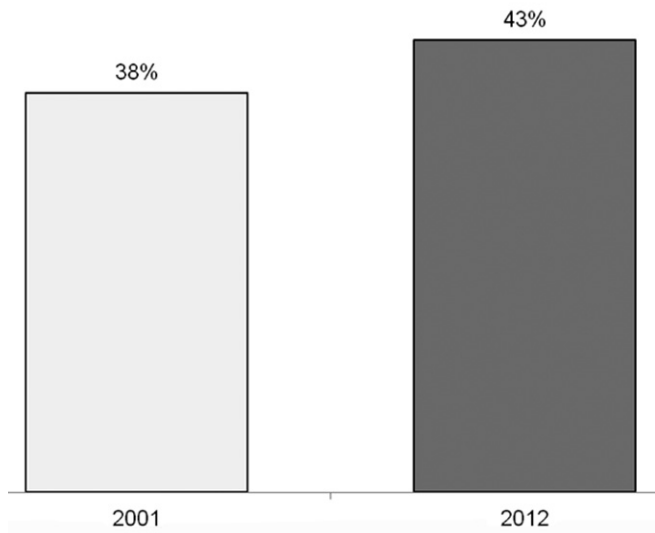
Of the companies that had a decrease in calls, 49 percent were located in a rural county and 51 percent were in an urban county. Sixty-nine percent of companies had budgets of less than \$100,000. These companies had 14.9 firefighters and responded to 390 calls, on average.

Of the companies that had no change in the number of calls, 50 percent were located in a rural county and 50 percent were in an urban county. Fifty-nine percent had budgets under \$100,000. These companies had 17.6 firefighters and responded to 549 calls, on average.

Change in Fire Calls Over the Past 2 Years, 2012



Percent of Companies Unable to Respond to Calls Over the Past 2 Years, 2001 and 2012

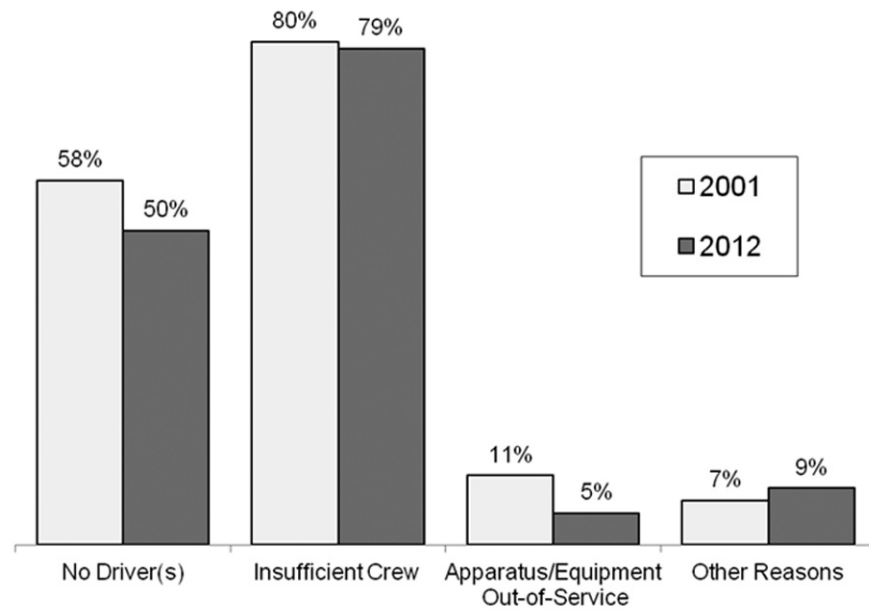


Ability to Respond to Calls

In 2012, 43 percent of fire chiefs said their companies were unable to respond to some calls during the past 2 years. This is an increase from 2001 when 38 percent of chiefs said their companies were unable to respond to some calls.

Among the companies that were unable to respond to calls in 2012, 79 percent said they were unable to respond to less than 10 calls, and 21 percent said 11 or more calls. From 2001 to 2012, there was an increase in the number of calls of which companies were unable to respond. In 2001, among companies that were unable to respond to calls, 82 percent were unable to respond to less than 10 calls and 18 percent to 11 or more calls.

Reasons Why Companies Were Unable to Respond to Fire Calls, 2001 and 2012



Totals do not add up to 100 percent due to multiple responses.

Reasons for Non-response

Among the possible reasons provided in the survey on why companies could not respond to calls, 59 percent of companies in 2012 checked only one reason, 38 percent checked two reasons, and 3 percent checked three reasons.

The majority of respondents in 2001 and 2012 cited insufficient crew as the main reason for non-response.

Day, Time When Companies Have Difficulty Responding to Calls

In 2012, 94 percent of fire chiefs said their companies had difficulty responding to calls during the weekday. The most difficult time to respond to calls was weekday mornings (82 percent) and weekday afternoons (69 percent). Four percent of chiefs said their companies had difficulties responding to calls during the evenings, and 9 percent said the difficulties were at night.

Forty percent of chiefs said their companies had difficulty responding to calls during the weekends.

Overall, 55 percent of respondents said their companies had difficulty responding to calls only during weekdays; 1 percent had difficulty responding only during weekends; and 39 percent had difficulty responding during weekdays and weekends.

Day and Time When Companies Have the Most Difficulty Responding to Calls, 2001 and 2012

	2001	2012
Weekdays		
Mornings	87%	82%
Afternoons	77%	69%
Evenings	2%	4%
Nights	6%	9%
Weekends		
Mornings	38%	38%
Afternoons	42%	38%
Evenings	35%	31%
Nights	25%	28%

Totals do not add up to 100 percent due to multiple responses.

Firefighter Training

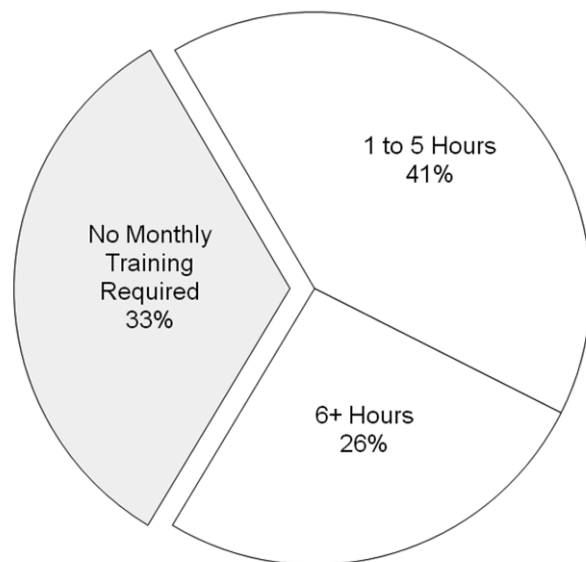
In 2012, 85 percent of companies required firefighters to train to become active firefighters; 15 percent did not require training. These percentages are nearly identical to the 2001 percentages.

In 2012, companies that required training to become a firefighter had roughly the same number of firefighters (16.8) as companies that did not require training (16.4). However, companies that required training responded to more fire calls (597) than companies that did not require training (400). A higher percentage of companies in rural counties (19 percent) did not require training than companies in urban counties (11 percent).

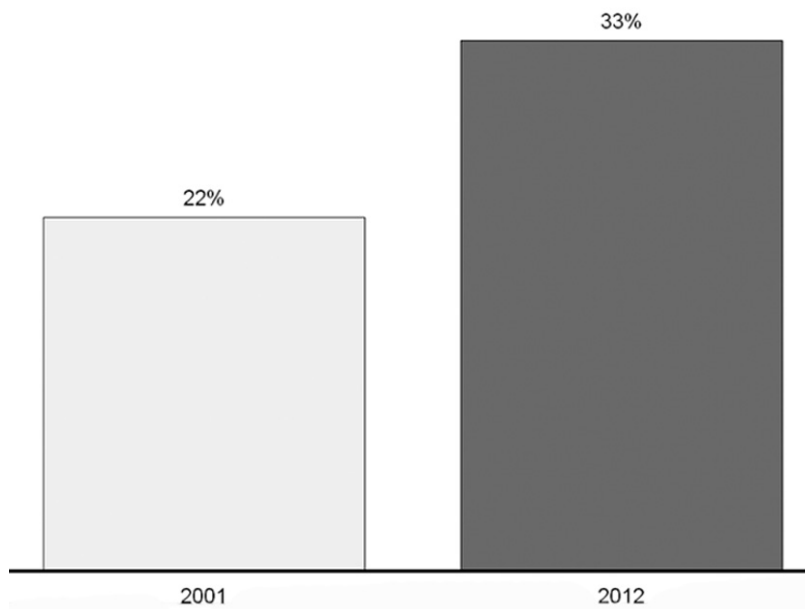
In 2012, 67 percent of companies required members to participate in monthly training to remain active, and 33 percent did not require such training. In 2001, 60 percent of companies required monthly training and 40 percent did not.

In addition to an increase in the percentage of companies requiring monthly training, there has been an increase in the number of training hours. In 2001, among companies that required training, 69 percent required one to five hours of training and 31 percent required six or more hours per month. In 2012, 61 percent required one to five hours of training and 39 percent required six or more hours of training.

Number of Hours of Training Required Each Month to Remain Active Firefighters, 2012



Percent of Fire Companies that Discussed or Considered Consolidation, 2001 and 2012

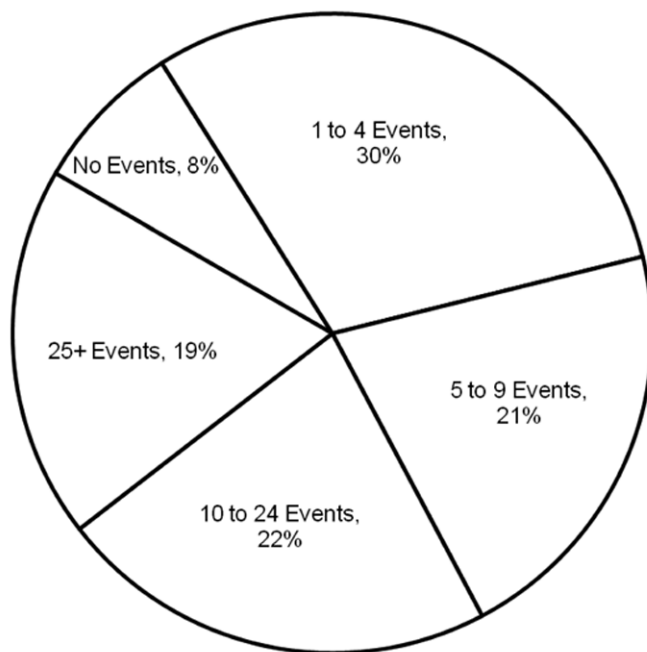


Consolidation

In 2012, 33 percent of fire chiefs said their companies discussed or considered consolidation with the past 2 years. In 2001, 22 percent of the fire chiefs said their companies discussed or considered consolidation within the past two years.

There was no indication from the 2012 data as to why some companies discussed consolidation while others did not.

Range of Fire Company Fundraising Events, 2012



Fundraising

In 2012, fire companies had an average of 17.4 fundraisers every year. (This question was not asked in the 2001 survey.) However, this average masks the wide range of fundraisers among companies, with 8 percent of companies having no fundraising events and 19 percent of companies having 25 or more events a year.

There was little difference in the average number of fundraising events a company had and the following indicators: population served; presence of an auxiliary or social club; discussion on consolidation; presence of elected officials in the fire company; and the number of new members recruited over the past 2 years.

There were, however, two noteworthy differences.

Rural/Urban Status: Fire companies located in rural counties had, on average, more fundraising events (23.0) than companies located in urban counties (12.3).

Firefighter Retention: The number of events was positively correlated with the number of firefighters who left or became inactive. This suggests that the more fundraisers companies have, the higher the number of firefighters who leave the company or become inactive.

Seventy-two percent of companies required their firefighters to participate in fundraising events and 28 percent did not.

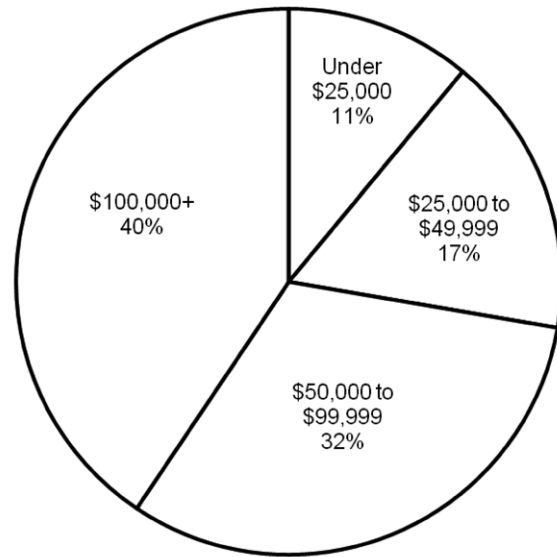
Budgets

In 2012, 60 percent of fire companies had an operating budget of less than \$100,000 and 40 percent had an operating budget of \$100,000 or more.

There were a number of significant differences between companies with smaller budgets (less than \$100,000) and those with larger budgets (\$100,000 or more). For example, smaller budget companies had, on average, fewer firefighters (13.8) and responded to fewer fire calls (378) than larger budget companies (21.0 firefighters and 849 fire calls on average).

In 2001, 75 percent of companies had operating budgets under \$100,000 and 25 percent had budgets of \$100,000 or more.

Range of Fire Company Annual Operating Budgets, 2012

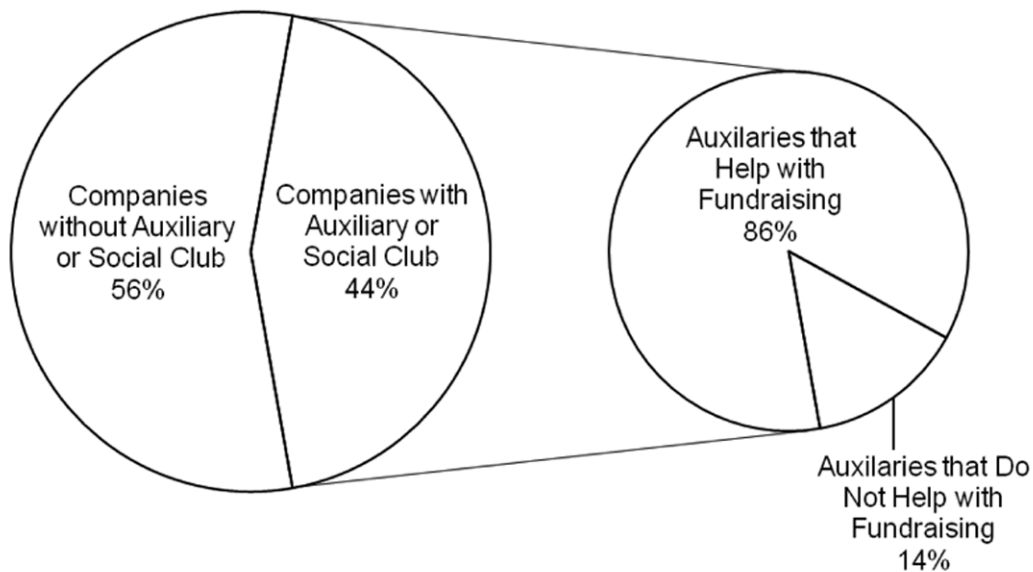


Auxiliaries/Social Clubs

In 2012, 44 percent of companies had an auxiliary or social club. This was a decrease from 2001 when 53 percent of companies had an auxiliary or social club.

Among companies with auxiliaries, 86 percent of auxiliaries helped with fundraising in both 2001 and 2012.

Companies With Auxiliary/Social Club and Auxiliary/Social Club Participation in Fundraising, 2012



Analysis

Small Changes Overall

The results of both surveys indicated that Pennsylvania fire companies underwent some changes over the past 11 years. However, those changes were relatively small, and included: an increase in the number of companies considering or discussing consolidation; a decrease in the percentage of companies with auxiliaries/social clubs; and an increase in the number of companies with budgets over \$100,000. There was also a slight decline in the number of firefighters who regularly responded to calls.

Together, all of these factors suggest that fire companies are changing, but at a relatively slow pace.

Some Difficulties Responding to Calls

In 2012, 43 percent of fire chiefs said their companies were unable to respond to some calls during the past 2 years. However, 79 percent of these chiefs said their companies were unable to respond to less than 10 calls and 21 percent said their companies were unable to respond to 11 or more calls. The top reason for not responding was insufficient crew. In general, these companies had fewer firefighters, and, over the last 2 years, 56 percent had either a net loss or no change in the number of firefighters.

In 2001, 38 percent of chiefs said their companies were unable to respond to some calls.

The results of both surveys indicate the most difficult times for a fire company to respond to calls are weekday mornings and afternoons.

More Consideration/Discussion of Consolidation

From 2001 to 2012 there was an increase in the percentage of companies discussing or considering consolidation (22 percent to 33 percent). This increase could suggest that more companies are facing financial or staffing difficulties. However, from the data collected, there were no indicators pointing to the reason(s) why these companies were thinking about consolidation.

The survey results did not find any statistical relationships among the variables that could potentially indicate the reasons for the increase in these discussions.

It may be that the reasons for these discussions/considerations are complex and varied and not limited to those companies that are losing members or have smaller budgets. However, since relatively few consolidations have actually occurred over the past 2 years, it appears that companies are trying to plan for a future where consolidation may need to be a reality.

Increase in Training Requirements

The percent of companies requiring monthly training increased from 60 percent in 2001 to 67 percent in 2012. Training, however, takes time and money, and in the written comments section of the survey, many chiefs talked about the difficulty firefighters have in balancing training along with family and work commitments.

These training requirements, however, did not seem to have an impact on recruitment and retention. When it came to the number of members who joined the company and those who left, there was no difference between companies that required five hours of training each month and those that required six or more hours.

Fundraising is Nearly Universal

Ninety-two percent of fire companies had one or more fundraising events a year. The average number of events was 17, or approximately one event every three weeks. The number of events varied little among companies based on size of the company, their budgets, the population served and a host of other factors. There were, however, two exceptions to this pattern. The first was the location of the companies, with rural companies having more fundraisers than urban. The second was with retention, with more fundraisers equaling more firefighters leaving the company or becoming inactive.

Summary

The 2012 survey data suggest that Pennsylvania fire companies are continuing to meet the needs of their communities. Like other community organizations, fire companies are recruiting new members as they see other members leave or become inactive. On average, most companies had a net increase in members.

Like other organizations, fire companies are also requiring on-going training of their members, thereby increasing their companies' skill levels and abilities to effectively respond to emergencies. And, like many other organizations, fire companies are bringing in revenues through fundraising. While it was beyond the scope of the survey to measure the effectiveness of fundraising, written comments included in the survey would suggest there is considerable doubt about the long-term viability of financially sustaining fire companies through constant fundraising efforts.