bushfire CRC

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RECRUITING AND RETAINING VOLUNTEER FIREFIGHTERS IN AUSTRALASIA

AN INTEGRATIVE SUMMARY OF RESEARCH

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Enhancing Volunteer Recruitment and Retention

Recruiting and Retaining Volunteer Firefighters in Australasia – An Integrative Summary of Research

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INTRODUCTION

This report summarises the research findings from Australia's largest-ever research project investigating ways of enhancing the recruitment and retention of volunteer firefighters. This project was conducted by the Bushfire Cooperative Research Centre (Bushfire CRC) Volunteerism Project team between 2003 and 2010.

The Bushfire CRC was established to gain a better understanding of the role of fire in the Australian environment. It brings together researchers from universities, CSIRO, other government organisations and fire agencies to collaborate on research, development and education activities of national economic and social significance.

The Bushfire CRC established the Volunteerism Project to help Australian and New Zealand fire agencies improve volunteer retention and recruitment strategies by enhancing their understanding of demographic, motivational and attitudinal changes affecting volunteerism. The project was based in the School of Psychological Science at La Trobe University, Melbourne, from 2003 to 2010. The research team completed 28 studies with and for volunteer-based fire agencies throughout Australasia, produced a corresponding number of reports and journal articles, and also presented findings at conferences and industry briefings.

The long-term (7-year) arrangements of the Bushfire CRC proved advantageous in enabling the project to become one of the most comprehensive studies of fire service volunteerism ever undertaken. The research has been assisted by the efficient structure of the fire services in Australasia, in which large numbers of brigades and volunteers fall under the umbrella of six state, and two territory, governments in Australia, and the government of New Zealand. This structure contrasts with that of some other countries where fire services are administered at the municipal or regional government level. Australia's state and territory-wide organisational structure has enabled us to survey large samples of respondents across very large geographical areas. All six states and the Australian Capital Territory (ACT) participated in at least one study.

Most of the studies were conducted as mail-out surveys, with one combined mail-out and on-line survey and several focus groups and structured interviews. The studies focused on the broad topics of recruitment and retention, with some studies focusing on key specialised areas identified by agencies, such as female volunteers, leadership, the relationship between work and volunteering, and family and volunteering. It should be noted that despite being of considerable importance, it was not possible to conduct focused studies on youth (subjects under 18 years of age) owing to human research ethics constraints.

Fire agencies had reported a consistent decline in volunteer numbers over the 15 years prior to 2004. As the Volunteerism Project studies were reported, fire agencies implemented a wide range of initiatives, some of these in response to the studies' findings. The overall decline in volunteer numbers has eased and modest improvements in volunteer numbers have been reported over several years by some agencies. However, more remains to be

done to ensure that adequate numbers of volunteers are available in the right place, at the right time and for sufficient duration to meet the demands upon fire agencies.

Volunteer-based fire agencies, both in Australia and overseas, have been concerned about declining volunteer numbers and availability for a number of years, and various reports had been commissioned on fire service arrangements and recruitment and retention in the period 1998–2003. Recruitment and retention is an important and well-established branch of human-resources management, although its focus has been predominantly on paid employees rather than volunteers. Prior to 2003, some volunteer-based fire agencies had prepared guides to the recruitment and induction of volunteer firefighters, but these relied heavily on knowledge derived from the human-resources employment domain and the broader volunteerism domain. Clearly, volunteer firefighting presents special challenges: the sometimes critical nature of the work; the need for unscheduled, rapid response around the clock; the physical and emotional demands; and the various risks. The purpose of this report is to integrate the research evidence gathered by the La Trobe University Volunteerism Project team during the seven years of the project. While the research was focused on Australian volunteer firefighters, the findings should nevertheless be relevant to other volunteer emergency services in Australia and internationally.

The research conducted under this project has been comprehensive but not exhaustive. In particular, further research remains to be conducted in relation to minors, as we were unable to survey respondents aged under 18 years; culturally and linguistically diverse groups, including Indigenous Australians; and communities in urban fringe areas as our survey of communities was limited to inland regional communities.

Fire and emergency volunteers form a distinctive category of volunteers who are subject to demands that are ever-present and at times more intense, than volunteers in most other fields. This report is the most comprehensive published source of research evidence to date for Australian fire-agency managers addressing issues of volunteer recruitment and retention.

To assist readers, this report is set out in four broad sections:

(a) Current profiles of volunteer firefighters and recent trends in the number of volunteers;
(b) Research findings on the factors contributing to the recent trends in volunteer numbers, and the factors most likely to improve retention and recruitment in the future;
(c) Major issues emerging from a consideration of the research findings across all studies; and
(d) Implications for future research.

In summarising the research findings, we also present a detailed analysis of economic factors that underlie the observed trends in volunteer numbers in order to provide a context within which to interpret the implications of the research findings for workforce planning into the future.

As in many cases a particular issue of interest was investigated in more than one study, in presenting a summary of the research findings, the results are organised according to issues (i.e. specific topics) such as the competing demands of work and volunteering, or the experiences of female volunteers. This format is intended to help readers to use the report as a ready reference when they wish to access research findings to address particular concerns relevant to their agency. The research examined a wide range of issues and, naturally, found some to be more important than others. As the Volunteerism Project had a rare opportunity to accumulate such a rich and diverse data set at the one time, both the important and less important findings are included in this summary to guide future research. It is just as valuable to know that something is not an issue as to know that it is, particularly if one wishes to avoid the unnecessary allocation of resources to non-problematic issues.

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Many people have contributed to and collaborated with the Bushfire CRC Volunteerism Project over the past seven years, culminating in this integrative report. Firstly, I wish to thank Dr Mary Omodei for her assistance in reviewing drafts of this report. Thanks also to those who have served on the Project at various stages (in alphabetical order):

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Tasmanian Fire Service (TFS): Robyn Pearce, Gerald Kutzner, Lucas van Rijswijk, John Gledhill

Victorian Country Fire Authority (CFA): Neil Bibby, Charles King, Ali Martin, Fiona O'Loughlin, Mike O'Mara

Volunteer Fire Brigades Victoria: Andrew Ford

Western Australian Fire and Emergency Services Authority (FESA): Dave Hicks, Glenda Husk, Murray Horbury

Finally, I wish to thank several thousand research participants including volunteers, their families, and members of their communities, who contributed their valuable time to complete questionnaires or participate in interviews or focus groups. I trust their contributions will be rewarded through improvements to fire service volunteering.

EXECUTIVE SUMMARY

The Bushfire CRC Volunteerism Project team at La Trobe University conducted 28 studies between 2003 and 2010 into ways of enhancing volunteer firefighter numbers in Australasia. The findings, integrated in this report, offer the most comprehensive compilation of empirical research evidence available on ways of enhancing volunteer firefighter numbers in Australasia.

The report addresses three aspects of sustaining adequate numbers: (a) the level of participation of current volunteers; (b) means of retaining volunteers; and (c) more effective recruitment of new volunteers. It provides an integrative summary, for the first time, of the key results from this substantial body of research. Some of the issues investigated were examined in several different studies, occasionally using different approaches, methodologies, or different categories of respondents (for example current volunteers and former volunteers).

Current volunteer numbers

Fire agencies have known for some time that the age profile of Australia's volunteer firefighters was skewed towards older age groups (40–60 years) with a median age in the mid-40s (McLennan, 2004a). This is partly because younger adults have a lower propensity to volunteer owing to modern economic and social pressures. Also, deficiencies have emerged in the numbers of young adults living in rural communities due to declining birth rates and the migration of youth to larger population centres seeking work and lifestyle opportunities. The demographic profiles of rural communities are ageing, as are the profiles of their volunteer brigades. Immigrants, particularly those from non English-speaking countries, are under-represented among the ranks of volunteers, largely because the great majority of immigrants now settle in major cities, and few move to regional areas until they have spent two or three decades becoming established in this country.

Trends in volunteer numbers

At the commencement of the Volunteerism Project in 2003, fire agencies were concerned that the consistent decline in the numbers of fire service volunteers over the previous two decades might continue. It was understood that the declines in volunteer numbers were related to long-term economic trends such as the consolidation of farms and the re-structuring of the labour market. However, during the research, it became apparent that more abrupt economic changes, most notably the emergence of high rates of inflation and unemployment in the early 1970s, and consequent economic restructuring from the late 1970s, had contributed to the considerable decline in volunteer numbers during subsequent decades. Based on Country Fire Authority (CFA) data, volunteer numbers appear to have levelled off since about 2006. However, this stabilisation is likely to be geographically variable, with brigades in many areas still likely to be struggling to maintain numbers. Furthermore, the economic and policy circumstances that contributed to the decline have moderated over the past decade. Should those conditions return, and there are indications that they are about to, agencies may again be faced with declining volunteer numbers, particularly in rural and remote areas. It will therefore be important for agencies to monitor

the effectiveness of their recruitment and retention strategies, and also to anticipate and plan for further declines in volunteer numbers in those areas most likely to be affected.

Level of participation of current volunteers

Fire agencies report problems of volunteer availability to participate in all aspects of the volunteer role. Most critically, volunteers may have difficulty responding to emergencies in certain locations at specific times. For example, volunteers are scarce during normal working hours in some communities. Suburban volunteers may have difficulty turning out late at night when they have to go to work the next day, because employers in metropolitan areas often have little understanding of volunteer firefighting. Volunteers who are shift workers often find non-emergency pager messages disruptive when they try to sleep through the day or evening.

Participation problems also occur in relation to training and a range of non-operational volunteer activities. Volunteers who work irregular hours may have difficulty attending scheduled training sessions, but may be more available to respond during business hours. Many volunteers are not interested in participating in specific roles such as incident management teams or community education. Some volunteers express concerns about having to attend too much training, or have difficulty attending training during work hours.

The most frequently reported barrier to participation is the competing demands of work and business. This constraint is more acute than many others because of the high proportion of volunteers who are in the labour force, compared with the general population, and therefore subject to work–volunteering conflict. Further, of those volunteers who are in the labour force, a disproportionately high number are self-employed. Self-employed volunteers report attending a much higher proportion of turnouts during business hours than do employed volunteers. As such, while they are particularly valuable to fire agencies in helping to maintain a business-hours turnout capability, they may take on too much of the responsibility for business hours turnouts, to the detriment of their own business.

Retention of current volunteers

Most volunteers leave because of: (a) moving from the area; (b) the demands of work and family; (c) old-age or ill health; or (d) dissatisfaction with the volunteering experience. The last cause of resignations, dissatisfaction, is perhaps the problem most able to be addressed by fire agencies. The most commonly reported source of dissatisfaction is a poor organisational climate in the brigade (bullying, harassment, discrimination, favouritism, exclusion, and incompetent or authoritarian leadership). The findings suggest that interventions to improve the volunteer management skills of paid officers and the brigade leadership skills of volunteer leaders will help improve the organisational climate in brigades and thereby reduce resignations, improve recruitment and participation, and save costs incurred owing to unnecessary turnover.

It is also worth noting that, while self-employed volunteers are more likely than employed volunteers to turn out during business hours, they are also more inclined to resign if they feel their time is being wasted.

Recruitment of new volunteers

There are important variations, according to age and lifecycle stage, in people's availability to volunteer. In particular, while in general volunteering the most active age groups are those associated with children's school and recreational activities (35–50 years), people of this age are least willing to consider fire service volunteering.

Overall, men were found to be more interested in operational firefighting than were women, and women in rural areas were more willing to volunteer as firefighters than their town and suburban counterparts.

Major issues emerging across studies

The major implications that emerge from a consideration of the 28 studies as a whole are:

1. Structural economic adjustments, particularly those that have emerged since the early 1970s, are on-going and will probably continue to negatively affect the volunteer fire services in many different ways.
2. The most frequently reported barrier to participation by both serving volunteers and prospective recruits is the competing demands of work and business.
3. Many former and current fire service volunteers reported dysfunctional behaviour among volunteers and poor relations between paid personnel and volunteers as reasons for their resignation and reduced participation respectively. Participant reports suggest the need for leadership development, particularly at the brigade and middle-management level, to minimise dysfunctional behaviour and cultivate improved morale.
4. The most frequently endorsed motivations for participation by both serving volunteers and prospective recruits are to 'do something for the community' and/or 'to make a difference'. However, these self-reported altruistic motives are sometimes inconsistent with the reports of dysfunctional behaviour among volunteers, and of some volunteers 'cherry picking' enjoyable tasks and neglecting necessary but less enjoyable tasks. It suggests that more implicit intrinsic motivations (of which the volunteer may be unaware) such as a sense of self-efficacy be considered and that altruistic motivations should be differentiated from self-enhancement motivations.
5. Many people in regional communities, from which brigades draw their volunteers, have a poor understanding of what is involved in volunteering with a fire service, suggesting the need for more effective community awareness programs.

Implications for further research

In integrating the results from all the Project's studies, the following have emerged as particularly pressing issues for further research:

1. Research into population subgroups that were not able to be targeted in the present project, most particularly youth (under 18 years), recent immigrants, and Indigenous Australians.

2. The impacts of both past and future economic trends on the availability of volunteers.
3. Attracting volunteers for non-operational and incident-management roles.
4. Support for employers and self-employed volunteers who bear disruption and costs when volunteers take time off to respond or train.
5. Identifying the underlying (hidden) motivations of volunteers.
6. Identifying the knowledge gaps in the links between brigades and their host communities.

Anonymity of fire agencies

The research team conducted many of the studies in collaboration with individual state and territory fire agencies, and in most cases, the results have not previously been disseminated beyond the particular fire agency in which the research was conducted. Some fire agencies have requested that results from certain studies not be released in a way that connects their agency with the study. To comply with such requests, we have removed references from our reports or questionnaires that identify fire agencies and their states. In their place we have inserted generic descriptions enclosed in square brackets in the form: [the fire agency] or [the state]. To enable the reader to review the methodology and sampling for every study, summaries of all 28 studies are included in Appendix A, also with the agency and state omitted where relevant.

SOCIETAL CONTEXT

WHY VOLUNTEER FIREFIGHTERS ARE IMPORTANT

The Victorian Bushfires Royal Commission examined the contribution of CFA volunteers during the bushfires on February 7th, 2009 (Black Saturday). The section of its final report concerning personnel 'celebrates the enormous contribution made by firefighters – particularly CFA volunteers – to the Victorian community.' The Commission reported that CFA volunteers provided rapid response and surge capacity, responding to 632 operational incidents across Victoria on Black Saturday. It found that, in addition to front-line operational roles, volunteers served in a variety of support and command roles. Volunteers were found to have invaluable local knowledge and commitment to their local communities. The Commission cited an example of dedication, volunteers who had forewarned their communities immediately prior to February 7th by doorknocking residents and visiting campers. It concluded, 'Volunteers are a vital part of Victoria's firefighting response, and all Victorians owe them gratitude' (2009 Victorian Bushfires Royal Commission, 2010).

For many fires and other emergency incidents, rapid response is essential if firefighters are to make an appreciable difference to minimising losses. As such, it is necessary for firefighters to be distributed throughout populated areas of the nation to minimise travel times to the locations of emergencies. Australia has a small population of 22 million people (Australian Bureau of Statistics, 2010b) which is highly concentrated in capital cities with the remainder distributed across a large continent of 7.7 million km^2 (Commonwealth of Australia, 2007). Overall, Australia has the seventh lowest population density on earth (2.9 people per km^2), comparable to the Western Sahara and Iceland (United Nations, 2004). The population served by volunteer firefighters is approximately 6.6 million people living in suburban, regional and remote Australia (Australian Bureau of Statistics, 2009i), in an area of approximately 4.7 million km^2 (61% of the continent) consisting of land used for agriculture (5.5%), grazing (56%), and urban and peri urban areas (0.3%) (Commonwealth of Australia, 2007). The population density of the regional and remote area averages 1.4 persons per km^2. It is tempting to perceive that few people live in the large area of grazing country, but of course this area is subject to grass and scrub fires, occupied by isolated farm houses and communities, and crossed by roads where brigades are needed to attend transport accidents.

Engaging full-time paid firefighters to provide coverage in regional and remote Australia with response times comparable with those currently provided by the volunteer force would be prohibitively costly. Some basic calculations illustrate the point. Fire agencies report that they respond to 90% of structure fires in regional and remote Australia in less than 20 minutes (Australian Government Productivity Commission, 2009). They achieve this level of cover across the 4.7 million km^2 of urban, regional, and remote and Australia[1] using 6,417 brigades in Australia and 440 in New Zealand (New Zealand Fire Service, 2010) (see Table 1).

[1] Refer to the maps at Figure 1 (p. 10) and Figure 5 (p. 21).

Table 1 Approximate number of brigades by jurisdiction[2]

Year	NSW RFS	NSW Fire Brigades	Vic.	Qld	WA	SA	Tas.	ACT	NT	Total for Australia	New Zealand
2001–02	2259	337	1228	1640	830	434		8	10	6746	437
2008–09	2065	339	1211	1300	N/A	421	233	8	10	6417	440

The map in Figure 1 shows, as an example, the geographic distribution of approximately 2,000 NSW Rural Fire Service (RFS) brigades and stations across New South Wales. Note that, in practice, there is considerable variation in the density of distribution roughly corresponding with population distribution. In the arid central and north-western parts of the state brigades are sparsely distributed. In Study 2, a survey of people in regional communities who were not volunteer firefighters, respondents' estimated their travel time from home and work to their nearest fire station. The results, in Figure 49 and Figure 51 (page 157) suggest that about 40% of the population in regional areas live within 5 minutes of their local fire station.

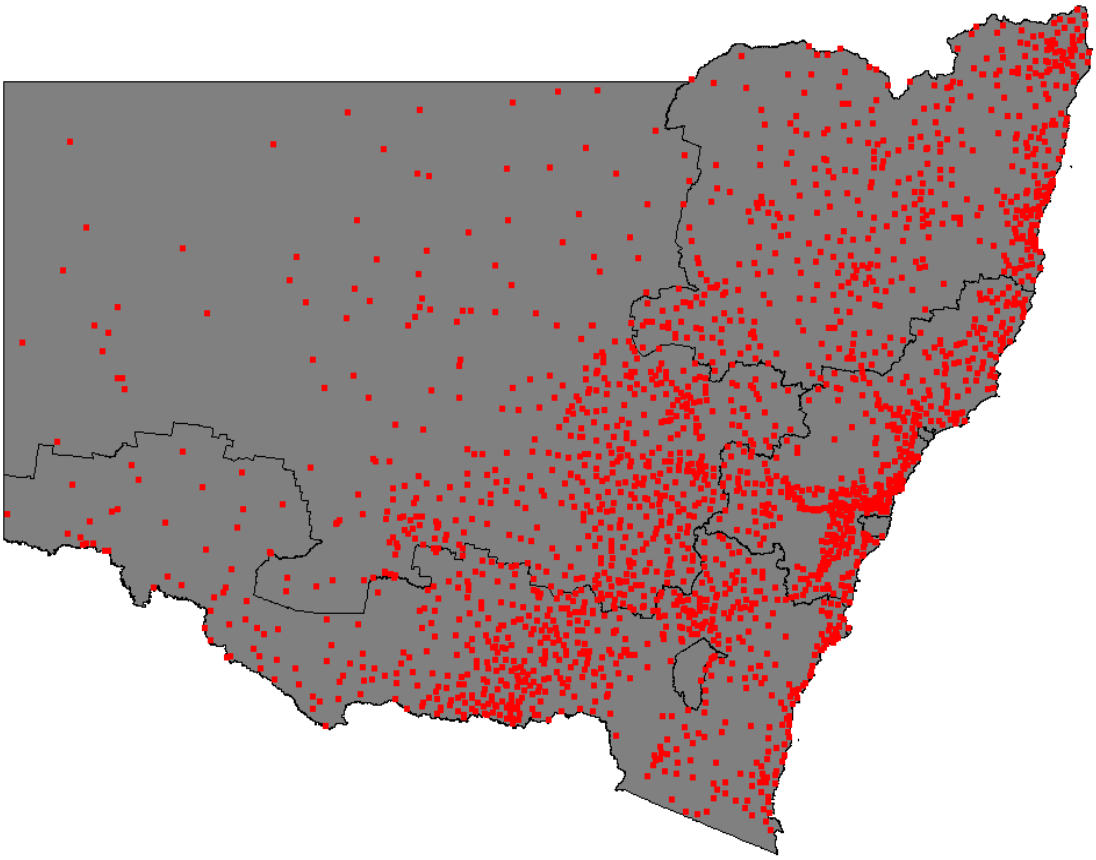

Figure 1 Geographic distribution of NSW RFS brigades and stations
Source: (NSW Rural Fire Service, 2007)

As a very approximate analysis, to staff each of the 6,417 brigades in Australia with one crew of four career firefighters, for five shifts to give 24–hour coverage every day of the year, would require 128,340 firefighters. This is more than twice the staffing level of the Australian Defence Force, which has 55,000 permanent personnel, excluding public servants

[2] Compiled from fire agency annual reports for 2001-02 and 2008–09

and reservists. Defence Department expenditure for 2008–09 was approximately[3] AU$22 billion (Australian Government Department of Defence, 2009). Many brigades have more than one fire appliance, and providing career staff to crew each of those would greatly increase the number of firefighters required.

The following examples provide broad cost comparisons of volunteer, salaried and integrated fire services in Australia. NSW RFS is a fully volunteer fire service with 70,701 volunteers and 752 salaried support and administration staff. It reported employee related expenses of $81 million from total expenses for 2009-10 of $316 million (New South Wales Rural Fire Service, 2010). The Metropolitan Fire and Emergency Services Board (MFB) in Melbourne employ only full-time salaried firefighters and support and administrative staff. The MFB protects the inner 1,000 km² of the Melbourne metropolitan area employing 1,724 salaried firefighters from a total of 2,085 employees. It reports employee expenses of $204 million from total expenses of $296 million for 2009-10 (Metropolitan Fire and Emergency Services Board, 2010). The Victorian government reports that integrated fire stations, where volunteers are supported by full-time career firefighters, operate at about one quarter of the cost of fully career-staffed stations. Thirty one of CFA's 1,223 fire stations are integrated stations. Nine of the 24 CFA stations that abut the MFB's boundary in Melbourne are integrated stations. Penny Armytage provided estimates on behalf of the Victorian government to the Victorian Bushfires Royal Commission stating that the average annual operating cost of those nine integrated stations was $1.5 million each, while the average annual cost of MFB stations was $5.9 million (2009 Victorian Bushfires Royal Commission, 2010).

Various approaches have been used to estimate the economic value of volunteer firefighters' contributions. In 2003, Hourigan conducted a detailed analysis of the economic contribution of CFA's 60,000 volunteers and calculated that they contributed $480 million annually (Hourigan, 2003). Similar estimates for smaller numbers of State Emergency Service (SES) volunteers in NSW and Victoria, including a component for standby time, were $86 million and $41 million respectively. The value of the average annual contribution of a NSW SES volunteer's time was estimated at $15,903 (Handmer & Ganewatta, 2007). In 2009, CFA reported that its volunteers contributed $840 million (Country Fire Authority, 2009), which greatly exceeds its annual expenditure of about $300 million. On this basis, the average annual contribution of a CFA volunteer is about $14,000. Extending these estimates nationally suggests that Australia's 218,000 volunteer firefighters contribute about $3 billion annually to the national economy.

Regrettably, this contribution has not, until recently, been counted towards calculations of the nation's gross domestic product (GDP). The international system for recording economic activity is the United Nations System of National Accounts, originally devised in 1953. Under the System of National Accounts, unpaid and non-profit activities such as housework, community work and volunteering are not counted as contributing to GDP. Oppenheimer (2008) argues that as a consequence, volunteering has tended to be overlooked by governments in formulating economic policies. During the past decade, the United Nations has attempted to address such concerns by producing the United Nations

[3] Throughout this document monetary amounts are expressed in Australian dollars unless otherwise specified.

Handbook on Non-profit Institutions in the System of National Accounts. The Handbook provides guidance in the preparation of 'satellite accounts' to measure the non-profit institution and voluntary work economies. In 2009, the Australian Bureau of Statistics (ABS) applied the guidelines in the Handbook to produce 'satellite accounts' for Australian non-profit institutions (Australian Bureau of Statistics, 2009b). It reported that in 2006–07, the non-profit sector contributed $43 billion to the Australian economy, which is equivalent to 4.1% of GDP. Volunteers contributed 623 million hours to non-profit institutions, with an economic value estimated at $14.6 billion. On this basis, the 26 million hours the Australian Bureau of Statistics (2007h) estimates emergency services volunteers contribute each year would have an economic value of about $609 million. It should be noted that this valuation is considerably lower than those arrived at by Handmer and Ganewatta (2007) and Country Fire Authority (2009), which factored in time emergency services volunteers contribute on standby. As such, if governments rely upon the satellite accounts valuation, they may be underestimating the economic value of volunteer firefighters by a factor of five.

Without volunteer fire brigades, many small communities would have little emergency response capability. They would have to depend upon emergency responders from larger communities with longer travel times. Australia's large numbers of volunteer firefighters offer an invaluable surge capacity of trained personnel, ready to respond to a range of emergencies. This is a great advantage in a country where weather conditions can be conducive to the outbreak of many bushfires simultaneously across a large proportion of the continent, in some cases requiring weeks or months of blacking out.

Australia is not unique in its reliance on volunteer firefighters. In the United States, the National Fire Protection Association reports that, in 2007, 70% of fire departments were all-volunteer departments and a further 17% were mostly-volunteer departments. It estimates that there were 1,148,800 firefighters of whom 825,450 (72%) were volunteers (Karter Jr. & Stein, 2008).

SOCIAL CAPITAL AND FIRE SERVICE VOLUNTEERING

Volunteer fire brigades not only offer protection during emergencies, but also enrich their communities by promoting interaction and mutual good will. The idea of 'social capital' captured the imagination of social scientists and the wider community following the publication of *Bowling Alone: The Collapse and Revival of American Community*, by Robert Putnam (2000). Putnam attributes first use of the term 'social capital' to L. J. Hanifan, state supervisor of rural schools in West Virginia who, writing in 1916, described it as:

> 'those tangible substances [that] count for most in the daily lives of people: namely good will, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit... The individual is helpless socially, if left to himself... If he comes into contact with his neighbour, and they with other neighbours, there will be an accumulation of social capital, which may immediately satisfy his social needs and which may bear a social

> potentiality sufficient to the substantial improvement of living conditions in the whole community. The community as a whole will benefit by the cooperation of all its parts, while the individual will find in his associations the advantages of the help, the sympathy, and the fellowship of his neighbours.' (p. 19)

Putnam's own characterisation of social capital is that it 'refers to connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them' (Putnam, 2000). His 'dominant theme' is that for the first two-thirds of the twentieth century, social capital in the United States generally rose as Americans became increasingly engaged in their communities. However, he believes that for the last few decades, social capital in the United States has been decreasing and that Americans 'have been pulled apart from one another and from [their] communities. This period, during which western governments began to embrace liberal economic policies, is discussed in more detail in the section headed: The effect of economic changes since 1970 (p.37).

Putnam proposes that two forms of social capital are of particular importance: bridging (or inclusive) and bonding (exclusive). Bridging forms of social capital involve outward-looking connections that extend across diverse social divisions such as race, ethnicity, age and income. He gives as examples of the bridging forms: 'the civil rights movement, many youth services, and ecumenical religious organisations'. Bonding social capital involves inward-looking connections within groups, which tend to strengthen 'exclusive identities and homogeneous groups'. Examples might include ethnic fraternal societies, fashionable country clubs and some service clubs.

Social capital is a similar concept to 'community', and Putnam acknowledges that social scientists have debated the relative merits of 'community' and 'individualism' for many years. He notes that while the notion of 'community' is often conceived as 'warm and cuddly' in the public imagination, in reality there are examples of very negative manifestations of community and of bonding social capital, such as racist organisations, and exclusive power elites that occur in many communities.

In considering recruitment and retention for volunteer fire brigades, the concept of social capital offers some valuable insights into social processes that can affect both recruitment and retention, and the value of brigades to the wider community.

Putnam considers various forms of altruism, including volunteerism and philanthropy, to be useful indicators of the level of social capital in communities. He regards volunteerism as being a more important manifestation of social capital than philanthropy (donating money or goods), because it involves personal connections and interactions among individuals.

Dempsey conducted a community study of an Australian rural community extending over 15 years during the 1970s and 1980s. He observed that, contrary to the popular image of country towns as cohesive, egalitarian communities, there are in fact important social divisions of economic class and social inclusion. In examining the recreational and voluntary organisations in the study community, he found that most conformed to what Putnam would describe as bonding, or exclusive, forms of social capital. Rather than facilitating

bridging forms of social capital across social strata, they tended to reinforce connections within a limited range of social strata, particularly among the service classes (people from managerial and professional occupations)[4]. The service classes comprised 80% of the membership of between 60 and 70% of the 130 voluntary organisations in the study community (p. 198). The fire brigade was one of only about a dozen organisations that was not dominated by the service classes (1990).

The Australian Bureau of Statistics (2007h) data in Table 2 show that rates of participation in voluntary work are higher among occupational groups corresponding to Dempsey's service classes (managers, administrators, farmers, professionals, associate professionals, and advanced clerical and service workers). Note that the 29.5% of people who were not employed (i.e. persons aged 18 years or older who were unemployed, retired, on domestic duties, sick or disabled), and did voluntary work contributed much more time than the most active categories of employed people. The competing demands of work and volunteering are a recurrent theme throughout this report.

Table 2 Rates of volunteering by occupational group

Occupation group	Participation rate Persons aged 18+ years (%)	Time given per individual in all voluntary organisations (hours/year)
Managers and administrators, farmers and farm administrators	46	44
Professionals	46	96
Associate professionals	39	54
Advanced clerical and service workers	45	20
Intermediate clerical, sales and service workers	34	70
Trades persons and related workers	31	41
Intermediate production and transport workers	26	36
Elementary clerical, sales and service workers	35	32
Labourers and related workers	25	25
Not employed (unemployed, retired, home duties, etc.)	30	295

A consideration for fire service recruitment and retention purposes is the extent to which fire brigades operate to bridge divisions across social strata or alternatively reinforce exclusionary bonds within certain social strata. To anticipate the research findings to be reported later in this report, there is evidence of brigades tending to exhibit either bridging or bonding social capital. The fact that, in many studies, members of rural communities reported that they had little knowledge about their local brigade suggests that some brigades can be insular (bonding social capital) rather than a source of inclusive, bridging social capital in communities. Furthermore, in several studies, significant proportions of respondents reported feeling excluded by the brigade. This had discouraged them from joining or, if already a member, had reduced their enthusiasm for participation or led them to resign.

[4] Dempsey (p. 156) used a system of classifying social stratification based on an individual's occupation and employment status.

RECENT PROBLEMS WITH VOLUNTEER FIREFIGHTER NUMBERS

CURRENT VOLUNTEER NUMBERS

Volunteer-based fire agencies report four basic problems:

1. Declining numbers of volunteers over the two decades to 2004;
2. Difficulty attracting volunteers in newly developed urban fringe communities;
3. Difficulty getting adequate numbers of volunteers to turn out during normal business hours in many places; and
4. Static or declining and ageing populations in small, rural communities.

Fire service volunteering is part of the broader context of voluntary work in the community. It is instructive to compare and contrast aspects of volunteering in the fire services with overall volunteering in Australia and some other countries, of which the best documented is the United States. Throughout this report, comparisons are made with data from these other domains where relevant.

The Australian Bureau of Statistics reports that the proportion of adults that participates in general voluntary work has been increasing over the past 15 years. Based on its Voluntary Work surveys, ABS reports that the proportion of the population aged 18 years and over who reported doing any voluntary work over the preceding 12 months increased as follows: 1995: 24%; 2000: 32%; 2006: 35%. However, the median number of hours per year contributed by each volunteer decreased: 1995: 74 hours; 2000: 72 hours; 2006: 56 hours (Australian Bureau of Statistics, 2007h).

For comparison, in the United States, the Bureau of Labor Statistics (BLS) reported in its Annual Current Population Survey that 26.4% of the adult civilian population participated in volunteering activity at least once during the 12 months to September 2008[5], a decrease from 28.8% reported in 2004. US volunteers spent a median of 52 hours on voluntary activities in the 12 months ending in September 2008 (US Bureau of Labor Statistics, 2009a).

The BLS adopted an alternative methodology for estimating the rate of volunteerism in its American Time Use Survey, in which participants keep a detailed diary of their time use for a single day each year. In 2009, the BLS reported that 7% of the civilian population aged 15 years and over spent an average of 2.15 hours on volunteer work during their “diary day” (US Bureau of Labor Statistics, 2009b).

It is difficult to obtain accurate data about the capability of the volunteer fire services in Australia. As a minimum, it is necessary to understand the numbers of volunteers available to respond to incidents. Realistically, it is also necessary to understand the capabilities and limitations of those volunteers, and the extent of their availability for duty. Volunteer-based fire agencies have historically found it difficult keep accurate records of the numbers of volunteers. The reasons for this are unclear but may include: the very large number of volunteers and brigades; their wide geographic dispersal across the nation; some volunteers

[5] Note that the so-called sub-prime loans crisis and related Global Financial Crisis may have reduced the volunteerism participation rate in 2007–08 owing to increased financial and employment insecurity.

find record-keeping and reporting onerous[6]; and the infrequency of fires and training in brigades in many small communities, which can make it difficult to tell which members are active and which are not. At times, brigades and fire agencies appear to have developed an accumulation of members who were registered but no longer active.

On a broader scale, it is also difficult to locate accurate figures for the number of emergency services volunteers of all kinds in Australia. Estimates vary depending on the methodology and definitions used, and the kinds of agencies that are included. One of the highest estimates located is that of Emergency Management Australia (EMA), which reports that, 'In Australia today, there are over 500,000 volunteers who play a crucial role in the delivery of emergency management services across the country' (Volunteer Action Plan Reference Group, 2009). However, this estimate includes volunteers in support agencies such as Red Cross and the Salvation Army, in addition to volunteers in the primary response agencies for fire, State Emergency Services, and ambulance.

The Productivity Commission reports that in 2009, Australia had about 250,000 emergency services volunteers distributed across ambulance (5,836), state or territory emergency services (26,090), and fire agencies (218,853) (Australian Government Productivity Commission, 2009). This estimate is similar to the aggregate of those reported in the constituent emergency management agencies' annual reports. On the basis of this estimate, the volunteer emergency services workforce is comparable in size with the paid workforce of Australia's largest private-sector employers. One of the largest employers, the retail group Woolworths Limited, has about 190,000 employees distributed across its supermarkets, department stores, liquor, petrol and electronics businesses (Woolworths Limited, 2008).

The Australian Bureau of Statistics (2007h) found, through its national Voluntary Work Survey in 2006, that 175,000 Australians (1.1% of persons aged 18 years and over) volunteered with the emergency services. It includes within this category 'those emergency services involved in protection against fire and flood, search and rescue and disaster relief (not including emergency medical services)'.[7] Most fire agencies admit volunteers from the age of 16 years and this partly explains why the ABS estimate is 70% of that reported by the Productivity Commission.

TRENDS IN VOLUNTEER NUMBERS

One of the most reliable historical data sets of membership numbers in a volunteer-based fire service is that maintained by the Victorian CFA. This is likely to be the case because it is one of the largest services, was one of the earliest to be established as a state-wide entity, and perhaps because the relatively compact size of the state makes communication and administration easier. Victoria's history of catastrophic bushfires, particularly the extreme

[6] Note widespread perceptions of the bureaucratic nature of the fire services in Table 12 and related analysis.
[7] ABS notes that while emergency rescue may involve medical attention, the overall aim is search and rescue. Similarly, while disaster relief can include a range of services (material assistance, accommodation, counselling), the broad focus of the organisation is disaster relief. Included are Red Cross Disaster Recovery Services and Salvation Army Disaster Services. First aid is included under health, not emergency services.

fires of 1939 and 1942, compelled the state government to amalgamate the former Country Fire Brigades Board (town brigades) and the Bushfire Brigades Association (rural brigades) under the administration of a single state-wide entity, CFA, in 1945. In contrast, in New South Wales, disparate municipal authorities administered volunteer brigades until 1997 when, following serious fires, the state government brought them under the control of the NSW RFS.

Trends in volunteer numbers in other states can be expected to broadly parallel the trends recorded in the CFA data. Early reports in an organisational history published by CFA (Murray & White, 1995) state that in 1951, CFA had 76,147 volunteers (71,783 rural and 4,364 urban) and, by the end of the 1950's, it had 100,959 volunteers (95,418 rural and 5,541 urban). In the 1970s, Noble (1977) reported that CFA had 6,492 urban and 112,022 "rural men". In the aftermath of Ash Wednesday, Moller (1984) reported that CFA had 118,000 "registered firefighters". These figures have been combined with data supplied by CFA for the period from 1988 to compile the graph in Figure 2. It suggests that there was a dramatic fall in volunteer numbers during the 1980s. However, the reliability of some of the earlier estimates is questionable as they suggest that the average membership of CFA's ~1,200 brigades was almost 100 volunteers.

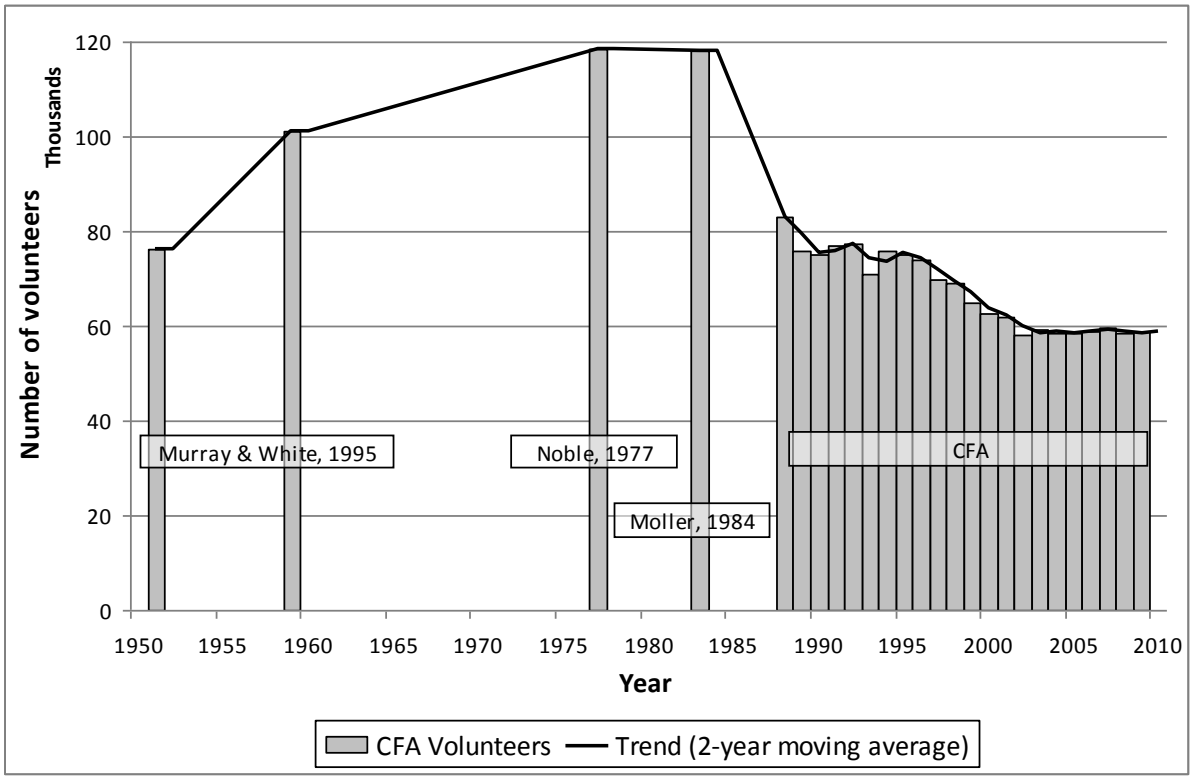

Figure 2 Historical trends in CFA volunteer numbers

More recent data from the two decades to 2009, graphed in Figure 3, show that the number of CFA volunteers fell by about 30% over the 15 years between 1988 and 2002. The data for the last 6 years provide additional insight into the capability of CFA volunteers, separating volunteer numbers into non-operational and those accredited as operational.

Of course, volunteers may be trained and accredited as operational, but not necessarily active. In 2000, CFA Chief Officer Roche gave evidence to the coronial inquest into the Linton Bushfire that of the Authority's 63,020 volunteers, 'about 28,330 of these are considered as active' (p. 50) (Johnstone, 2002). In a similar vein, brigade chiefs participating in focus groups on brigade leadership in Study 18 reported that, in a number of brigades, a dedicated few volunteers shouldered most of the workload.

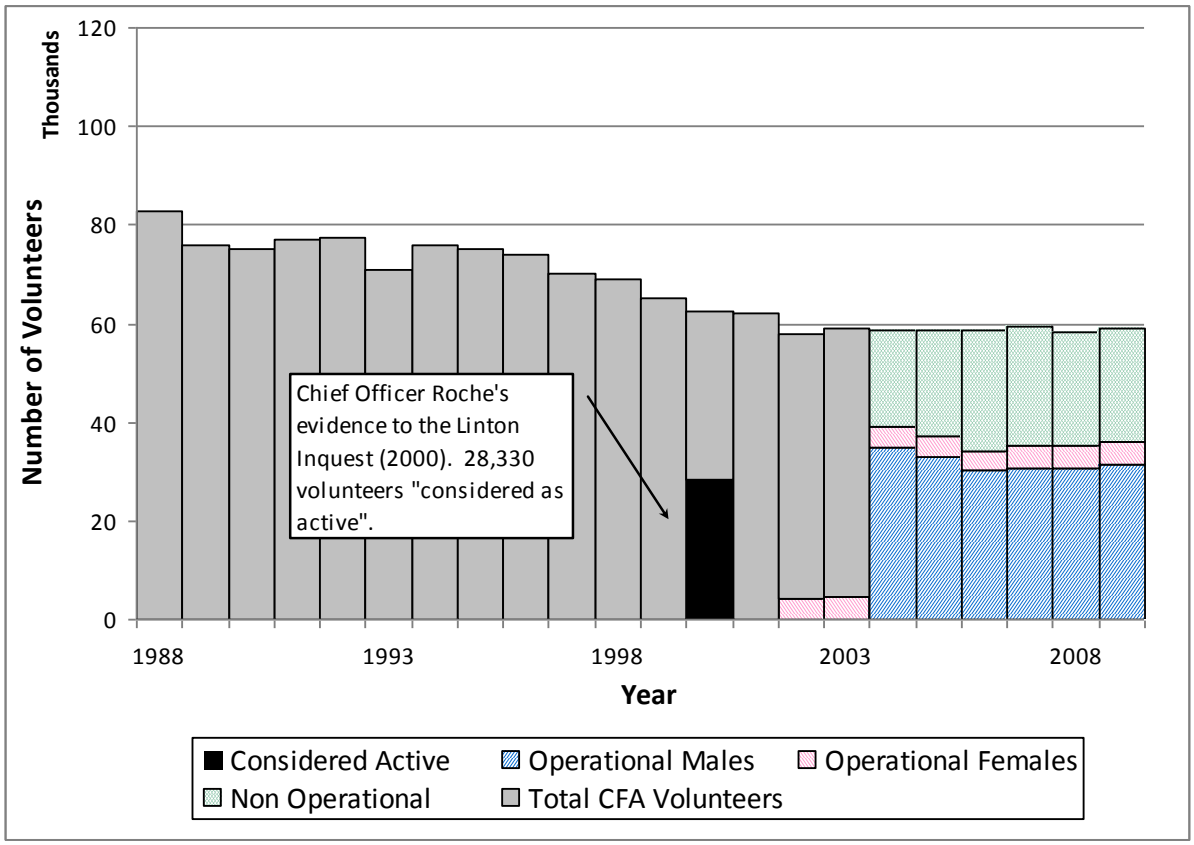

Figure 3 Recent CFA volunteer numbers with operational status and sex where available
Source: CFA annual reports, CFA Volunteer Services Department, and (Johnstone, 2002)

In the United States recent trends in volunteer firefighter numbers have paralleled those in Australia as represented by the CFA data. The number of volunteer firefighters in the US peaked at 897,750 in 1984, but then fell 14% to a low of 770,100 in 1989 before partially recovering and apparently stabilising at about 820,000 from 2005 (National Volunteer Fire Council Foundation (NVFC), 2009). From 2001 to 2005, the proportion of US fire departments that were all-career increased slightly from 6% to 7% of departments and the proportion of population they protected increased from 40% to 43%. Conversely, the proportion of all-volunteer departments decreased from 76% to 73% of departments and the proportion of the population they protected dropped from 26% to 23%. Communities larger than approximately 25,000 people are more likely to be protected by all- or mostly-career departments, while communities smaller than about 25,000 are more likely to be protected by all- or mostly-volunteer departments (United States Fire Administration, 2006).

Volunteer firefighters in the United States are eligible for a range of financial and other incentives, aimed at improving recruitment, retention and participation including tax exemptions, retirement benefits and paid leave from employment. The details vary widely

among states but the National Volunteer Fire Council provides a website listing the benefits available in each state (National Volunteer Fire Council, 2011). The benefits accruing to Australian volunteer firefighters are confined to various forms of life and income insurance which Australian fire agencies provide to protect the interests of their volunteers. The assortment of US fringe benefits, if applied in Australia, would probably fall outside Volunteering Australia's formal definition of volunteering as being 'for no financial reward' (refer to Organisational structure of volunteer fire services on page 25). There is some debate in the United States as to: (a) the effectiveness of these additional benefits in enhancing recruitment and retention, and (b) the fairness and equity of the benefits.

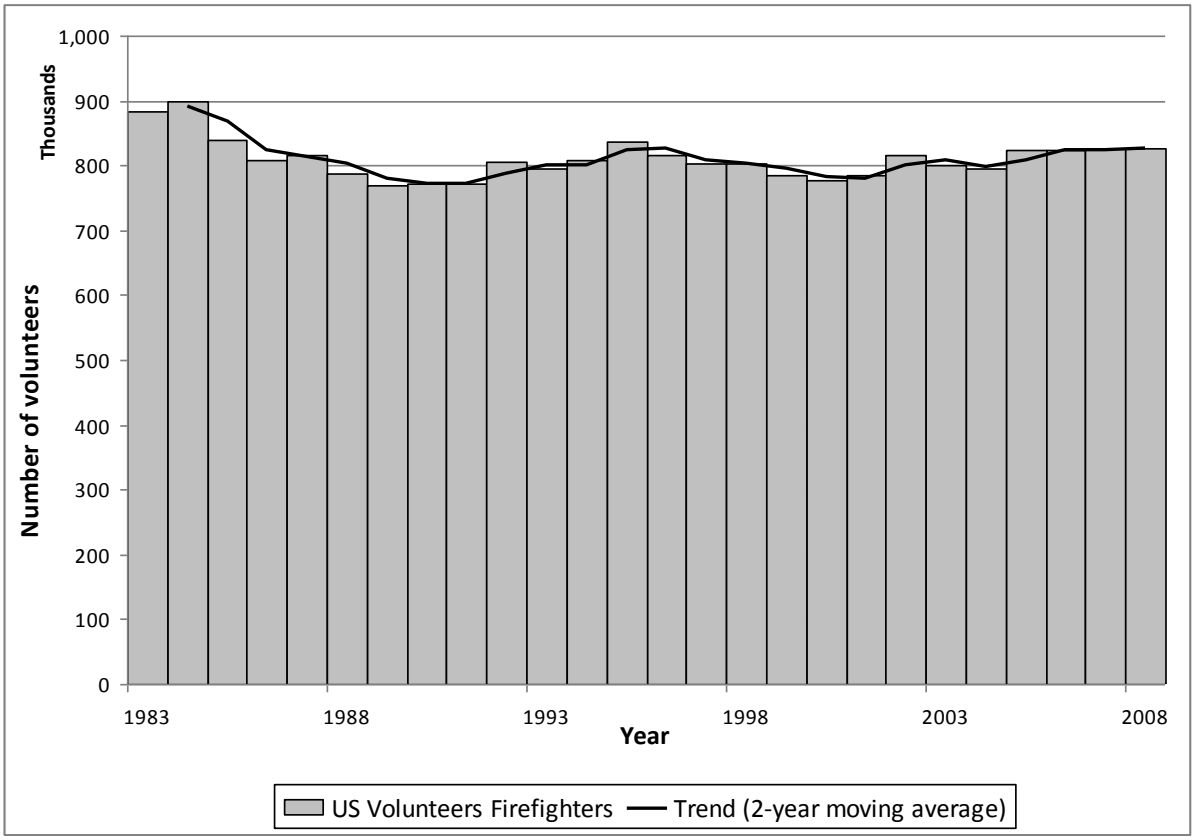

Figure 4 Number of US volunteer firefighters, 1983–2008
Source: (U.S. National Fire Protection Association, 2010)

POPULATION DISTRIBUTION AND MOVEMENT

Much of this report is concerned with the factors that motivate or inhibit people from volunteering with the fire services. However, these factors depend upon there being enough people in the right locations to consider volunteering in the first place. This section describes the changing geographic distribution of the population and the ways in which that affects the fundamental availability of people to volunteer.

REMOTENESS AREAS

Commencing with the 2001 census, ABS introduced a new system of geographical classifications called Remoteness Areas (RAs) for classifying locations according to their level of remoteness (Australian Bureau of Statistics, 2006d). We will use the Remoteness Area framework in this report because remoteness affects population characteristics and migration, which in turn affect the availability of prospective recruits for the fire services.

During the census, each Collection District (CD), the smallest spatial unit used when collecting census data, is assigned to a remoteness category. The remoteness classification contains six categories: Major Cities, Inner Regional, Outer Regional, Remote, Very Remote and Migratory (composed of off-shore, shipping and migratory CDs). The CDs are assigned to a given remoteness category based on the Accessibility/Remoteness Index of Australia (ARIA), which measures the distance of a point by road from the nearest urban centre in each of five classes.

The map in Figure 5 (Australian Bureau of Statistics, 2008c) shows the distribution of Remoteness Areas in Australia based on the 2006 census. Generally, Australia's volunteer fire services provide primary fire response coverage in all areas of privately held land except the most densely populated parts of major cities. The details vary among states and territories. Volunteer fire services also provide valuable support for land management agencies in publicly-owned land; however the arrangements vary among the states and territories.

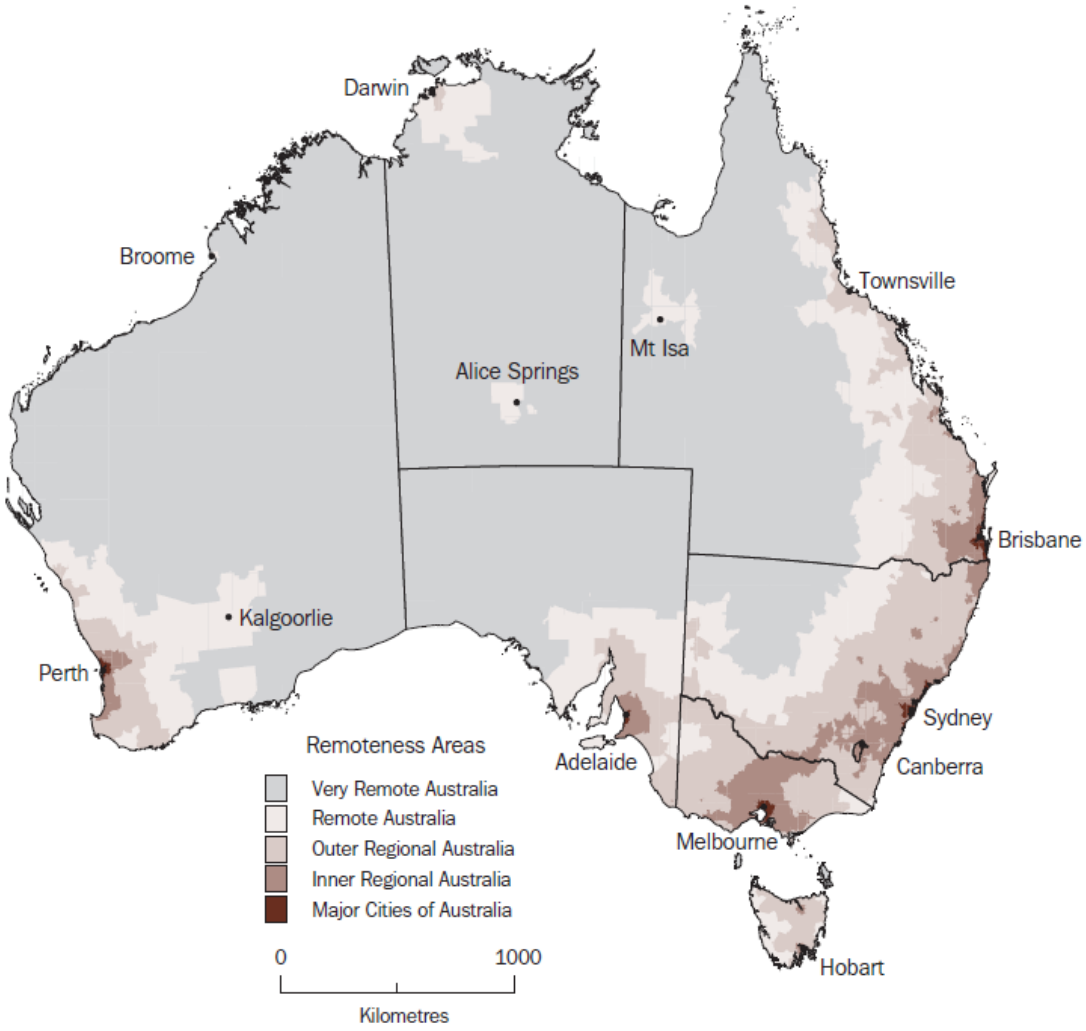

Figure 5 Remoteness Areas, June 2006
Source: Australian Bureau of Statistics. (2008). *Australian social trends 2008* (No. 4102.0). Canberra: Australian Bureau of Statistics.
http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/DE5DE30C9CF6E5E3CA25748E00126A25/$File/41020_2008.pdf

The Australian Bureau of Statistics (2007h) reports that, measured across all forms of voluntary work, a higher proportion of people living outside Major cities participated in voluntary work (40%) compared with people living in Major cities (31%). The amount of time given also increased with the level of remoteness. Volunteers living in Major cities gave an average of 2.4 hours per week, compared with 2.8 and 3.1 hours per week in Inner Regional and Outer Regional Australia.

Hugo (2008) notes that between 1991 and 1996, the population of Australia's major cities increased by over 10% while populations at all other levels of remoteness declined slightly. Between 1996 and 2001, the growth rate of major cities moderated in favour of Inner Regional Australia as metropolitan populations 'spilled out' into peri-urban commuter zones and coastal settlements in pursuit of environmental and lifestyle values. Over the same period, population decline in Remote and Very Remote Australia accelerated dramatically. Table 3 uses ABS census data derived from Hugo to illustrate patterns of population change in Australia at different levels of remoteness over the 10 years from 1996 to 2006.

Table 3 Population change by remoteness area, 1996–2006

	Population 2006	Percentage	% change 1996–2006
Major cities	13,558,142	68.5	+16
Inner Regional Australia	3,926,989	19.8	+8
Outer Regional Australia	1,879,461	9.5	0
Remote Australia	297,391	1.5	–4
Very Remote Australia	151,097	0.7	–3
Total	**19,813,080**	**100.0**	**+11**

Source: (Hugo, 2008)

A number of factors contribute to these net gains and losses at different levels of remoteness. Overall, Australia's population is growing at a rate of 1.7% per annum. In 2009, about 40% of that growth rate was due to natural increase (births minus deaths), with the remainder made up of net overseas migration (NOM). However, in remote areas of Australia, rural decline and fluctuations in the mining industry caused declines in overall population (Australian Bureau of Statistics, 2009i).

POPULATION DISTRIBUTION BY LOCAL GOVERNMENT AREA

While the Remoteness Area framework offers a broad overview of the effects of remoteness on population characteristics and change in Australia, it tends to mask variations among individual communities. For example, mining communities and Aboriginal communities often have significant concentrations of population in the midst of otherwise sparsely populated remote areas. Analysis of population at the Local Government Area (LGA) level offers greater understanding of the diversity of population distribution and change. The following section draws on the ABS Regional Population Growth report (Australian Bureau of Statistics, 2009i) to outline aspects of the distribution and changes in population at the LGA level, which may affect the availability of volunteer firefighters. The map in Figure 6 illustrates patterns of population growth and decline by LGA for the period 2001–06 based on census data.

Overall, Australia's population is highly urbanised, with about two thirds of the population residing in capital city Statistical Divisions (SDs). Between 2001 and 2006, the capital city SDs also experienced slightly faster annual population growth (1.8%) than the rest of Australia (1.6%). Many of the LGAs with the fastest and largest population growth were on the outskirts of capital city SDs. Annual growth rates of around 7% were common, with some outer-suburban LGAs experiencing growth rates of 20%.

Outside the capital cities, some coastal LGAs experienced the largest growth or fastest growth rates. In 2007–08, the population of the Gold Coast grew by 13,200 and Cairns by 6,000, while Mandurah in Western Australia grew by 5.1% and Victor Harbour in South Australia grew by 3.5%.

While some inland cities grew significantly, the extent of growth was much less than those of coastal areas like the Gold Coast. In 2007–08, the largest increase among the inland cities was in Ballarat (1,800 people), with comparable increases in Bendigo (1,600) and Toowoomba (1,700).

The fastest declines in population in 2007–08, excluding LGAs with fewer than 2,000 people, have occurred in rural LGAs in dry-land farming areas, including Paroo in Queensland (3.0%), and Hay and Gwydir in the NSW grain-belt (2.2 and 2.0%).

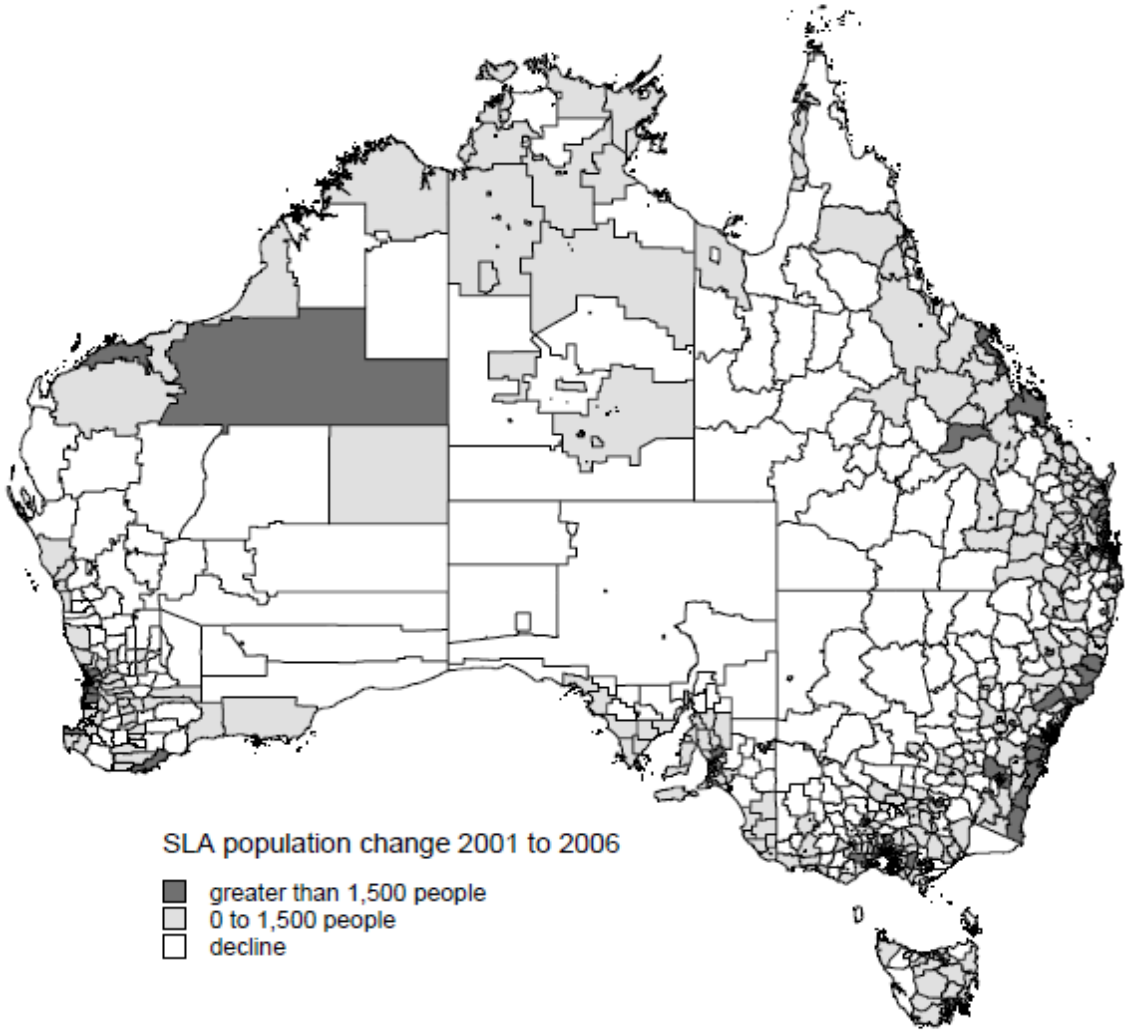

Figure 6 Population change Australia, June 2001 to June 2006 at the SLA level
Source: Australian Bureau of Statistics. (2007) Regional Population Growth, Australia, 1996 to 2006 (No. 3218.0). Canberra, Australian Capital Territory: http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/C70AD2A06FB3A80CCA2573210018E2B2/$File/32180_1996%20to%202006.pdf

RURAL POPULATION DECLINE

Farmers and agricultural workers make up about 14 per cent of the non-metropolitan labour force in Australia. However, this aggregate figure masks the importance of agriculture as a source of employment in many regional communities. In 207 of Australia's 425 labour

market regions, agriculture accounted for more than 25 per cent of local employment, and in 62 regions it accounted for 70% of employment (Australian Government Productivity Commission, 2005). Consistent with the Productivity Commission data, results from Study 3a of recruit volunteer firefighters showed that 13%of respondents who were in the labour force reported their occupation as farmer or agricultural worker. This suggests that farmers and agricultural workers volunteer at rates in accord with their proportion in the population.

The long-term trend in employment on Australian farms, the straight line in Figure 7, shows a decrease of 90,000 people (21%) between 1961 and 2009. This represents a modest rate of decline of less than 0.5 per cent per annum. However, agriculture is arguably the most volatile sector in the Australian economy owing to fluctuations in climate and overseas markets for agricultural produce. For example in a single year, the 12 months to June 2003, widespread drought resulted in the loss of 60,000 farm jobs (16%) with further losses experienced over the subsequent six years. Fire agencies can anticipate that variations in the size of the agricultural workforce will have a corresponding affect on volunteer recruitment and retention consistent with the proportion of farmers and agricultural workers in a given community.

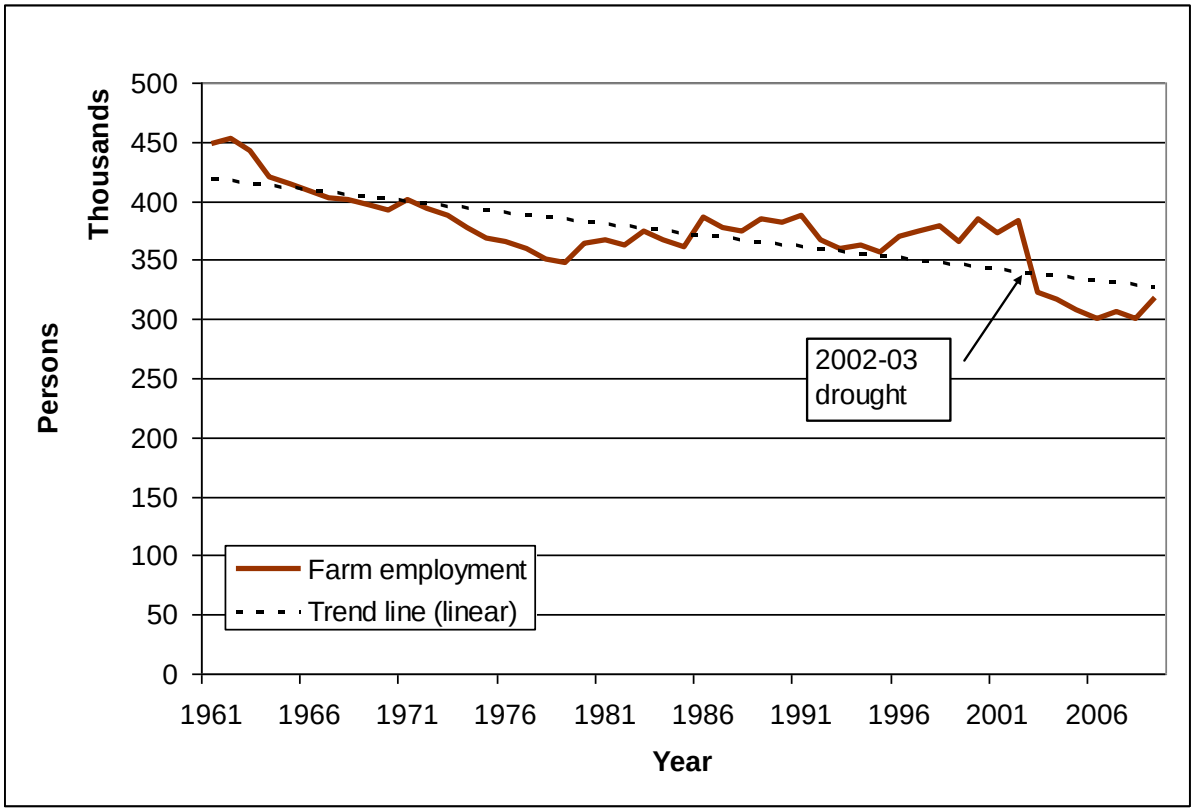

Figure 7 The decline in employment on Australian farms 1960-61 to 2008-09
Source: (Australian Bureau of Agricultural and Resource Economics, 2009b)

Australian agriculture is subject to a trend of declining farm terms of trade, extending back many decades. The farm terms of trade is the ratio of the prices received by farmers for their outputs to the cost paid for farm inputs such as fuel and fertiliser. The general response from farmers to declining terms of trade is to increase production for a given set

of farm inputs. In many cases, the most effective strategy for increasing production is to expand the farm by buying parts of neighbouring farms. Expansion often requires new technology or larger equipment to enable greater production for a given labour input. Larger farms and new technology mean fewer farming families and agricultural workers, and thus lead to regional population decline (Barr, 2009).

Two prominent structural changes in Australian agricultural production have been: (a) the 60 per cent decline in sheep numbers from 174–72 million between 1990 and 2008 as farmers shifted to more profitable cropping, and (b) the 60-fold increase in oil-seed production from 44,000 tonnes in 1962 to 2.6 million tonnes in 2009. Among other major adjustments, the total area of farms in Australia fell by 17 per cent from 500 million ha in 1977 to 417 million ha in 2008 as farmers retreated from marginal and degraded land. Similarly, the number of farms fell 28 per cent from 198,000 in 1967 to 141,000 in 2008, partly as a result of farmers expanding their farms to improve economies of scale (Australian Bureau of Agricultural and Resource Economics, 2009a).

Improvements in roads and cars have enabled country people to travel further to larger service centres that offer more choices than nearby local towns. This has also contributed to the decline of small towns, as young people from rural communities have increasingly turned to larger service centres for employment. The Productivity Commission reports that 45 per cent of farming families supplement farm income with wages and salaries earned from off-farm employment (Australian Government Productivity Commission, 2005).

The age profile of farmers is also higher than that of the Australian labour force as a whole. In 2006, the median age of Australian farmers was 52 years, markedly higher than the median age of the Australian labour force which was 39 years, and 18 per cent of farmers were aged older than 65 years (Australian Bureau of Statistics, 2006a, 2008b). The higher age profile of farmers is most evident among cattle, sheep and wheat farmers who comprise about 44 per cent of farmers. Farmers are also notable for their length of tenure in the job. In 2004 the median length of tenure of agricultural workers was 10 years and 30 per cent had been in their current job for 20 years or more (Australian Government Productivity Commission, 2005). Just as the length of tenure of farmers is much longer than the workforce average, the length of service profile of volunteer firefighters is much longer than that of volunteers generally (see: Leaving and re-joining, p. 98).

Together, these processes have presented difficult recruitment and retention challenges for fire agencies by creating shortages in the numbers of people available to volunteer, exacerbated by relative deficiencies of adults aged less than 40 years.

ORGANISATIONAL STRUCTURE OF VOLUNTEER FIRE SERVICES

The volunteer-based fire agencies in Australia's states and territories, and in New Zealand, have each evolved along different pathways. At present, each has different responsibilities in terms of rural and urban fires and a range of other incident types, which may include such roles as response to hazardous materials incidents, road-crash rescue, trench rescue and mine rescue. Each has different combinations of volunteers and paid staff.

Fire agencies in Australia support volunteer firefighters using a range of organisational models. The responsibilities of volunteer firefighters vary among the services, with some specialising in rural firefighting while others are responsible for both rural and urban firefighting.

The vast majority of volunteer firefighters in Australia and New Zealand meet the strict definition of a volunteer, advocated by Volunteering Australia (2005):

> Formal volunteering is an activity that takes place through not-for-profit organisations or projects and is undertaken:
>
> - to be of benefit to the community and the volunteer;
> - of the volunteer's own free will and without coercion;
> - for no financial payment; and
> - in designated volunteer positions only.

However, some fire agencies adopt a broader definition of volunteering to encompass paid staff in ways that do not meet all of Volunteering Australia's criteria. Some fire agencies that employ retained firefighters refer to these as volunteers even though they typically receive a modest financial retainer and other payments to attend training and incidents. Nevertheless, retained firefighters share most other characteristics with non-retained volunteers; particularly that firefighting is not their main source of employment. Also, fire agencies report similar difficulties with the recruitment, retention and response availability of retained firefighters as with volunteers. Accordingly, retained firefighters have been the subjects of some of our studies, both as a special type of volunteer, and as a point of comparison with unpaid volunteers.

Some fire services, notably NSW Fire Brigades, have also implemented Community Fire Units. In such units, the fire service provides a small cache of fire hoses and basic firefighting equipment in a residential street to help residents defend their immediate neighbourhood during bushfires (Lowe, 2009). The relevant fire services also refer to Community Fire Unit members as volunteers. However the scope of the benefit to the community, protecting their own and their neighbours' properties, is very localised compared with the broad community benefit provided by traditional brigade-based volunteers.

Land management agencies use staff whose primary role is other than fire management to respond to large bushfires when they arise. They may also draw such staff from other public sector agencies which normally have no role in fire management. When allocated to work on fire management, these staff members have to defer leave or work related to their primary role, sometimes for days or weeks. They may need to work away from home for extended periods, work night shifts and work unusually long 12-hour shifts. In fact, they may have less autonomy in choosing when or where they work on fire management than conventional volunteer firefighters. Insofar as these staff members have to work well beyond the scope of their normal employment arrangements, the land management

agencies regard them as volunteers, although they are being paid and sometimes compelled to undertake the work.

In considering the problem of sustaining an adequate number of volunteer firefighters, the focus of the present report is on firefighters who volunteer under the traditional model through joining a fire brigade and donating their time for no financial payment.

Each volunteer-based fire agency is now constituted as a state or territory government instrumentality. However, some services have become state-wide government instrumentalities comparatively recently. For example, New South Wales RFS only became consolidated from a collection of municipally based fire brigades as recently as 1997.

Table 4 shows the number of volunteer firefighters in each state or territory in 2008 (Australian Government Productivity Commission, 2009). However, on the strength of evidence to the Linton Commission of Inquiry (see Figure 3, p. 18), the numbers of active volunteers in each agency may be as few as half those quoted by the Productivity Commission.

Table 4 Number of volunteer firefighters by state or territory (2008)

NSW	Vic.	Qld	WA	SA	Tas.	ACT	NT	Australia	NZ
75,474	58,362	35,000	27,457	15,744	4,909	1,367	540	218,853	7,000

Source: (Australian Government Productivity Commission, 2009; New Zealand Fire Service, 2010)

The numbers of volunteers reported for each of the three largest fire agencies are comparable with the number of employees in Australia's largest corporations. The management of such large volunteer fire services presents certain challenges. The volunteer workforce is not subject to the same level of control as paid employees or contractors. Volunteers have greater freedom to resign than career firefighters because they are not dependent on the fire service for income. As a result they may be allowed wide latitude in the extent of their participation.

The large numbers and wide geographical dispersal of the volunteer workforce creates challenges for communication, consultation and logistical support. These challenges are compounded by limited contact time as most volunteers do not attend their volunteer 'workplace', the fire station, on a daily basis. In recent years, mobile phones, electronic mail and improvements in pagers have helped volunteers to communicate to organise for training and operations. More recently, social networking sites have enabled volunteers to interact socially while away from the fire station, both with their own brigades and among members of other brigades. Increasingly, fire agencies are using websites to publish documents, provide on-line forums for debate and deliver web-casts across the workforce. However, in rural and remote areas telecommunications services may be unavailable, too slow or too costly. Some volunteers have to travel long distances to regional service centres for training, to attend meetings or collect supplies.

As numerically large as it is, Australia's volunteer fire service workforce still constitutes a relatively small proportion of the nation's overall volunteer workforce. The Australian Bureau of Statistics estimates that in 2006, 5.2 million Australians aged 18 years and over

(34%) volunteered through an organisation or group (Australian Bureau of Statistics, 2007h). The fire services account for about 4% of Australia's volunteers.

Data on Australian volunteer fire services for 2005–08 show that the number of volunteers has fallen from 224,700 in 2005–06 to 218,000 in 2007–08. However, almost all of that decline is attributable to Queensland Fire and Rescue Service: Rural (QF&RS), which conducted an audit that identified and removed records for about 6,000 volunteers who had left (Australian Government Productivity Commission, 2009). CFA reports that part of the decline in its numbers during the 1990's was caused by a similar audit of volunteer records (King, C., personal communication, January 15, 2010).

TRENDS IN OPERATIONAL STATUS BY GENDER

CFA has provided more detailed data on its volunteer membership for the period 2004 to 2009 than for previous periods, as presented in Figure 3 (Country Fire Authority, 2009). In 2009, the exceptionally deadly Black Saturday bushfires in Victoria appear to have caused larger than normal outflows and inflows of volunteers, with a net inflow of 311 (0.5%) in the 6 months to June 2009, and a further 490 (0.8%) in the 6 months to December 2009 (King & Martin, 2009) and C. King (personal communication, January 15, 2010). Based on anecdotal evidence in relation to past extreme events, the modest surge in numbers is likely to be short-lived and longer-term trends may resume within a year or so as public attention turns elsewhere. Research evidence regarding the effect of major fires on recruitment and retention is presented on p. 123.

This part of the report is concerned with medium-term trends rather than short-term fluctuations, so CFA data for 2009 have been excluded from the analyses. The data, in Table 5 and Figure 8, show that during the period June 2004 to June 2008, the total number of CFA volunteers declined slightly from 58,583 to 58,362 (0.4%). While this appears to be a modest decline in volunteer numbers over that period, closer inspection reveals that there were greater underlying declines in the number of operational volunteers. In June 2008, 35,127 (60%) of its 58,362 volunteers were accredited as operational. From 2004 to 2008, the number of CFA operational volunteers declined by 4,147 (11%). This was almost entirely due to a drop of 4,275 (12%) in operational males, partly offset by an increase in operational females. However, while the total number of female volunteers increased by 1,527 (16%), the number of operational females rose by a more modest 128 (3%).

The low proportion of female recruits (~20%) completing operational accreditation in CFA is broadly consistent with findings from Study 2. In that survey of community members who had never been firefighters, about 40% of women and 60% of men were interested in operational firefighting roles.

Table 5 Number of CFA volunteers by operational status, June 2004 to December 2009

	Persons			Female			Male		
		Operational			Operational			Operational	
Year	Total	Yes	No	Total	Yes	No	Total	Yes	No
June 04	58,583	39,274	19,309	9,471	4,221	5,250	49,112	35,053	14,059
June 05	58,662	37,150	21,512	9,917	4,089	5,828	48,745	33,061	15,684
June 06	58,849	34,299	24,550	10,385	3,883	6,502	48,464	30,416	18,048
June 07	59,509	35,114	24,395	10,821	4,288	6,533	48,688	30,826	17,862
June 08	58,362	35,127	23,235	10,998	4,349	6,649	47,364	30,778	16,586
June 09	58,943	36,004	22,939	11,379	4,551	6,828	47,564	31,453	16,111
Dec. 09	59,422	36,808	22,614	11,671	4,825	6,846	47,751	31,983	15,768

Source: (King & Martin, 2009)

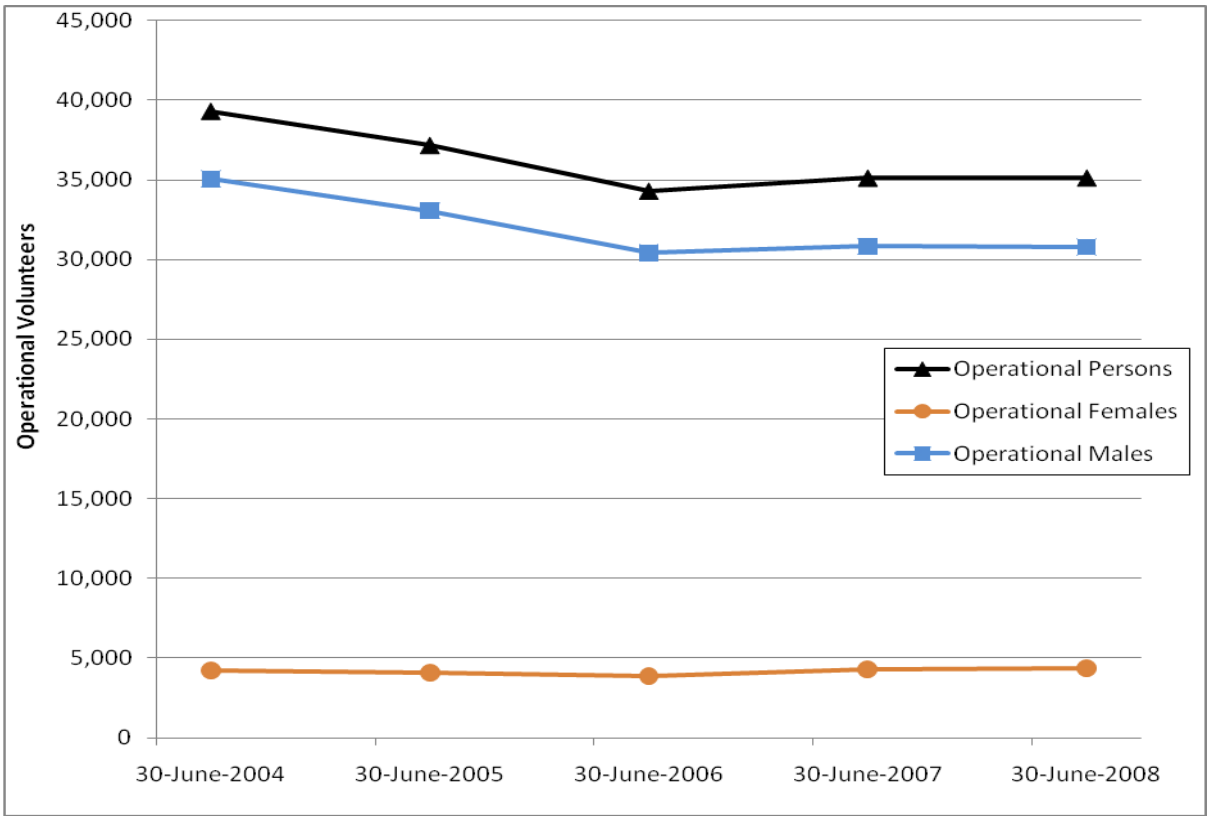

Figure 8 Numbers of operational CFA volunteers by gender, 2004–08

Source: (King & Martin, 2009)

RESULTS

WHO CURRENTLY VOLUNTEERS FOR FIREFIGHTING?

(Studies 10 and 20)

Data on the make-up of Australia's volunteer fire services are sparse in detail, of variable quality, and of limited historical extent. In contrast, the Fire Services Needs Assessment Surveys in the United States capture comprehensive data on the characteristics of US fire departments which is readily available to all stakeholders (National Fire Protection Association, 2006). The relative paucity of data on Australian fire services limits fire agencies' understanding of their current volunteer workforce and their ability to plan for future workforce sustainability. A census of Australian volunteer-based fire services would greatly assist in workforce planning and provide benchmarks for sample-based research such as that conducted by the Volunteerism Project.

GENDER

(Study 20)

Australia's volunteer-based fire agencies supplied the Volunteerism Project with basic demographic data on the age, gender and length of service of their volunteers in 2004. The data were collated and reported in (McLennan, 2004a). Table 6 presents data supplied by the agencies on the gender of volunteers. The Northern Territory fire services were not participants in the Bushfire CRC at the time so we have no data for that jurisdiction. Despite the apparent precision of the data, participating agencies have cautioned that, for a variety of reasons, these data should be regarded as approximations. The Volunteerism Project undertook several studies focused on the experiences of female volunteers and identified a number of issues that limited women's participation in firefighting. The findings are presented later in this report in the *Women volunteers* section (p. 113).

Table 6 Numbers of volunteers by gender as reported by fire agencies in 2004

		ACT ESA	NSW RFS	Qld QF&RS/Rural	SA CFS	Tas. TFS	WA FESA	Vic. CFA	**Australia Total**
Male	*n*	313	43,856	39,175	11,360	3,508	20,763	49,475	**171,250**
	%	84.6	85.4	80.9	76.7	87.9	78.2	84.4	**82.7**
Female	*n*	57	7,522	9,223	3,460	482	5,792	9,168	**35,704**
	%	15.4	14.6	19.1	23.3	12.1	21.8	15.6	**17.3**
Total		370	51,378	48,398	14,820	3,990	26,555	58,643	**206,954**

Source: (McLennan, 2004a)

The Australian Bureau of Statistics estimates that 54,600 emergency services volunteers (31%) are female (Australian Bureau of Statistics, 2007h); however, the gender ratios of respondents in the Volunteerism Project's studies are consistent with the fire agencies' data, suggesting that between 12 and 23% of volunteer firefighters in each state are female, with an national mean of 17%.

The predominance of males in firefighting contrasts strongly with their participation in general volunteering. Across all forms of volunteering in Australia in 2006, 32% of men and 36% of women volunteered (Australian Bureau of Statistics, 2007h), and similarly in the US in 2007, 23% of men and 29% of women volunteered (US Bureau of Labor Statistics, 2008).

AGE

The age profile of volunteer firefighters is skewed towards late middle age compared with that of the Australian population. Figure 9 compares the percentage age-distribution of NSW RFS volunteers aged 20–69 years[8], from the RFS membership database current to September 2007 (M. Surrey, personal communication September 25, 2007), with that of the estimated resident population (ERP) of NSW aged 21–70 years[9] (Australian Bureau of Statistics, 2008d). Note the lower proportions of RFS volunteers aged less than 40 years, and higher proportions aged over 40 years, compared with the NSW adult population.

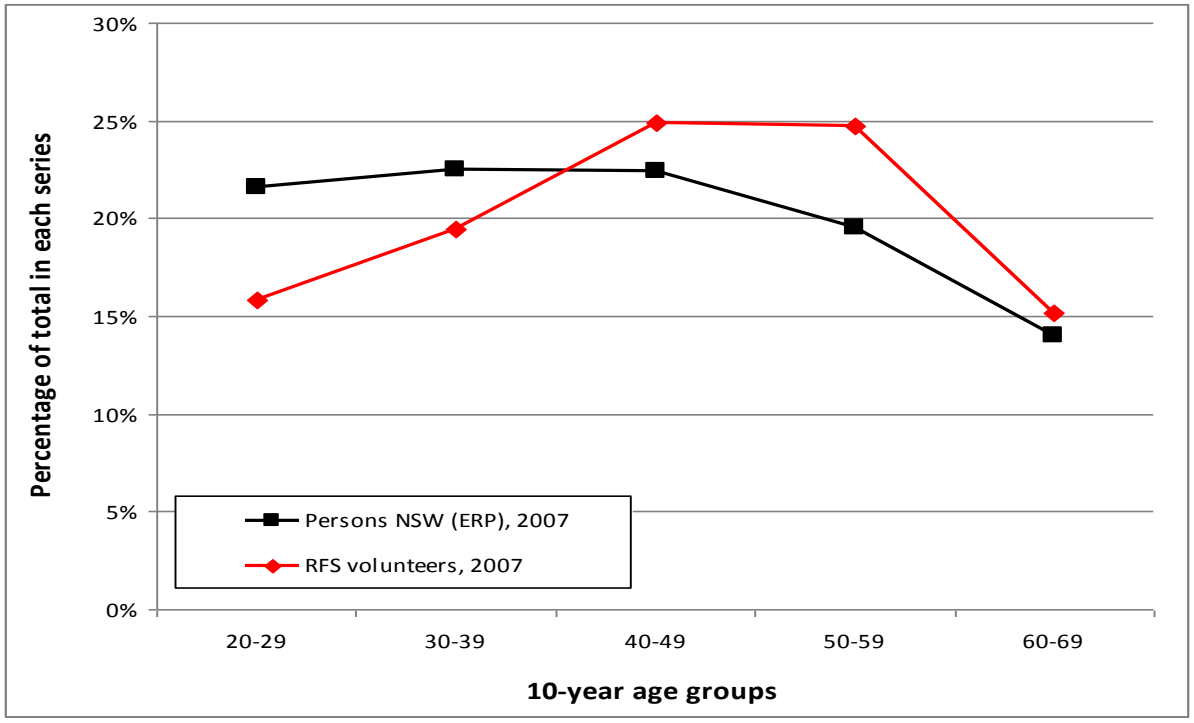

Figure 9 The 2007 age distributions of NSW RFS volunteers and the NSW adult population.
Source: (M. Surrey personal communication, September 25, 2007) and (Australian Bureau of Statistics, 2008d)

Given the sometimes strenuous demands of firefighting, the over-representation of higher age groups may both elevate health risks associated with older firefighters and diminish the overall physical capabilities of the firefighting force. In the United States, on average 100 on-duty firefighter fatalities occur each year, of which over half are caused by stress or

[8] About 87% of volunteers whose age is known fall within the age range 20–69 years, and comparing volunteers with the population aged older than 69 years makes interpretation of the graphical distribution more difficult.

[9] Note that, owing to limitations of the data available, the age groups used for the volunteer data are: 20–29, 30–39 ... 60–69 years, while the corresponding age groups for the adult population are one year higher: 21–30, 31–40 ... 61–70 years.

overexertion, and 85% of these involve firefighters aged over 40 years (United States Fire Administration, 2010). Data concerning on-duty deaths among Australian firefighters is limited, in part because Australia has about one fifth the number of firefighters compared with the United States. However, the Victorian bushfires in 2009 offer an insight into the level of vulnerability of Australian volunteer firefighters to overexertion. In the extreme temperatures and stressful circumstances experienced by firefighters during those fires, the Victorian Bushfires Royal Commission reported one instance of injury classified as 'heart attack/condition' and two instances classified as 'chest pains' among firefighters between February 7th and March 20th 2009. The most frequently reported cause of injury was 'dehydration/heat stress', recorded in 52 incidents (2009 Victorian Bushfires Royal Commission, 2010). Findings from our research into the implications of setting mandatory fitness standards for volunteers is reported in the section headed *Age and fitness* on p. 59. Further research into the age-related health risks of Australian volunteer firefighters is being undertaken by the Bushfire CRC through Deakin University.

The skewed age distribution of RFS volunteers might suggest that rates of RFS volunteering are declining among younger generations; however, the explanation may simply be that the RFS age distribution parallels that of the regional population from which RFS recruits. Figure 10 compares the age distribution of the overall population of NSW (ERP) with the age distributions of (a) the Sydney Statistical Division(SD), and (b) the rest of NSW (Australian Bureau of Statistics, 2008d). The Sydney SD covers the greater metropolitan area of Sydney extending from the coast west to the Blue Mountains, south almost to Wollongong and north almost to Newcastle.

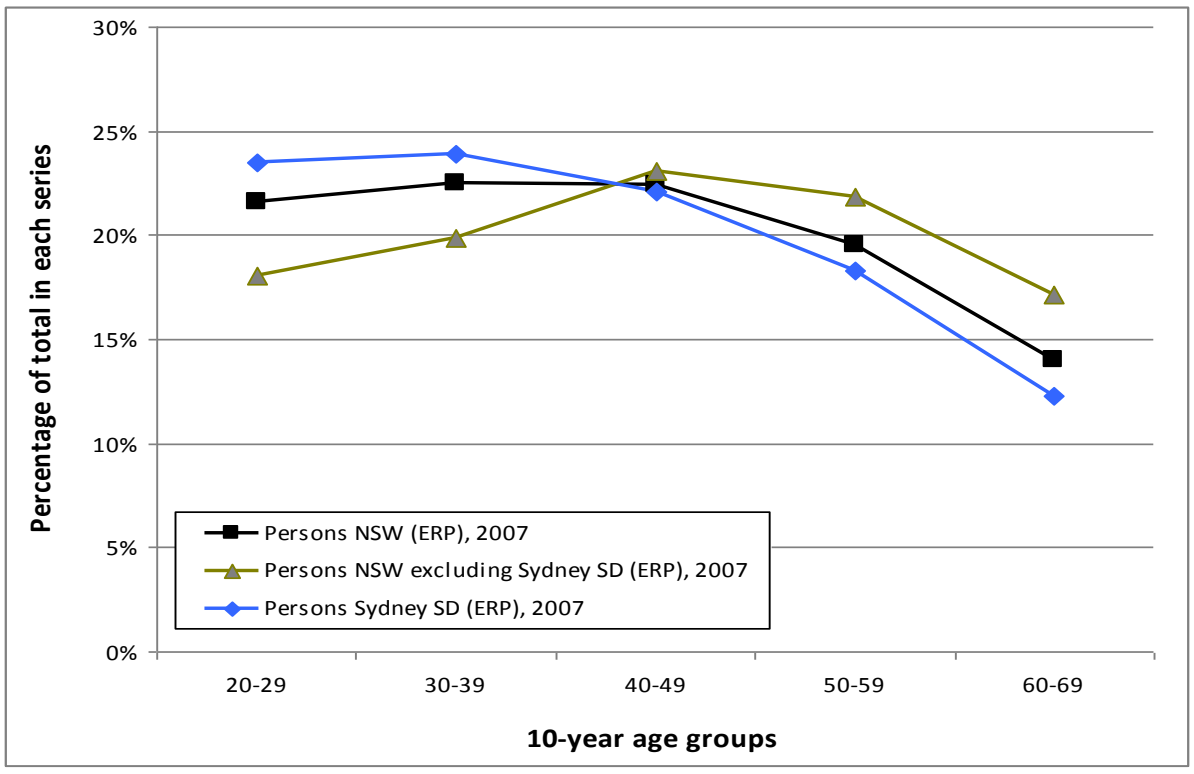

Figure 10 2007 age distributions for NSW, Sydney SD, and NSW excluding Sydney SD
Source: (Australian Bureau of Statistics, 2008d)

It is clear from the graph that the population of the Sydney SD is skewed towards younger age groups compared with that of regional NSW. Nationally, 30.7% of adults who lived in capital-city SDs were aged between 20 and 39 years compared with 24.7% of adults who lived in the remainder of Australia (Australian Bureau of Statistics, 2008d).

The higher proportion of the regional population aged between 40 and 69 years is also evident at the national level. The Productivity Commission suggests that people are attracted back to country areas to raise families by perceived lifestyle advantages and family ties. In support of this proposition, it notes the relatively high proportion of people in the 0–14-year age group in regional areas compared with capital cities (Australian Government Productivity Commission, 1999).

The increased proportion of children aged 5–15 years in regional areas can be seen in Figure 11, which depicts the full age range (0 to 85+ years) of the estimated resident population of NSW in 2007 (Australian Bureau of Statistics, 2008d). The relatively higher proportions of children in the 5–9- and 10–14-year age groups in regional areas, and correspondingly lower proportions in Sydney, are consistent with a net migration of adults moving from Sydney to regional areas when they start having children. This migration may be for some combination of lifestyle reasons and the availability of larger, cheaper housing outside Sydney. For the 15–29-year age group, the regional population decreases while the Sydney population increases. However, for the 30–49-year age group, the regional population increases while the Sydney population decreases. These age distributions suggest net inflows from the regions to Sydney for persons aged 15 to 29 years and net outflows from Sydney to the regions for persons aged 30 to 49 years. Figure 11 shows that all of these trends are stronger in the least-populace 50% of Statistical Local Areas[10] (SLAs) compared with NSW excluding the Sydney SD. This suggests that, the less populace the community people grow up in, the greater their tendency to move to a more populace SD for education, work or lifestyle in early adulthood.

[10] Statistical Local Areas (SLAs) are geographical areas defined by ABS that are, in almost all cases, identical with local government areas (LGAs) as defined in the Local Government Act 1993.

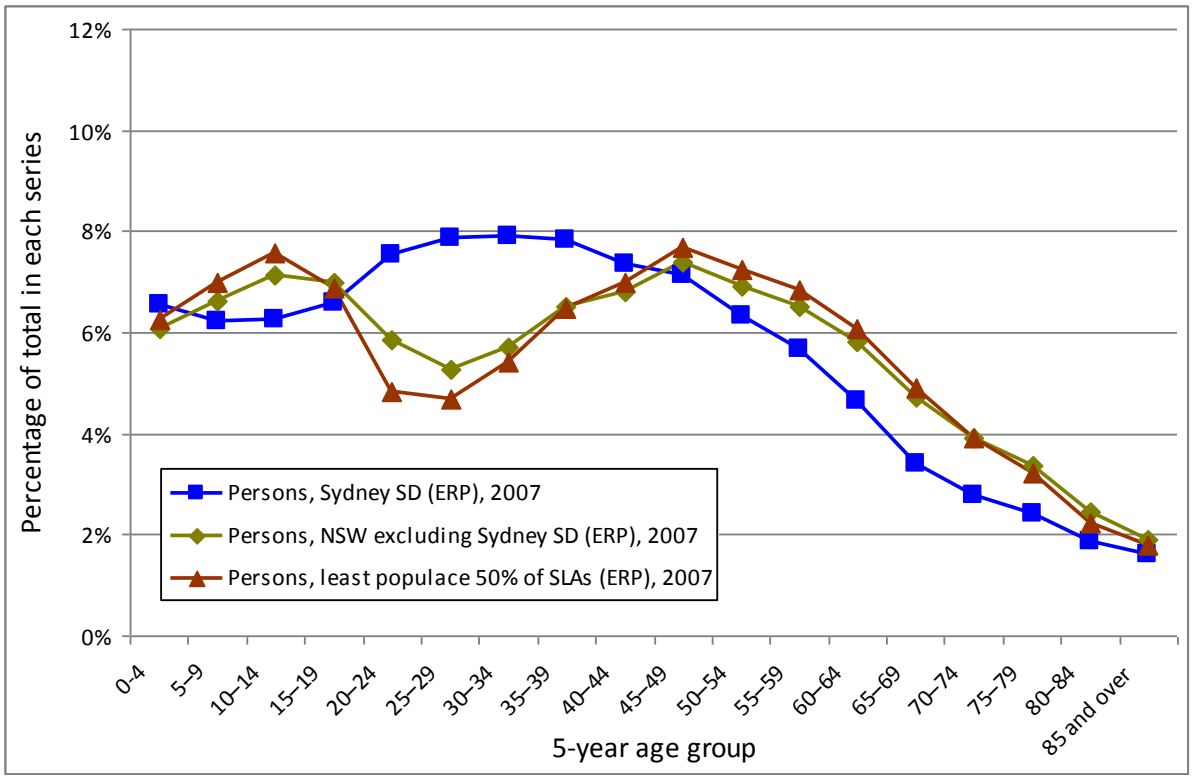

Figure 11 Age distributions of 2007 ERP compared with the least populace 50% of SLAs
Source: (Australian Bureau of Statistics, 2008d)

The Australian Bureau of Statistics has monitored population movements in recent census data by asking respondents about their usual place of residence at the time of the previous census and comparing it with their place of residence at the current census. This technique has limitations insofar as it only reports on peoples' locations at two points in time, five years apart and gives no information about movements between those two times. However, it provides a broad indication of the population flows, their intensity, and the characteristics of people who are moving (mobility).

While our focus here is upon mobility between regional and metropolitan areas, there are other important flows such as those to rapidly growing coastal communities liked the Gold Coast.

Figure 12 overlays the age distribution of mobility among SDs in NSW (Australian Bureau of Statistics, 2009f), with the age distribution of the population of regional NSW (NSW outside the Sydney SD) (Australian Bureau of Statistics, 2008d). The mobility distribution shows, for each age group, the percentage of people who moved to a different SD in the same state during the year. Note the sharp rise in people moving in the 20-24 year age group as young adults tend to leave their parents' homes. The mobility distribution alone tells us nothing about the net direction of movement, only the proportion of people in each age group who moved between the 2001 and 2006 census. However, we can infer the net inflows and outflows from regional NSW from the age distribution of the regional population. The highest rate of mobility occurs for the 20–24-year age group and the net direction of movement is from regional NSW to Sydney. The graph suggests that there is a net movement of about 25% of 25–29-year olds from the regions to Sydney. Conversely, there

appears to be a corresponding contra-flow from the Sydney SD back to the regions spread over the 30–49-year age groups.

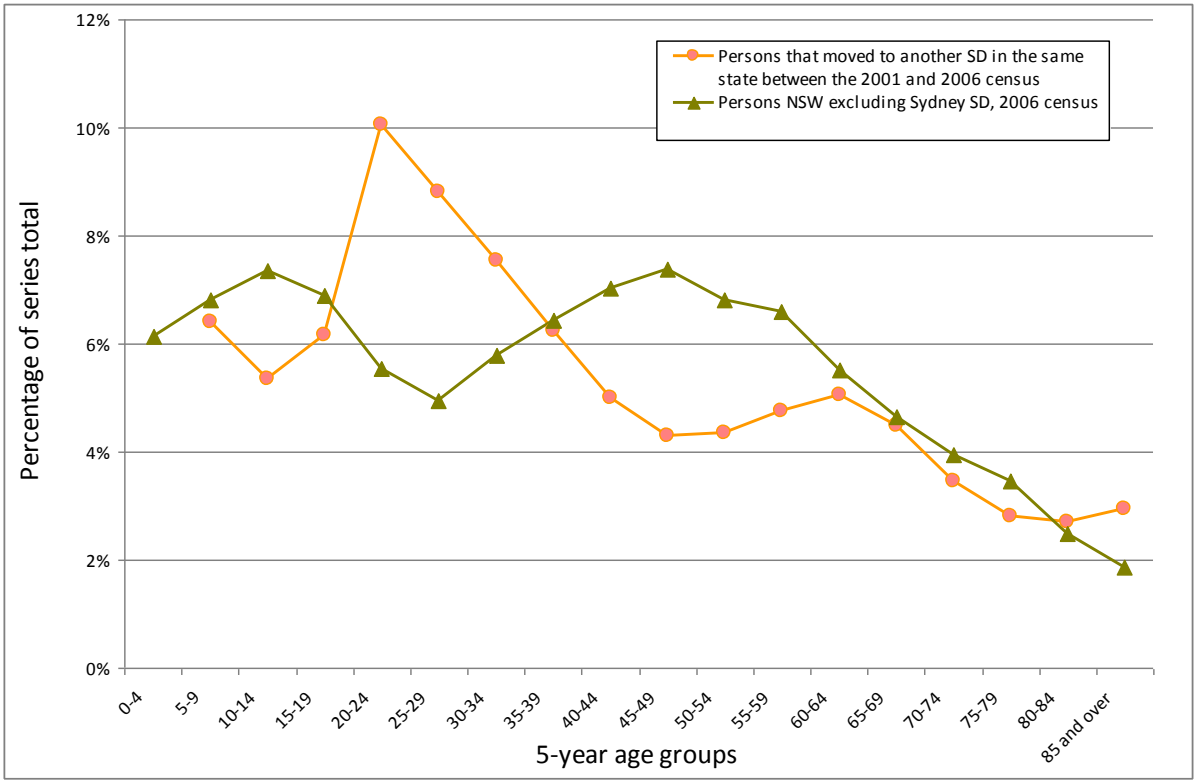

Figure 12 Age distributions of: persons NSW excluding Sydney SD, and mobility Australia.

The age distribution of the RFS membership most closely approximates that of the smaller communities in regional NSW. Figure 13 compares the age distribution of the least-populace 50% of SLAs in NSW (Australian Bureau of Statistics, 2008d) with that of the RFS volunteer population (M. Surrey, personal communication, September 25, 2007). RFS tends to draw its recruits from the least-populace communities in NSW while, generally, the 339 communities with the largest populations fall under the jurisdiction of NSW Fire Brigades which employs full-time career firefighters and part-time retained firefighters (NSW Fire Brigades, 2009).

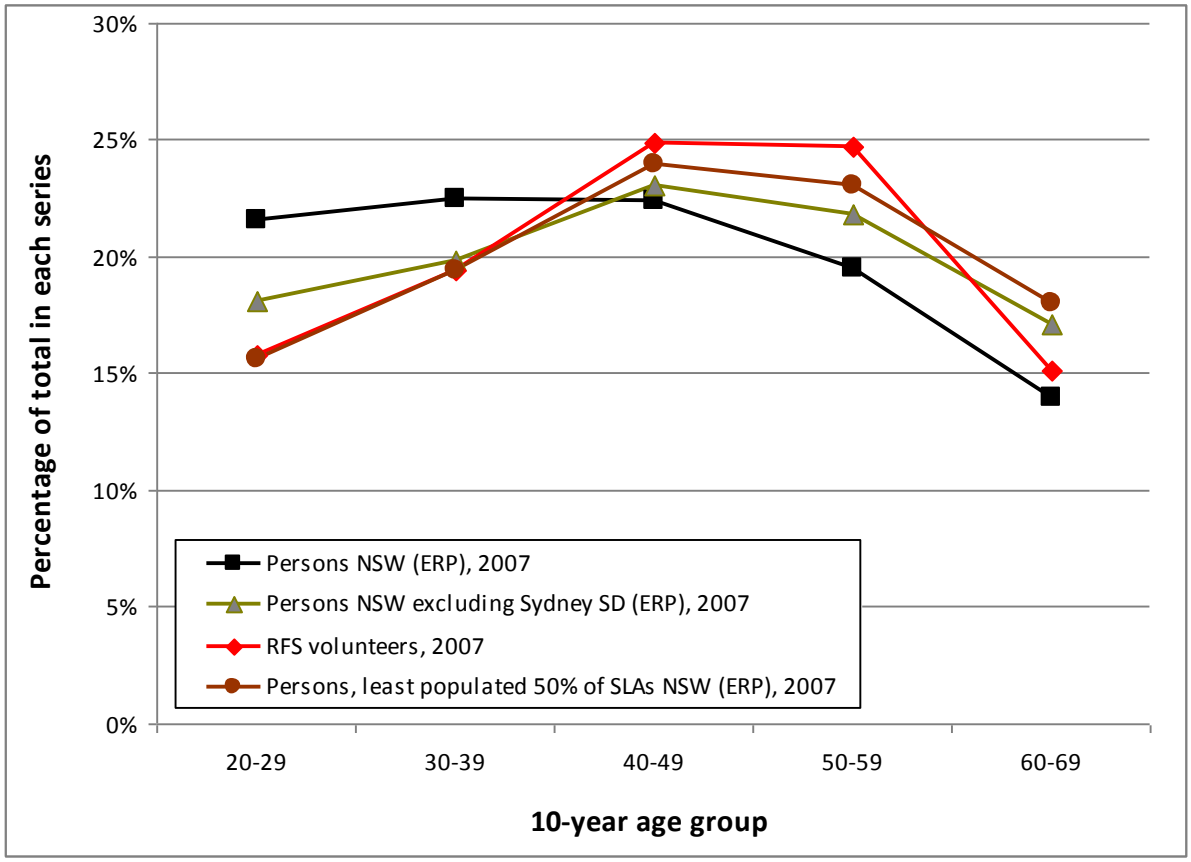

Figure 13 Age distributions of: the population of NSW, and NSW RFS volunteers

THE EFFECT OF ECONOMIC CHANGES SINCE 1970

During the 1970s, Australian governments at federal and state or territory level, of both major political parties, began a series of economic reforms which could be described as having mostly negative consequences for fire service volunteer recruitment. The broad thrust of reform was towards 'economic liberalism', substantially reducing many forms of government economic intervention and allowing market forces greater freedom to guide the economy.

The perceived need for this shift in the direction of economic policy was brought about by Australia's decline in productivity, relative to other nations, since federation. According to Anderson, in 1900 Australia had 'arguably' the highest per capita gross national income (GNI) in the world, but slipped to third highest by 1950 and eighth place by 1970 (2001). By

2009 Australia's productivity was ranked 24th in terms of per capita GNI (World Bank, 2010). Anderson notes that, for the first 70 years of the twentieth century, Australian governments used ever increasing tariffs and other import controls to protect local manufacturing industries. He asserts that in the post-war period Australia and New Zealand were more protectionist than all other OECD countries (2001).
For 30 years following the second world war, the Australian economy prospered, supplying minerals, agricultural commodities and manufactured goods to other countries engaged in post-war reconstruction (Bell, 2000). The combination of the post-war boom and the protectionist regime enabled Australia to maintain consistently low unemployment rates of about 1.5% for all adults, and fluctuating between 3 and 5% on a seasonal basis for young people aged 15–19 years (Australian Bureau of Statistics, 2003, 2010c). Data on CFA volunteers, presented in Figure 2, indicate that volunteer numbers grew by up to 50 per cent during this post-war boom period.

Other contributing factors to the growth in volunteer numbers can also be seen to be related to economic policy of the day. Anecdotal evidence from fire service personnel, serving at the time, indicates that state-owned utilities, notably the electricity and telecommunications authorities, subscribed to the ethos of 'serving the public good'. Consistent with that philosophy they were supportive of employees who volunteered with the emergency services and were relatively willing to allow them to respond to incidents during working hours (N. Marshall, personal communication, January 21, 2011).

However, Anderson observes that 'disenchantment' with protectionist trade policies and other interventionist economic policies emerged during the 1960s. In 1973, the Whitlam labour government took the first major initiative in reforming trade policy by unilaterally cutting all import tariffs by 25 per cent. At about the same time, the annual rate of inflation rose sharply from a 30-year average of about 5% per annum to 17%. In 1974–75 unemployment rates also rose sharply. The unemployment rate for adults aged 15 years and over rose from a 30-year average of 2% to 5.5% in 1975, while the unemployment rate for 15–19-year-olds rose from 5.2% to 12% (Figure 14)[11]. Unemployment rates continued to climb slowly until a further sudden increase occurred in 1982–83, which took them to 12.1% for adults and 25% for 15–19-year-olds. They then trended downwards gradually until a further recession in 1992–93, during which the adult unemployment rate rose rapidly to 11.6% and that for 15–19-year-olds rose to 34%. Since peaking in 1993, unemployment rates have trended gradually downwards to about 5% for adults and 17.3% for 15–19-year-olds in 2007. In 2008, the global financial crisis caused the adult unemployment rate to rise briefly to 5.7%. Inflation rates fell gradually and unevenly from 17% in the mid 1970s to 0% in 1998 before stabilising at about 2.6% from 2002 to 2009 (Lewis, Garnett, Treadgold, & Hawtrey, 2010).

Anecdotal evidence from fire agency personnel who served during the 1970s and 1980s suggests that during the early periods of high unemployment, people were often unemployed for lengthy periods and many volunteered with the fire brigades. Being unemployed, they were generally available for response during business hours (N. Marshall,

[11] The unemployment rates noted above, and shown in Figure 14 are those published for the August or June quarters in each year so as to eliminate the cyclic peaks of the November and February quarters when young people leave school and search for work.

personal communication January 21, 2011). However, governments progressively introduced more restrictive eligibility criteria for unemployment benefits, notably introducing requirements for evidence of active job-seeking or participation in vocational training. It is likely that such measures progressively diminished the spare time unemployed people initially had to volunteer with fire agencies, particularly during business hours.

The unemployment rates discussed here are the national rates across the whole labour force; however unemployment rates vary widely among different demographic groups and regions. They are generally higher for early school-leavers, women, unmarried people, people with few vocational qualifications, people living in non-metropolitan areas, and recently arrived immigrants, especially those from non-English speaking countries. For example, in 1992, when the adult unemployment rate for persons looking for full-time work was 11.7%, the unemployment rate among women born in Vietnam was 41.7% (Australian Bureau of Statistics, 2003, 2010a, 2010c).

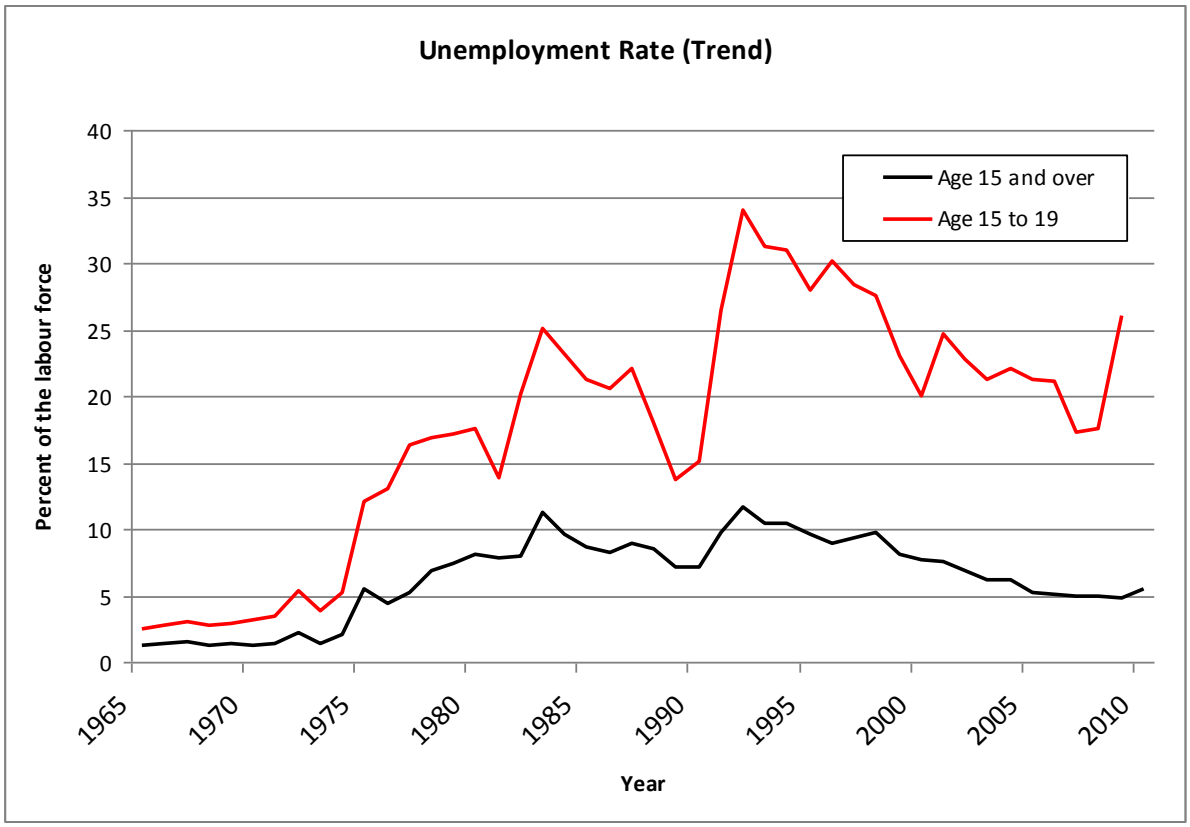

Figure 14 Unemployment rates, 1965–2010
Source: (Australian Bureau of Statistics, 2003, 2010c)

The expansion of post-compulsory education was an important component of the program of liberal economic reform. The rationale for this was articulated by Castle and Mangan who reported research showing that 'unemployment was lowest among the most highly educated and trained sections of the workforce'. They argued for measures to increase participation in education to (a) reduce unemployment in the short term, (b) increase individuals' chances of future employment, and (c) increase Australia's ability to attract high-technology industries in order to compete internationally (Castle & Mangan, 1984).

This expansion of education had several undesirable consequences for volunteer fire brigade membership. First, it drew more young adults away from rural communities to enrol in vocational and tertiary education. Further, those who qualified could expect more specialised, higher paid jobs and commensurate lifestyle enhancements which tended to keep them in larger population centres after completing their studies. It is also likely to have reduced youth unemployment, and in so doing reduced the number of young unemployed adults, available to volunteer, who could respond during working hours. Our research suggests that people who are studying are less likely to volunteer with fire brigades. Data from Studies 3c and 10, presented in Table 17 (p. 65), indicate that students are under-represented among volunteer numbers compared with their proportion in the population.

The expansion of post-compulsory education proceeded in three stages. The first stage commenced in 1973 when, following the recommendations of the Kangan Report, the Tertiary Education Assistance Scheme was extended to students in the Technical and Further Education system (TAFE), and the number of TAFE places was increased from 400,700 in 1973 to 671,013 in 1975 (59%) (Goozee, 2001). Most TAFE students from outlying rural communities have to commute or relocate significant distances to larger cities to attend their preferred course. As such, the expansion of TAFE participation is likely to have accelerated the migration of young adults from outlying rural communities to regional and capital cities.

The second stage of the expansion of education was an increase in the rate of retention at secondary school for the post-compulsory school years. Between 1982 and 1992, the percentage of 17-year-olds completing Year 12 doubled from 30 per cent to over 60 per cent. The results can be seen in Figure 15, which shows the percentage of persons aged 15–19 years attending secondary school, university or college of advanced education (CAE) between 1980 and 2002. Lamb (1994) suggests the following factors contributed to the dramatic increase in year 12 retention rates:

- Increased Commonwealth Government financial assistance for young people in low-income families (Youth Allowance);
- The abolition of unemployment benefits for 16 and 17-year-olds;
- Long-term structural reform in industry and the labour market; and
- High unemployment rates, especially youth unemployment.

The third stage was the expansion of tertiary education facilitated by the increased Year 12 retention rate. Satisfactory completion of year 12 is generally required for enrolment into tertiary education in Australia. Tertiary education has a greater affect of drawing young adults away from rural communities because it is more strongly concentrated in capital cities than is TAFE. Commencing in 1987, the Commonwealth government increased the number of student places available in higher education (Harman, 1989). As a result the domestic[12] tertiary education participation rates increased between 1989 and 2002 as shown in Table 7 and Figure 15. In 2002 the age group with the highest tertiary

[12] Table 7**Error! Reference source not found.** contains data on students who are Australian citizens, New Zealand citizens, Australian permanent residents and those students whose citizenship status is unknown, but excludes overseas students.

participation rate was 20-year-olds with 28.1 per cent enrolled in higher education. This was an increase of 61 per cent from 1989 when 17.5 per cent of 20-year-olds were enrolled. Note that the rate of increase in participation, shown in the right-hand column of Table 7, rises with age as growing proportions of students pursue increasingly advanced post-graduate studies.

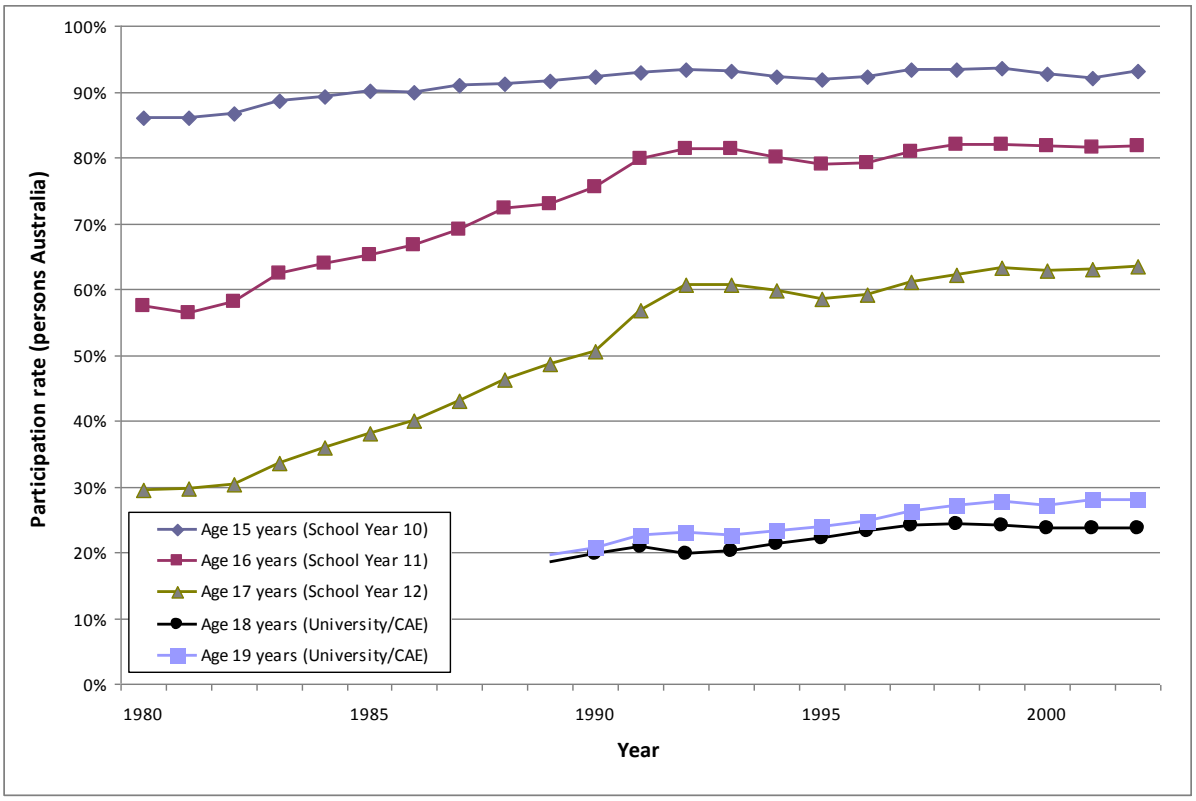

Figure 15 Participation rates in school, university or college of advanced education (CAE)
Source: (Australian Government Department of Education Employment and Workplace Relations, 2010)

Table 7 Percentage of Australians participating in higher education by age, 1989–2002

Age group (years)	Year														% Change 1989–2002
	89	90	91	92	93	94	95	96	97	98	99	00	01	02	
17	3.7	4.0	4.0	3.6	3.7	3.8	4.1	4.2	4.1	3.8	3.8	3.6	3.9	3.9	5
18	18.4	19.7	20.9	19.7	20.3	21.3	22.2	23.3	24.1	24.3	24.1	23.6	23.6	23.6	28
19	19.5	20.6	22.5	23	22.6	23.3	23.8	24.8	26.3	27.2	27.7	27.2	28.0	27.9	43
20	17.5	18.5	20	21.4	21.9	21.9	22.5	23.1	24.5	25.6	26.3	26.6	27.4	28.1	61
21	12.9	14.1	15.2	16.3	17.4	17.6	18.1	18.8	19.8	20.5	21.4	21.8	23.9	24.3	88
22	8.8	9.5	10.7	11.3	12	12.4	12.6	13.5	14.3	14.7	14.9	15.3	17.2	18.2	107
23	6.4	7.1	7.8	8.5	8.8	8.9	9.2	9.6	10.4	10.8	10.8	10.8	12.6	13.1	105
24	4.9	5.4	6.1	6.5	7.0	7.1	7.1	7.5	7.8	8.3	8.5	8.3	9.8	10.2	108
15–19	8.5	9.4	10	9.7	9.6	9.9	10.2	10.5	10.8	10.9	11	10.8	11.1	11.2	32
20–24	10.1	11.0	12.2	13.0	13.5	13.5	13.6	14.3	15.2	15.8	16.3	16.5	18.3	18.9	87
15–24	9.3	10.2	11.1	11.4	11.7	11.8	12	12.5	13.1	13.4	13.6	13.6	14.6	15.0	61
25–29	3.6	3.8	4.2	4.5	4.7	4.9	5.1	5.4	5.5	5.5	5.4	5.4	6.6	6.9	92
30–64	1.6	1.7	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.9	2.3	2.3	44
15–64	3.7	4	4.4	4.5	4.6	4.6	4.6	4.8	4.8	4.8	4.8	4.7	5.3	5.4	46
All ages	3.2	3.5	3.7	3.8	3.9	3.9	3.9	4	4.1	4.1	4	3.9	4.4	4.5	41

Source: (Australian Government Department of Education Employment and Workplace Relations, 2010)

The area chart in Figure 16 shows the higher-education participation rate by age in 1989 overlaid on the age distribution for 2002 using data from Table 7. Not only do participation rates for the core undergraduate ages (18–21 years) increase by an average of 50%, but the distribution spreads to the right as growing proportions of students pursue post-graduate qualifications. The greatest percentage increases occur among these older age groups. For example, the participation rate for 24-year-olds more than doubled over the 14-year period. The total number of persons participating in higher education is proportional to the area under the two distributions. Both distributions in the graph are cut-off at the age of 24 owing to lack of available single-year age data beyond that age.

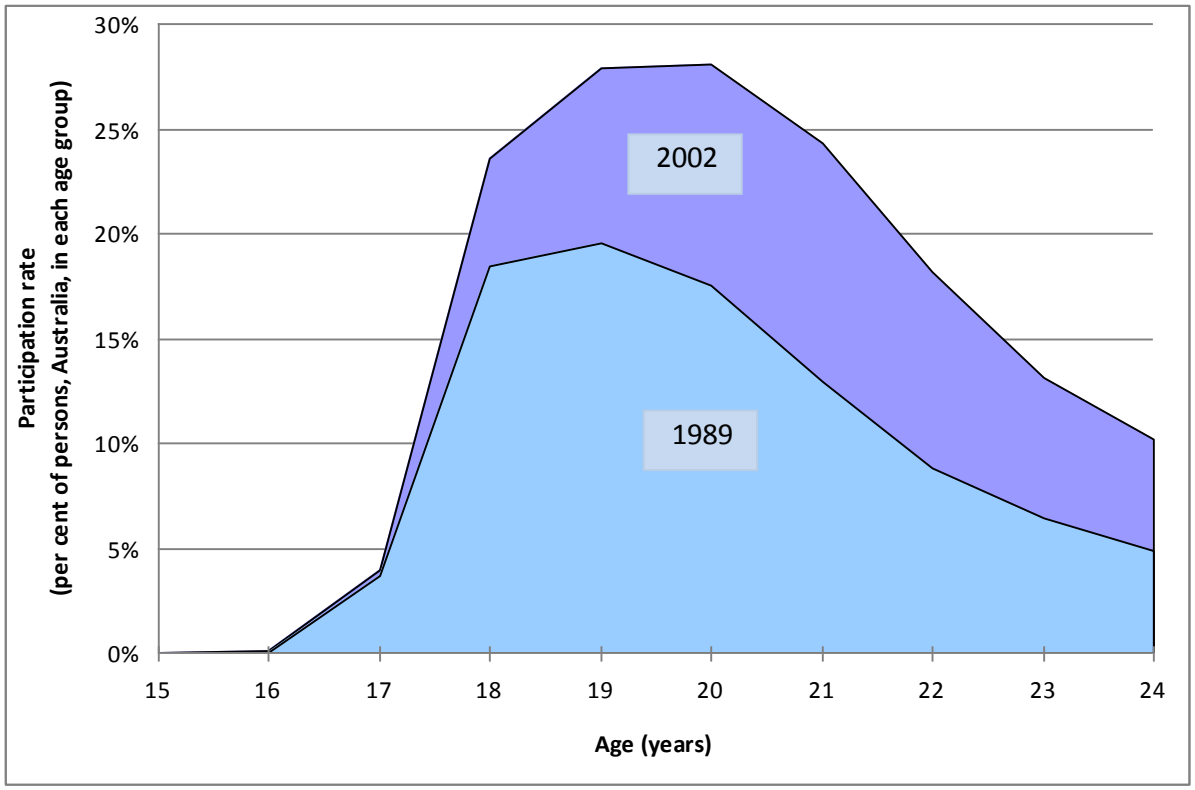

Figure 16 Age distribution of participation in higher education, 1989 and 2002

Across Australia in 2004, 716,422 domestic students were participating in higher education (Australian Government Department of Education Employment and Workplace Relations, 2004). About 19% of students enrolling in higher education originate from non-metropolitan areas, and about 40% of those, move home to attend university. In comparison, only 4% of students from metropolitan areas move home to attend higher education (Blakers, Bill, MacLachlan, & Karmel, 2003). The overall effect of the expansion of higher education is a significant and increasing excision of young adults aged 18 to 24 years, and older, from regional to metropolitan areas in pursuit of higher education.

In 2009, following the Bradley Review into Higher Education, the Australian Government announced a policy initiative to increase the proportion of people attaining bachelor degrees from 32% currently to 40% by 2025 (The Australian Government, 2009).

The Bradley Review also reported that people from regional areas were under-represented in higher education enrolments, with a participation rate of 70% of the national participation rates relative to their proportion in the population. The review recommended measures be taken to increase the proportion of people from regional areas who attained a bachelor degree (Australian Government Department of Education Employment and Workplace Relations, 2008). The combination of initiatives to (a) increase overall attainment rates and (b) redress under-participation by people from regional areas, is likely to further increase the exodus of young adults from those areas.

The Bradley Review also reported that the level of real public funding of Australian universities did not change between 1995 and 2005, while the trend in other OECD

countries was an increase of between 13 and 55% over the same period (Australian Government Department of Education Employment and Workplace Relations, 2008). Access Economics reported that the average annual increase in the number of domestic students in higher education was 1.7% between 2002 and 2007 compared with an average annual growth rate of 3.7% 'through the 1990s'. This led to domestic higher education participation rates levelling-off, and in some instances declining, between 2002 and 2007 (Access Economics, 2008). The levelling off in domestic higher education participation rates corresponds with, and may have contributed to, the levelling off in the decline of volunteer firefighter numbers during the same period as reported by CFA (refer to Figure 3).

The effect of the economic changes that commenced in the 1970s on the age profile of regional populations is evident in Figure 17 which compares the age distributions for regional NSW in 1981 and 2006 (Australian Bureau of Statistics, 2008d). The age distribution for 1981 trends downward with increasing age, as would be expected of a population in natural increase due to births. The distribution for 2006 shows a relative deficit of young adults aged 19-34 years. The deficiency in young adults emerged progressively between 1981 and 2006, as can be seen in Figure 18 where age distributions for the intervening census years of 1986, 1991, and 1999 have been inserted.

The progressive emergence of this relative deficit of young adults in regional areas is explained by Hillman and Rothman who used longitudinal data to study the movement of Australian youth from non-metropolitan areas to major cities. They concluded that 'the pursuit of further educational opportunities, particularly attending a university, was a significant influence on the likelihood that a young person would relocate from a non-metropolitan area to a major city during late adolescence and early adulthood' (2007).

Downward pressure on volunteer firefighter numbers, and upward pressure on their age distribution, should be anticipated by fire agencies and government given the impact that past expansion of post-compulsory education appears to have had since the 1970s. Fire agencies would benefit from developing a better understanding and confirmation of this apparent relationship to assist with workforce planning in the future.

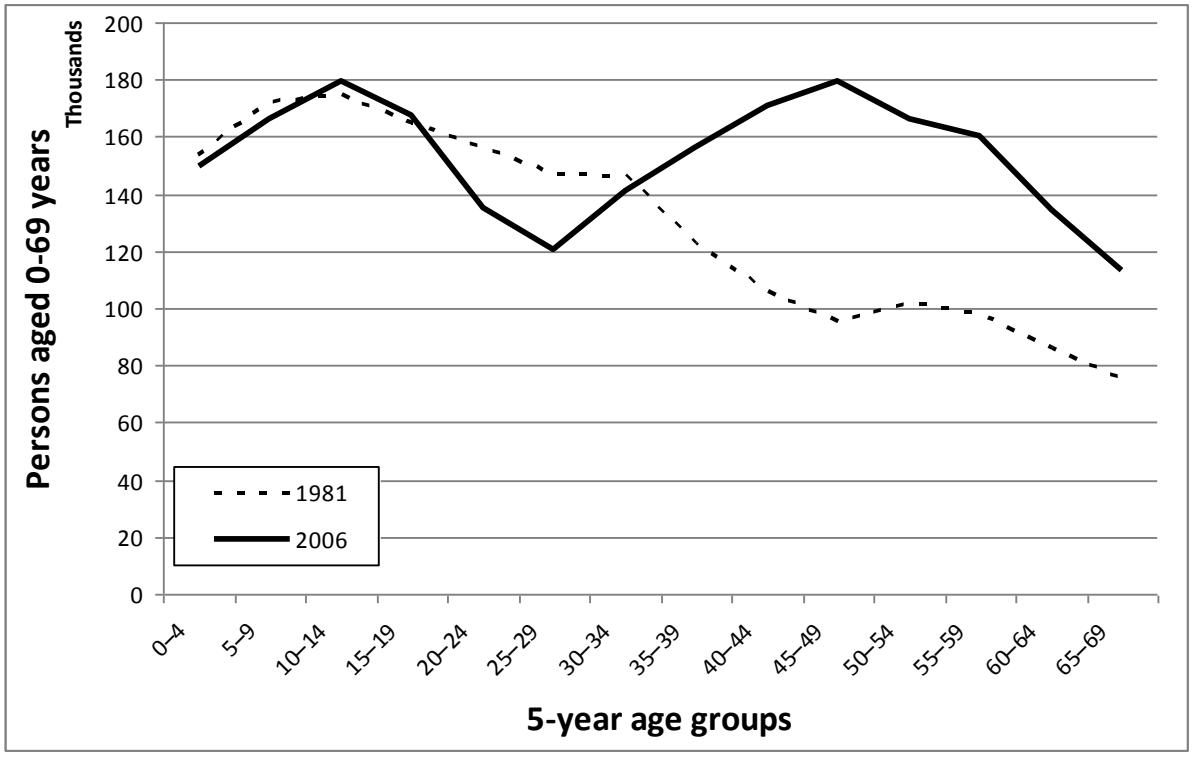

Figure 17 Age distribution of NSW population outside Sydney SD, census 1981 and 2006
Source: (Australian Bureau of Statistics, 1983a, 1983b, 2007a)

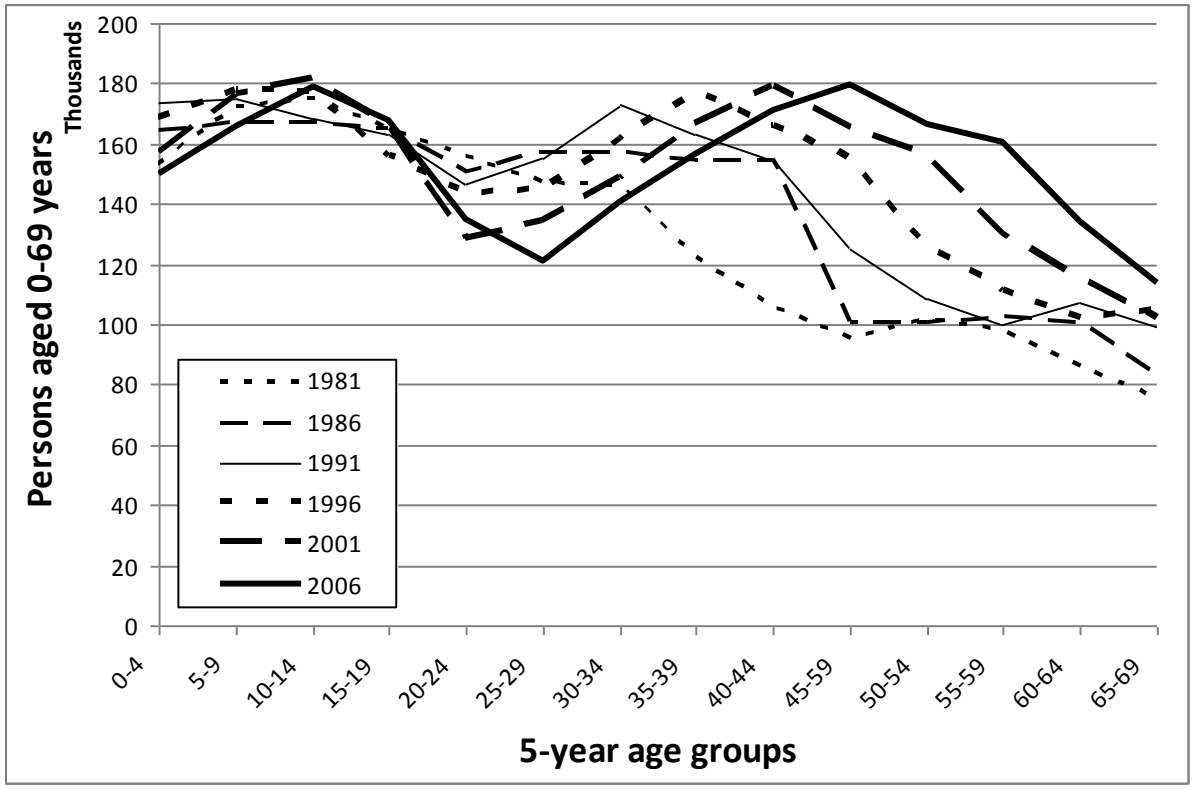

Figure 18 Age distribution of NSW population outside Sydney SD, census years 1981–2006
Source: (Australian Bureau of Statistics, 1983a, 1983b, 1987, 1993, 2007a)

OVERSEAS-BORN VOLUNTEERS

(Study 10)

Immigration is an important source of population growth for Australia. Currently, about one quarter of Australia's population was born overseas, and in 2007–08, net overseas migration (213,700 persons) exceeded natural increase (145,600 persons) for the third consecutive year and accounted for 59% of population growth (Australian Bureau of Statistics, 2009f). However, for a number of reasons discussed below, immigration is proportionately less of a source of fire service volunteers.

A relatively high 85% of immigrants live in major cities, compared to 63% of Australian-born residents (Australian Bureau of Statistics, 2006b). While about 15% of people living in regional Australia were born overseas, the survey of volunteers in Study 10 found only 9% of current fire service volunteers reported having been overseas-born. There are several plausible explanations for this deficit including: differing cultural traditions of fire service volunteering among various ethnic groups, limited or slow integration into the local community, perceptions of not being welcome in local brigades, or practical constraints associated with poor English language proficiency. The most concrete of these explanations is poor English language proficiency. People who have limited English language skills may have difficulty communicating so as to train or participate in firefighting crews. Currently, 21% of overseas-born permanent settlers in regional Australia have nil or poor proficiency in the English language (Australian Government Department of Immigration and Citizenship, 2010).

In general volunteering, a higher proportion of persons born in Australia (36%) volunteer compared with persons born overseas (29%). Immigrants from the main English-speaking countries volunteer at a higher rate (34%) compared with immigrants from other countries (26%). Similarly, on average, volunteers who were born in Australia contribute more hours per week (2.7 hrs/week) than volunteers who were born overseas (2.4 hrs/week), and volunteers from the main English-speaking countries contribute more hours per week (2.6 hrs/week) compared with volunteers from other countries (2.0 hrs/week) (Australian Bureau of Statistics, 2007h). In the US, participation rates in volunteering for whites (27.9%) were higher than those for minority groups: blacks (19.1%), Asians (18.7%), and Hispanics (14.7%) (US Bureau of Labor Statistics, 2009b).

The greater the time since an immigrant arrived in Australia, the more likely they are to be living in regional Australia. In 2006, 90% of overseas-born residents who had arrived in the past 20 years lived in major cities, compared with 81% of people who had arrived 30 or more years ago (Australian Bureau of Statistics, 2006b). In 2009, of 1,249,214 permanent settlers who arrived in Australia during the 18 years between 1991 and 2009, only 8.5% were currently living in regional areas (Australian Government Department of Immigration and Citizenship, 2010) compared with 37% of Australian-born residents. It is unclear whether these statistics show that immigrants are increasingly likely to relocate to regional areas the longer they have lived in Australia, or whether settlers who arrived 20 or 30 years ago were more likely to settle in regional Australia. Further research is required to examine this question. Further research is also required to examine ways of improving rates of volunteering among immigrants in urban fringe areas. Fire services that have volunteer

brigades in major cities may benefit from targeting for recruitment overseas immigrants who are living in outer suburban zones.

Consistent with these statistics, in Study 10, we asked respondents (current volunteer firefighters) who were born overseas what year they arrived in Australia. The bar chart in Figure 19 shows that the majority (53%) immigrated between 1961 and 1980, and the median year of arrival was 1972, 35 years prior to the survey. The numbers of overseas-born volunteers increases as their year of arrival recedes from 2007 back to about 1971, possibly reflecting the time-lag in moving to regional areas or becoming comfortable with Australian language and culture. The numbers then decline as year of arrival recedes further, probably owing to age-related natural attrition.

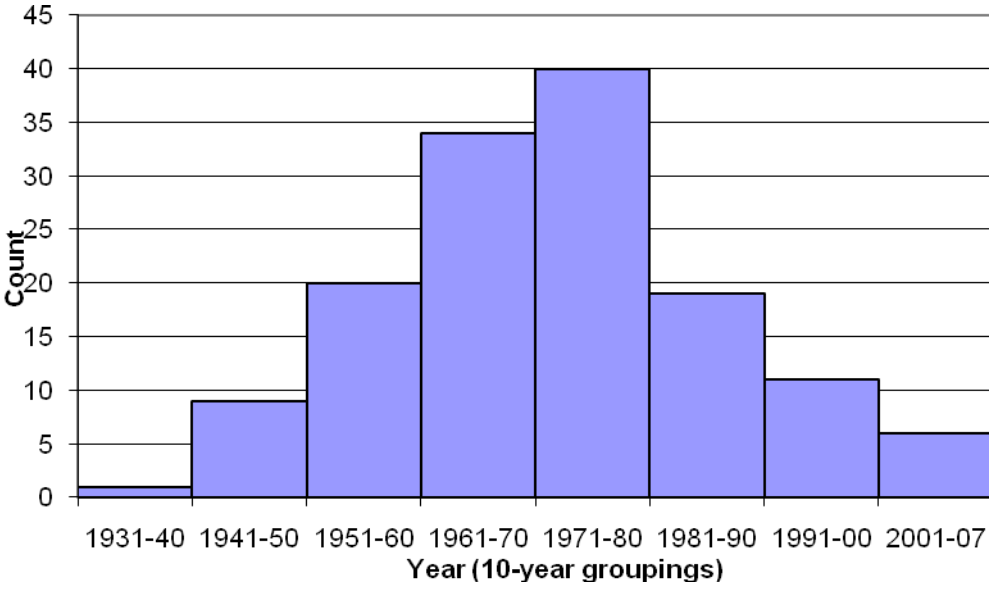

Figure 19 Number of overseas-born respondents by year of arrival

In Study 10, we asked current volunteers who were born overseas in which country they were born. We coded volunteers' country of birth according the Standard Australian Country Classification (SACC) (Australian Bureau of Statistics, 1998). In Table 8, we used the SACC Minor Group level to categorise respondents' country of birth. The right-hand column shows the percentage distribution of country of birth of the regional population of the state (Australian Government Department of Immigration and Citizenship, 2010).

Of the 9% of respondents born outside Australia, 81% have come from the main English-speaking regions. They are over-represented by a factor of almost two compared with their proportion in the regional population surveyed. Volunteers from non English-speaking regions are under-represented by a factor of three on average while volunteers from Asia are markedly under-represented by a factor of ten. The variation in participation among people from non English-speaking regions might suggest that factors other than English language proficiency, such as cultural traditions, play a role in determining participation rates. Further analysis is required to explore the underlying reasons for the low participation from among particular ethnic groups.

Table 8 Country of birth: volunteers compared with the regional population of the state

	Overseas-born volunteer firefighters in the state (Study 10)		Overseas-born regional population of the state (DIAC)
	Count	%	%
Main English-speaking countries			
United Kingdom and Ireland	81	57.8	28.3
New Zealand	22	15.7	8.1[13]
Northern America	11	7.9	9.6
Subtotal (main English-speaking)	**114**	**81.5**	**46.0**
Other countries			
Western Europe	9	6.4	4.4
Eastern Europe	4	2.9	0.8
Southern and East Africa	4	2.9	10.0
Southern Europe	3	2.1	2.6
Asia[14]	3	2.1	23.3
Polynesia (excludes Hawaii)	2	1.4	1.7
Northern Europe	1	0.7	0.8
South-eastern Europe			2.6
Middle East			2.0
North Africa			2.1
The Former USSR and Baltic States			1.1
Central and West Africa			1.1
South America			0.9
Melanesia			0.3
Central America			0.3
Subtotal (other)	**26**	**18.5**	**54.0**
Total	**140**	**100.0**	**100.0**

[13] We have interpolated this data item from ABS data because the Australian Department of Immigration and Citizenship (DIAC) data for New Zealanders, from its Settlement Reporting Facility, reports very low numbers of settlers from New Zealand. DIAC have offered the following explanation:

> In 1994 amendments made to the Migration Act 1958, resulted in a number of changes to migration legislation. As a result, the Special Category Visa (SCV) was introduced for New Zealand citizens. In practical terms, there was no change to procedures for New Zealand citizens wanting to come to Australia. They continue to need only a valid New Zealand passport to travel to Australia and in most cases, do not need to seek a visa before travelling. Therefore, the Settlement Database would not be recording these arrivals (Department of Immigration and Citizenship email communication, February 11, 2010).

[14] In Study 10, respondents from all parts of Asia were incorporated into a single category 'Asia' owing to the low cell-counts. However, the Department of Immigration data for settlers from Asia comprises North-east Asia (6.5%), South-east Asia (12.1%) and Southern Asia (5.7%).

INDIGENOUS VOLUNTEERS

(Study 10)

There are limited data on the participation of Aboriginal or Torres Strait Islanders in the volunteer fire services. This is regrettable because, while Australia's 517,043 Indigenous people constitute just 2.5% of the population, they represent a high proportion of the population in parts of regional Australia. For example, in most of the Northern Territory outside Darwin, Indigenous people constitute about 60% of the population. Some other areas[15] with high proportions of Indigenous people include the SLAs of Bourke, NSW (17.5%), Mt Isa, Qld (24.2%), Broome, WA (27.3%), Derby, WA (63.3%), and Dubbo, NSW (10.6%). About 70% of Indigenous Australians live outside major cities. Figure 20 shows the distribution of the Indigenous population across Australia, with each dot representing 100 Indigenous persons (Australian Bureau of Statistics, 2006c).

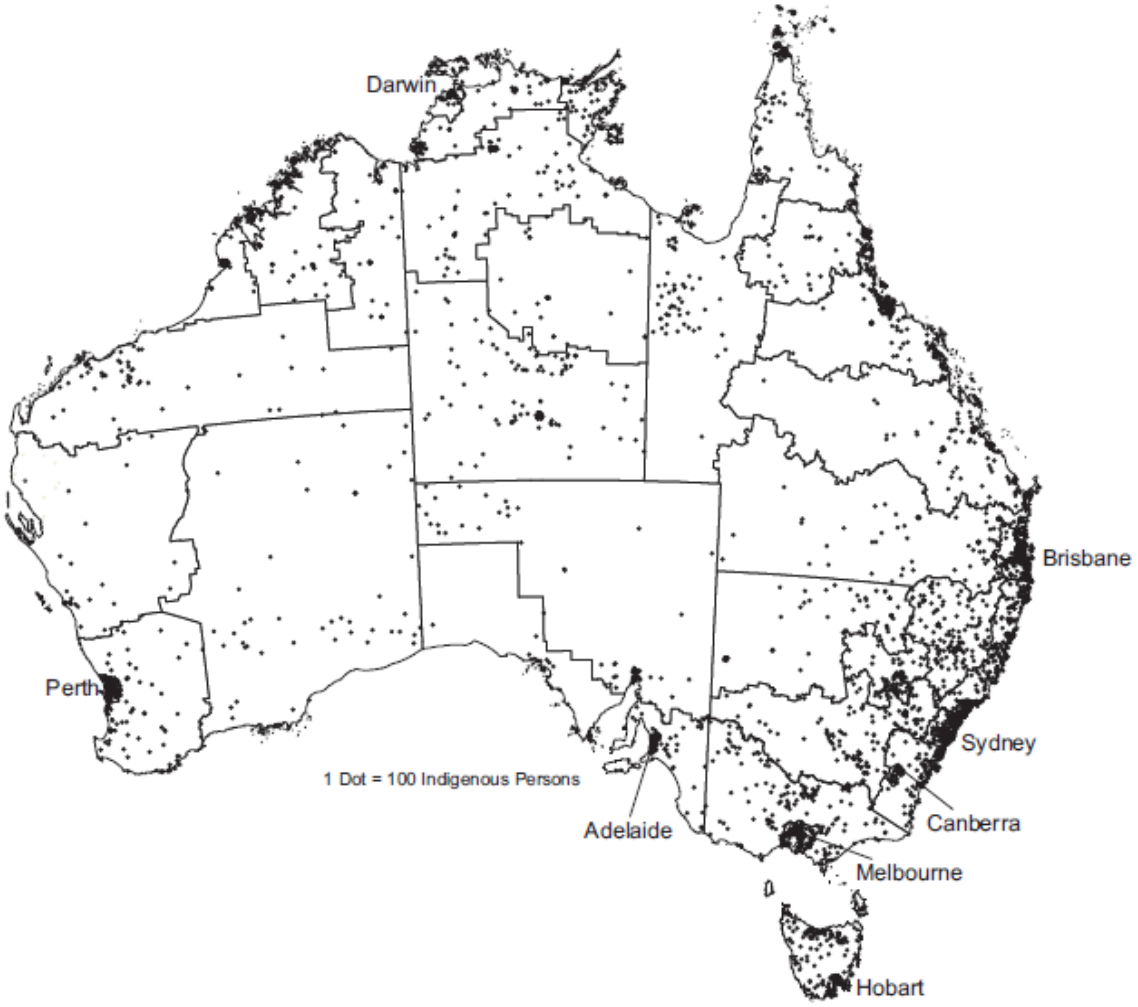

Figure 20 Indigenous population distribution – Indigenous Region Boundaries 2006
Source: Australian Bureau of Statistics. (2006). *Population Distribution, Aboriginal and Torres Strait Islander Australians* (No. 4705.0). Canberra, Australian Capital Territory

[15] The areas used in this section are ABS Indigenous Areas as defined under the Australian Indigenous Geographical Classification (AIGC).

Indigenous people also constitute a rapidly growing section of the population. Between 2001 and 2006, the number of Indigenous people increased by 11% compared with 6% for the total population. ABS attributes this high level of population growth to a combination of natural increase and people who were identified as Indigenous for the first time in the 2006 census. Australia first began including Indigenous people in official estimates of the Australian population following changes to the Constitution as a result of the 1967 referendum (Australian Bureau of Statistics, 2006c).

In Study 10, we asked respondents, volunteer firefighters from one state, 'Do you identify as an Aboriginal or Torres Strait Islander?' and 24 respondents (1.7%) indicated they did. This corresponds well with census counts showing that 1.7% of persons aged 18 years and over in the state concerned identify as Aboriginal or Torres Strait Islander (Australian Bureau of Statistics, 2007c). However, the comparatively small number of Aboriginal or Torres Strait Islander respondents means that this finding may be the result of chance and so should be treated with caution. Further research is needed into all aspects of Aboriginal and Torres Strait Islander participation in volunteer fire services.

FUNCTIONS UNDERTAKEN BY VOLUNTEERS

(Study 10)

As noted in Table 5, about 61% of CFA volunteers in 2009 were classified as operational: 66% of males and 40% of female volunteers. At any one time, a proportion of volunteers are recent recruits who need to complete training before becoming operational, while others have become non-operational owing to old-age, illness or disability.

Volunteers are required to perform a range of functions within the fire services. Each function places different demands on those who undertake them. Volunteers undertake the various functions more or less willingly, and their allocation to a role is largely dependent on who is available, and willing. Increasingly, specific roles require training and accreditation before volunteers can undertake them. For example, under recent health regulations, volunteers engaged in catering for fund-raising may now require training and accreditation in food-handling. Ensuring that the right people are available for a range of specialist roles is an increasing consideration for workforce planning and recruitment.

In Study 10, serving volunteers were asked, 'What functions do you perform in [your fire service[16]]?' They were given a list of seven functions with checkboxes and asked to tick the checkboxes for all the functions they performed. Table 9 sets out the results; however as respondents were able to tick more than one function, the totals in this table exceed the total number of respondents (1,589), and the percentages exceed 100%. In performing the calculations, respondents who did not respond to any of the seven items were treated as 'Not stated' across all seven items. For this question, only 13 respondents failed to tick at least one of the functions, so the total number of valid cases used for calculating percentages is 1,576.

[16] Some fire agencies have requested anonymity in relation to particular research findings so all identifying references to agencies or their state have been replaced with a generic description in square brackets. See explanation on page 16.

The Count column of the table shows, for example, that 1,497 of a possible 1,576 respondents (95%) reported that they performed the function of firefighter. This appears to be inconsistent with data fire agency annual reports. Three agencies reported the proportion of volunteers who were operational in their 2009 annual reports: RFS, 48%; CFA, 61% and CFS, 69%. It may be that most volunteers identify as firefighters even if they are not accredited as operational. This may be a useful insight into the motivation of non-operational volunteers: that they may perceive it as desirable to identify with the role and/or title of firefighter. An alternative explanation is that non-operational volunteers overwhelmingly failed to participate in the survey.

While 95% of Study 10 respondents identified as firefighters, only 143 (9%) reported performing the function of catering. Across the seven functions, the 1,576 respondents nominated performing 4,242 functions between them, an average of 2.7 functions per respondent. This is reflected in the total in the Percentage of Respondents column of 269%.

The Percentage of Responses column shows each count calculated as a percentage of the 4,242 responses. The Percentage of Responses values are convenient for assessing the extent to which each function is performed relative to the other functions.

Table 9 Functions performed in [the fire service]

		Responses		Percentage of respondents
		Count	%	
Functions performed	Firefighter	1,497	35.3	95.0
	Training	773	18.2	49.0
	Administration	549	12.9	34.8
	Community education	515	12.1	32.7
	Brigade support	428	10.1	27.2
	Communications	337	7.9	21.4
	Catering	143	3.4	9.1
Total		4,242	100.0	269.2

The cross-tabulation in Table 10 shows, for each possible pair of functions, how many respondents reported performing both functions. For example, of the 143 respondents who undertook catering, 91 also carried out administration and 80 carried out brigade support.

Table 10 Cross-tabulation: functions performed by functions performed

Functions performed	Firefighter	Catering	Administration	Brigade support	Training	Community education	Communications
Firefighter	**1,497**	123	519	390	758	501	293
Catering		**143**	91	80	91	75	60
Administration			**549**	227	349	255	177
Brigade support				**428**	263	198	160
Training					**773**	373	212
Community education						**515**	161
Communications							**337**

Respondents were given a second column of checkboxes and asked to tick just one box to indicate the main function they perform. Table 11 shows 82% of respondents identified firefighter as their main function. The second most frequently nominated main function was communications, selected by 4% of respondents. Of the 337 respondents (21%) who endorsed communications as one of their functions, just 20% endorsed it as their main function.

It appears that, to date, the fire agency involved in Study 10 has tended to attract people who are primarily interested in operational firefighting roles. This contrasts with the findings of Study 2 in which the targeted respondents, people who had never been members of the fire service, were twice as likely to express interest in a non-firefighting role as a firefighting role. If, as seems to be the case, the current membership is not enthusiastic about functions such as Administration and Catering, the findings from the Study 2 suggest that there are untapped resources in the community who are interested in taking up such roles, given the appropriate circumstances. Fire agencies may need to consider alternative strategies for recruiting volunteers into specialist non-firefighting roles.

Table 11 Main function performed in the fire service

Function	%
Firefighter	85
Communications	4
Administration	3
Brigade support	2
Training	2
Community education	2
Catering	1
Total *(n = 1,522)*	100

LEVEL OF PARTICIPATION OF CURRENT VOLUNTEERS

(Studies 1, 3c, 10 and 16)

The adequacy of the volunteer fire service should be measured not just in terms of the numbers of volunteers registered, but also in terms of their levels of participation. Volunteers are not subject to the same levels of control over their attendance or degree of application as employees in the general workforce. Most fire agencies and brigades have rules governing minimum levels of attendance, but are flexible in enforcing them, mindful that volunteers are entitled or even required to give other aspects of their lives priority, particularly work and family.

The nature and importance of these other priorities were examined in several of the Volunteerism Project's studies looking at both the considerations that limit volunteers' participation, and factors that would make it easier for them to participate.

Most volunteer firefighters also participate in the labour force (employed, self-employed or unemployed[17]). In Study 10, 84% and in Study 3c, 82% of respondents were active in the labour force, compared with 70% of the Australian population aged 15 years and over (Australian Bureau of Statistics, 2010a). This is not unexpected given the work-like nature of volunteer firefighting. In Australia, most people of working age need paid work to earn an income. Most people who are not working, and not seeking work, are prevented from doing so by one or more barriers including: full-time study, parenting, disability, caring for a sick or disabled person, or lack of available work. Generally, the same barriers affect an individual's ability to volunteer as a firefighter.

Virtually all volunteers who are in the labour force identify the competing demands of work or business as a barrier to participation in volunteering; these are the most frequently cited barriers to participation in all of our studies. Refer to the *Volunteering and work or business* section (page 64) for a more detailed discussion.

Most volunteers who are employed, as distinct from self-employed, report being allowed to attend a small proportion of call-outs during their normal work hours, the median proportion they can attend being 10% (Study 3c).

Volunteers who are self-employed report being able to attend a larger proportion of turnouts during their normal business hours. Note, however, that self-employed volunteers may work long and irregular hours so their concept of working hours may be broader than that of employed volunteers. For example, many self-employed people may regard evenings and weekends as part of their normal working hours, but have the flexibility to stop what they are doing to respond to callouts. Self-employed people are more strongly represented among fire service volunteers compared to the proportion they constitute of the labour force.

[17] ABS defines unemployed people as participating in the labour force, although this may seem counterintuitive. See the explanation on page 67.

A number of systemic changes have occurred in Australia over recent decades that are likely to have negatively affected the conflict between volunteering and work or business. These include changes in the economy affecting industry and the labour force, and social changes.

Historical data on volunteer numbers or the levels of participation of individual volunteers is unavailable or of poor quality. As such, it is difficult to analyse how various economic and social changes are correlated with volunteer numbers over time. We are largely limited to accounts from long-serving volunteers as to what economic and social phenomena have had the greatest impact on their volunteering and why. We have clearer evidence as to what changes have occurred during recent decades and we can infer the ways in which these are likely to have affected fire service volunteering.

FACTORS THAT LIMIT PARTICIPATION IN VOLUNTEER FIREFIGHTING

(Study 10)

In the survey of volunteers in Study 10, respondents were asked, 'How much has each of the following limited your participation in [fire service] activities?' and presented with a list of items to rate on a scale of 'Great extent', 'Moderate extent', 'Not at all', 'Don't know', or 'Not applicable'. The results are set out in Table 12, in which items are sorted in descending order based on the percentage of respondents who selected 'Great extent'.

Table 12 Limitations to participation in fire service activities

			Percentage				
#	**Limitation**	***n***	Great extent	Moderate extent	Not at all	Don't know	N/A
1	Perceived bureaucratic nature of the [fire service]	1,456	26	33	34	5	2
2	Business, farm or work commitments	1,468	24	38	29	2	9
3	Internal brigade politics	1,462	15	25	54	2	5
4	Out-of-pocket expenses	1,466	14	26	54	1	5
5	The increased complexity of [fire service] activities	1,465	13	36	46	3	2
6	Increased or ongoing demands of training or assessments	1,460	12	31	52	2	3
7	Increased time commitments required by the [fire service]	1,466	12	38	45	2	3
8	Awkward leaving workmates when I turnout	1,468	12	19	53	1	15
9	Parenting and family activities	1,458	11	31	48	1	8
10	Lack of resources provided by the [fire service]	1,462	7	24	62	3	4
11	Increased commitments caused by drought	1,455	6	13	58	2	21
12	Domestic duties	1,463	6	29	58	1	6
13	Losing interest in the [fire service]	1,464	6	14	71	2	7
14	Fear of legal action arising from [fire service] activities	1,469	5	13	74	3	6
15	Health problems	1,467	3	12	68	2	15
16	I'm finding some incidents too distressing to attend	1,464	2	5	83	2	8

Note that some items are only relevant to a subset of respondents. For example, Item 2, 'Business, farm or work commitments', is only applicable to respondents who are business owners, farmers or employees, comprising about 84% of the sample.

Clearly, perceptions of the 'bureaucratic nature of the [fire service]' are foremost among the factors limiting participation in fire service activities. The 26% of respondents who report this as a limitation to a 'Great extent' exceeds the percentage endorsing the more concrete limitations of business and work commitments (24%). Respondents also submitted numerous written comments elaborating on their perceptions of the bureaucratic nature of the fire service. They complained of excessive paper work which, they felt, stretched their generosity as volunteers. They also blamed fire service bureaucracies for shortages and delays in supplies, and for delays and poor quality of decision-making.

The extent to which volunteers perceive the fire agencies as excessively bureaucratic varies with the nature of their work status[18] outside the fire service. In
Table 23Table 13, respondents' perceptions of the bureaucratic nature of the fire service have been cross tabulated with their work status. The rows in the table have been sorted in descending order of work status categories reporting bureaucracy as a limiting respondents' participation to a 'Great extent'. Respondents who were self-employed or engaged in home duties were those most likely to report that bureaucracy limited their participation to a 'Great extent' (~38%). In comparison, about 20% of respondents who were employees or students, and only 13% of unemployed respondents, reported being greatly limited by bureaucracy. One interpretation of this finding is that, generally, the higher the level of autonomy a respondent had outside the fire service, the more likely they were to perceive the fire service as excessively bureaucratic.

Table 13 Perceived bureaucratic nature of fire service by work status

Work status	Respondents reporting that their participation is limited by the perceived bureaucratic nature of the [fire service] Percentage within work status categories					
	Great Extent	Moderate Extent	Not At All	Don't Know	Not Applicable	Total
Home duties	39.3	17.9	39.3	0.0	3.6	100.0
Self-employed business or farm owner WITH employees	38.3	35.1	21.3	3.2	2.1	100.0
Self-employed business or farm owner WITHOUT employees	37.1	28.6	29.5	3.3	1.4	100.0
Retired	33.8	24.6	34.5	4.2	2.8	100.0
Full time employee	22.7	34.8	35.7	4.7	2.1	100.0
Student	20.0	20.0	45.0	15.0	0.0	100.0
Part time employee	18.8	37.6	33.5	7.1	2.9	100.0
Unemployed	12.8	38.5	33.3	7.7	7.7	100.0
Mean %	26.6	32.8	33.6	4.7	2.3	100.0

[18] See details of how we classified respondents' work status in the section on volunteering and work on page 64.

These findings suggest that fire agencies may be able to improve levels of volunteer retention and participation if they address perceived inefficiencies in their bureaucracies, and better explain essential bureaucratic practices to volunteers. Volunteers' sense of frustration may be reduced if they are able to see that unmet needs are being addressed through an equitable, consultative and transparent planning process. The findings are particularly relevant to volunteers who are self-employed or engaged in home duties.

'Business, farm or work commitments' (Item 2), rank as the equal greatest factor limiting respondents' volunteering with the fire service. This category was nominated as a great or moderate limitation by 62% of respondents despite being directly relevant to only the 84% of respondents who are business operators, farmers or employees.

There is a significant gap between the two highest ranked limitations and the next lower ranked limitations, dropping from about 25% to about 12% 'Great extent'. Among this second band of limitations, 'internal brigade politics' (Item 3) is highest-ranked, reported as a great limitation by 15% of respondents. About 40% of respondents reported brigade politics as a great or moderate limitation, suggesting that the fire service may benefit from addressing issues of organisational climate among its volunteers.

The next highest-rated limiting factor, endorsed by 40% of respondents, is 'out-of-pocket expenses for fuel, phone, and Internet usage' (Item 4). There was little variation across age-groups to this sensitivity to expenses, although volunteers aged 70 and over were more likely to report this as a limiting factor. Volunteers aged 30-39 years were least likely to endorse expenses as a limiting factor, which is surprising given many are starting families and possibly reduced from two incomes to one. Fuel costs are common source of expense because many volunteers drive to their station for callouts, training and meetings. Depending on their role, volunteers may drive greater distances for group or regional meetings. The price of petrol when Study 10 was conducted in mid-2007, was about AU$1.20 per litre[19], relatively low compared with AU$1.35 a year earlier, and AU$1.60 in mid 2008 (Australian Competition and Consumer Commission, 2009). As known reserves of fossil fuels decrease or become more difficult to extract, we can anticipate that fuel prices will continue to rise and become an increasing concern to volunteers. The fire services might consider ways of easing the burden of out-of-pocket expenses on volunteers, for example through subsidies or reimbursement. They might also consider strategies such as facilitating telephone conferencing as an alternative to meetings to reduce the time and cost of travel. Further research is needed into the out of pocket expenses incurred by volunteer firefighters, and to manage future increases in those expenses, particularly fuel.

The three next-rated limitation factors are related, in that they each refer to demands placed on volunteers by fire services: complexity, training requirements and overall time demands. 'The increased complexity of [fire service] activities' (Item 5) is reported as limiting participation to a 'Great extent' by about 13% of respondents, and a 'Moderate extent' by a relatively high 36% of respondents. There are similar patterns of response to

[19] These prices are the monthly average petrol prices in Australia's largest 5 cities derived from Chart 8 in (Australian Competition and Consumer Commission, 2009) The fuel prices in regional areas were higher than in the cities. For example prices outside Sydney, in the remainder of NSW, were on average about 5 cents per litre higher than Sydney prices at any given time.

the item ‘increased or ongoing demands of training’ (Item 6) and ‘increasing time commitments required by the [fire service]’ (Item 7).

In attempting to balance the demands of volunteering and work, respondents are less likely to blame the demands of volunteering and more likely to blame the demands of work or business. Fewer respondents (50%) regard the ‘increased time commitments required by [the fire service]’ as a limit (Item 7) than regard ‘business, farm or work commitments’ (Item 2) as a limit (62%).

Item 8, ‘awkwardness of leaving workmates or employees at work while at calls’ was endorsed as limiting participation to a ‘Great extent’ by 12% of respondents, a similar level of endorsement as for Items 6 and 7. However the proportion endorsing Item 8 as limiting to a ‘Moderate extent’ was substantially lower at 19% compared with 31% and 38% for Items 6 and 7. About 15% of respondents to this item ticked ‘Not applicable’, which is consistent with the finding that about 85% of respondents are in the labour force.

The proportion of respondents endorsing Item 9, ‘parenting and family activities’ as limiting their participation was 42%, comparable with Items 6 and 7.

Relatively few respondents (7%) endorsed ‘lack of resources provided by the fire service’ as limiting their participation to a ‘Great extent’, and 62% reported it did not limit their participation ‘at all’. This finding should be interpreted carefully, as a lack of resources might not limit participation directly, but participation and even retention indirectly by undermining morale.

At the time of the survey approximately 80% of the relevant state had been declared drought-affected and over 50% of the state had been drought-affected for the preceding five years. Under these conditions, 18% of respondents reported being limited by the ‘increased commitments caused by drought’ (Item 11). However, note that 21% of respondents endorsed ‘Not applicable’ for this item. Drought might be expected to limit farmers’ spare time by forcing them to engage in more intensive farming practices like hand-feeding livestock. It may also limit farm income and expenditure, with flow-on effects to other industries and local businesses.

About 35% of respondents reported ‘domestic duties’ (Item 12) as limiting their fire service volunteering, compared with 42% who reported ‘parenting and family activities’ (Item 9). Most of the difference between the two items occurred at the ‘Great extent’ level which was endorsed by 11% of respondents for ‘parenting and family activities’, but just 6% for ‘domestic duties’. This suggests that parenting imposes more inflexible limitations on participation than other forms of domestic duty.

Relatively few respondents (20%) reported ‘losing interest in the fire service’ (Item 13) as limiting their participation, suggesting that morale in the relevant fire service is fairly healthy.

There are anecdotal reports of growing fear among fire service volunteers of the risk of legal action arising from mishaps associated with their volunteer firefighting. The results in Item

14 suggest that this is a concern for about 20% of volunteers, while 74% of respondents appear unconcerned.

Responses to Item 15 show that 'health problems' ranked as the second-lowest factor limiting participation in the fire service activities. A breakdown across age, as shown in the bar chart in Figure 21, shows that the percentage of respondents in each age group reporting health problems increases with age. An interesting anomaly is that respondents in the 30–39-year age group defy the trend. This age group has the lowest proportion of respondents reporting health problems as a limitation. There are no obvious reasons why this might be so, although this age group is the primary parenting age group. Parents with young children might suggest that they are too busy to worry about themselves.

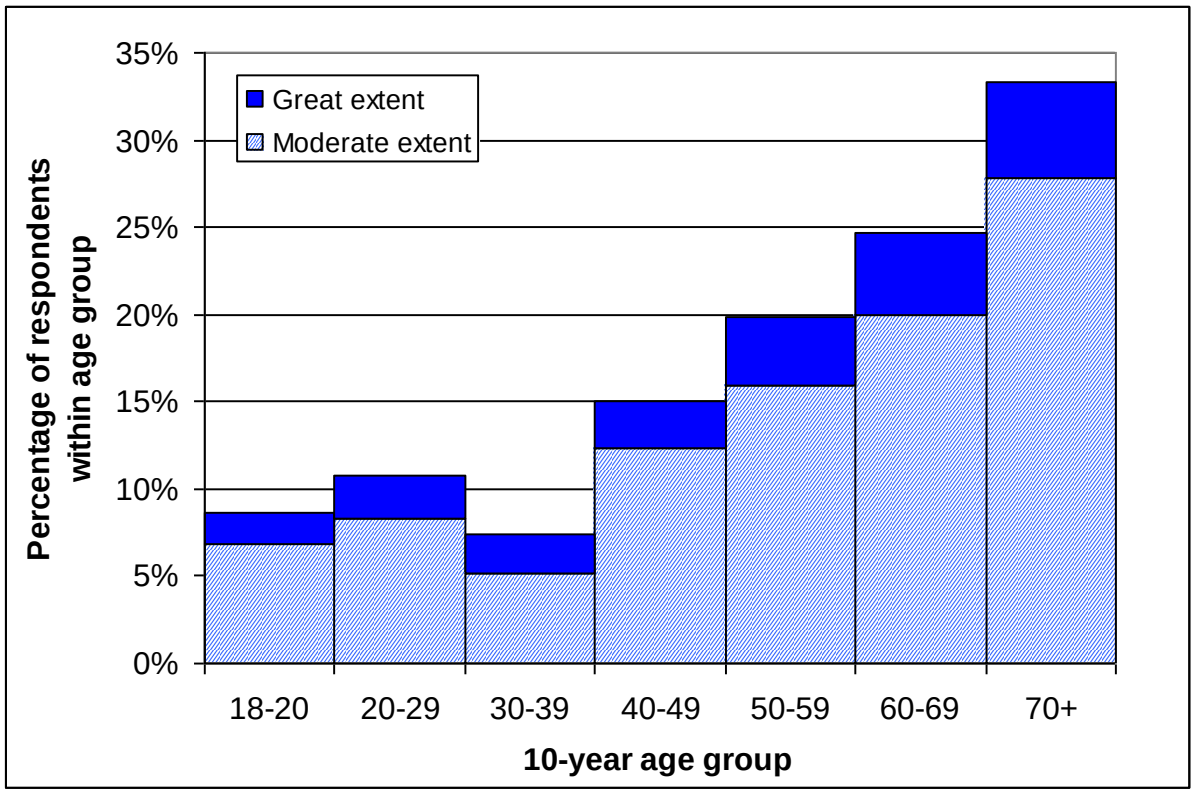

Figure 21 Reported extent of limitation to participation with age (Study 10).

There are anecdotal reports of emergency service volunteers finding some aspects of the role, such as attending road accidents or witnessing serious burns, distressing or psychologically traumatic. Distress associated with attending motor vehicle accidents was identified as a reason for resigning in the exit survey in Study 11 (see the section headed, *What did you enjoy least?* p. 107). Many fire agencies have established peer support programs and critical incident support services to assist affected volunteers. Item 16 in Table 12 shows that about 7% of respondents reported 'finding some incidents increasingly too distressing to attend', making it the lowest-ranked limitation measured. The low proportion of respondents identifying this limitation may reflect a low rate of exposure of volunteers to critical incidents. The most likely source of traumatic incidents encountered is probably severe motor vehicle accidents. According to the Road Traffic Authority in the relevant state, about 450 people die and 23,000 are injured each year in transport accidents

in that state. About half of the fatalities occur on non-urban roads, where the volunteer fire service is likely to attend. Thus, with approximately 50,000 volunteers, the probability of an individual volunteer attending a fatal vehicle collision in a given year is relatively low. However, there is a moderate probability that a given volunteer will attend a transport accident involving injury in a given year. It would be instructive to compare these findings with fire agency and third party statistics on psychological distress among volunteer firefighters.

AGE AND FITNESS

(Study 1)

Concerns have been raised in general discussions of volunteer firefighter numbers that Occupational Health and Safety (OH&S) considerations might some day require volunteer fire agencies to introduce mandatory fitness standards for operational volunteers. There is presently no indication that such a development is imminent. However, given the intrinsically hazardous nature of firefighting and related emergency response activities, it is entirely possible that the findings from a coronial inquest or similar inquiry in the future could leave volunteer fire agencies with no alternative but to introduce mandatory fitness standards.

Currently, only one of Australia's eight volunteer fire agencies has mandatory fitness standards for its operational volunteer firefighters, the ACT Emergency Services Authority (ACT ESA). In Study 1, we used volunteers' age distribution information from ACT ESA to generate estimates of the likely impact on operational volunteer firefighter numbers in another fire agency, of introducing a mandatory fitness standard equivalent to that of the ACT ESA. We will refer to the other fire agency, which is in a different state, as Agency B.

Figure 22 shows the age distribution of female operational volunteer firefighters in the ACT ESA and Agency B. Figure 23 shows the corresponding information for male operational volunteer firefighters. In both graphs, the age distribution for volunteers in Agency B is skewed toward older age groups compared with ACT ESA volunteers. The methodology used to estimate the effects of mandatory fitness standards essentially involved calculating the numbers of agency operational volunteers needed, females and males separately, to make the current Agency B age distributions identical to those of the ACT ESA.

Table 14 and Table 15 show the calculation results on current Agency B female and male operational volunteer firefighter numbers if the agency was required to have an age distribution corresponding to that of the ACT ESA in order to meet the same fitness standards. Shortfalls in recruiting younger volunteers and forced retirements of older volunteers would result in an estimated decrease in numbers of 40% of the current female operational volunteers and 33.5% of the current male operational volunteers.

The limitations involved in making the above estimates are considerable and readers should exercise caution in drawing conclusions because:

1. The ACT ESA has a very small total number of operational volunteers. The effect of this is to cast doubt on the precision of the estimated effects.

2. The assumption that the imposition of mandatory fitness standards is the sole determinant of the age distributions of operational volunteers in the ACT ESA is questionable.
3. The assumption that the general levels of fitness in the populations from which the two agencies recruit their volunteers are similar is likewise questionable.

However, having due regard for the limitations inherent in the procedure, the estimation exercise indicates that the likely effect of imposing mandatory fitness standards on Agency B's current operational volunteer numbers would be appreciable—numbers would probably, all other things being equal, fall by at least one third. Other Australian volunteer fire agencies have similar age and gender profiles to that of Agency B. As such, the imposition of mandatory fitness standards on those agencies is likely to have a similar impact.

Of course, the only way to make a confident prediction of the likely effects of introducing mandatory fitness standards would be to carry out a fitness audit of a sample of an agency's active membership. Introducing mandatory fitness standards would almost certainly have a negative effect on agencies' current attempts to maintain adequate numbers of volunteers. Proactive initiatives to minimise the impact mainly fall into three categories.

1. Increasing recruitment and retention activities targeting younger volunteers.

2. Encouraging and assisting current volunteers to increase fitness levels.

3. Reviewing tasks and roles of operational volunteers in order to identify ways in which operational volunteers can be replaced by non-operational volunteers.

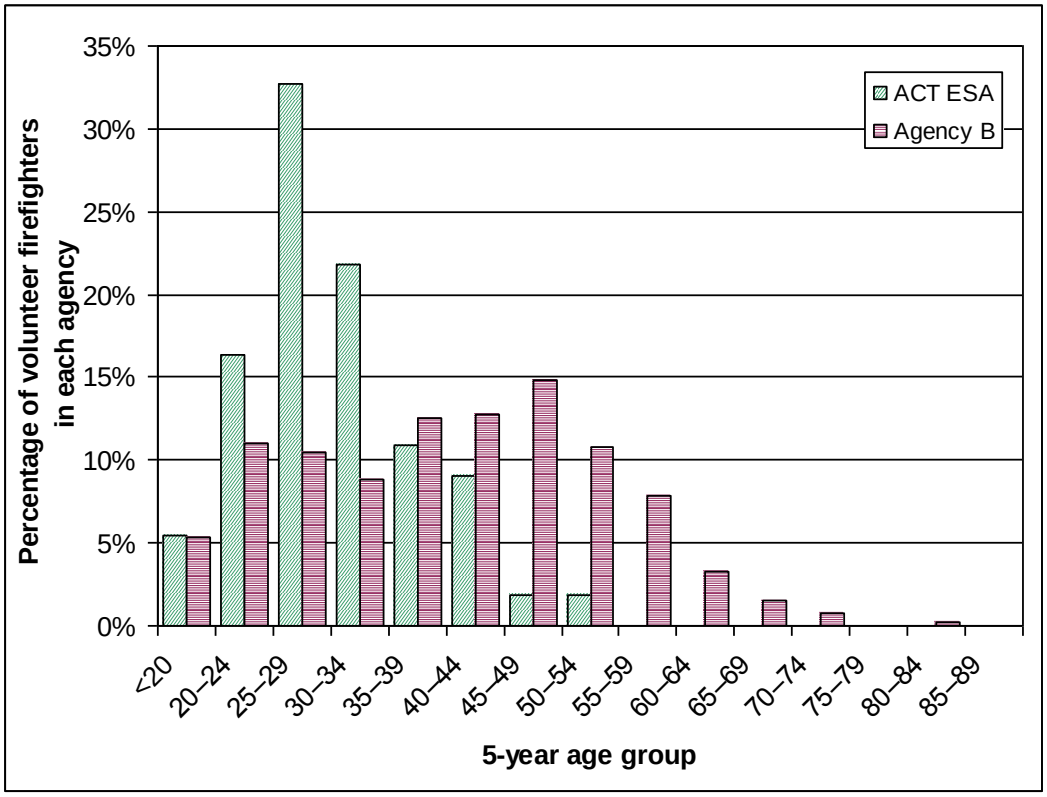

Figure 22 Age distributions of operational female volunteers

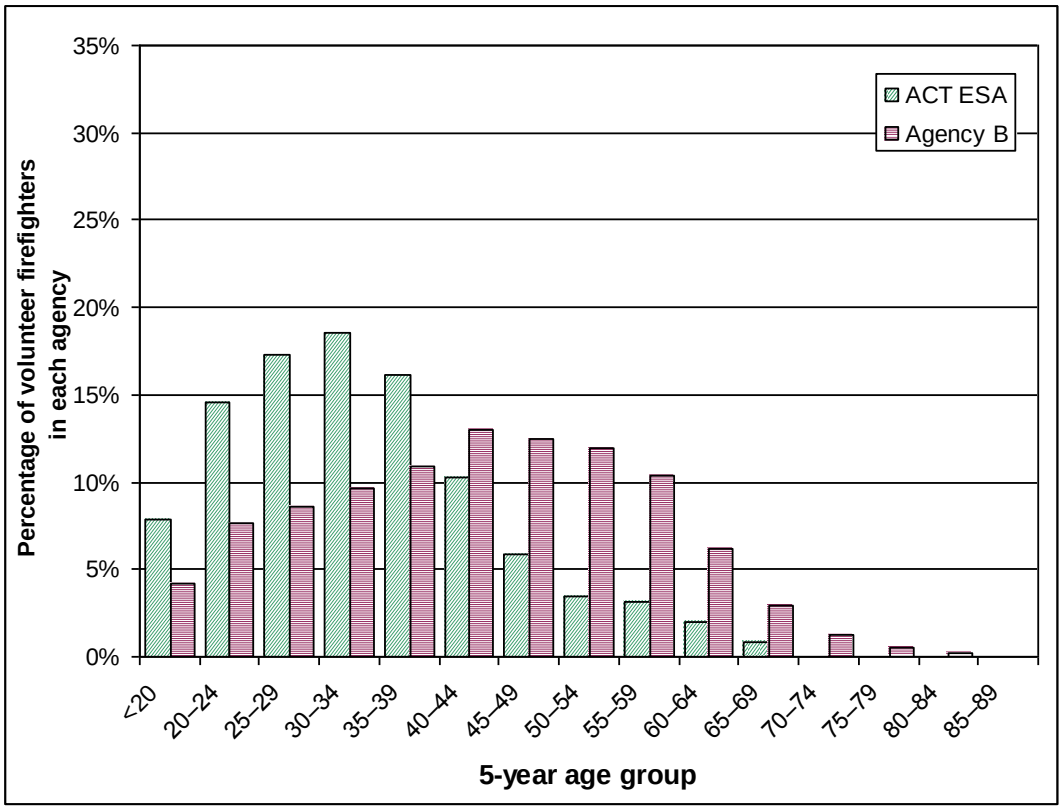

Figure 23 Age distributions of operational male volunteers

Table 14 Female operational firefighters: ACT ESA and Agency B

Age range (Years)	ACT ESA		Agency B		
	Count	%	Current %	Shortfall^ %	Forced retirements# %
<20	3	5.5	5.3	–0.3	
20–24	9	16.4	11.0	–5.3	
25–29	18	32.7	10.5	–22.3	
30–34	12	21.8	8.8	–13.0	
35–39	6*	10.9	12.5		1.5
40–44	5*	9.0	12.8		3.8
45–49	1	1.8	14.8		12.8
50–54	1	1.8	10.8		8.8
55–59			7.8		7.8
60–64			3.3		3.3
65–69			1.5		1.5
70–74			0.8		0.8
75–79			-		0.0
80–84			0.2		0.3
85–89			5.3		1.5
TOTAL	**55**			**–40.4**	**40.4**

Table 15 Male operational firefighters: ACT ESA and Agency B

Age range (Years)	ACT ESA		Agency B		
	Count	%	Current %	Shortfall^ %	Forced retirements# %
<20	20	7.9	4.2	–3.7	
20–24	37	14.6	7.6	–7.0	
25–29	44	17.3	8.6	–8.8	
30–34	47	18.5	9.6	–8.9	
35–39	41	16.1	10.9	–5.2	
40–44	26	10.3	13.0		2.7
45–49	15	5.9	12.5		6.6
50–54	9*	3.5	11.9		8.4
55–59	8*	3.1	10.4		7.3
60–64	5	2.0	6.2		4.2
65–69	2	0.8	2.9		2.1
70–74			1.3		1.3
75–79			0.5		0.5
80–84			0.2		0.2
85–89			0.0		0.0
TOTAL	**254**			**–33.5**	**33.5**

* Smoothed—total for the two age categories 50–54 and 55–59 years is unchanged at 17%

^ Rounding to whole numbers results in some minor inconsistencies in totals

Represents a predicted loss of 33.5**%** of male operational volunteer firefighters for Agency B

WHAT WOULD MAKE IT EASIER TO VOLUNTEER?

(Studies 2 and 10)

In Study 10, current volunteers in one state were asked, 'How much easier would each of the following make it for you as a volunteer?' and presented with a list of six items to rate on a scale of 'Much easier', 'A bit easier', 'Not easier', 'Don't know' or 'Not applicable'. The results are set out in Table 16, in which items are sorted in descending order according to the percentage of respondents reporting the item as making volunteering 'Much easier'.

Table 16 What would make it easier for you as a volunteer?

			Percentage			
#	Item	*n*	Much easier	A bit easier	Not easier	N/A
1	I could catch up with training at another brigade	1,351	38	31	11	20
2	If my employer had a better awareness of the volunteer role	1,430	32	15	7	46
3	The atmosphere in the brigade was more harmonious	1,395	26	25	9	40
4	I didn't have to leave my property or family unprotected	1,387	19	23	13	44
5	[Fire service] activities took less of my time	1,346	16	38	20	26
6	If my own or my family's requirements were better catered for	1,352	15	28	12	44

The highest-ranked item, supported by about 63% of respondents, was the ability to *'*Catch up with training or assessments at neighbouring brigades*'* (Item 1). This is consistent with other findings that show that the time commitments of fire service volunteering are among the greatest problems reported by respondents. Together, Items 1 and 5 show that fitting in with the schedule of fire service commitments is a problem for more respondents than meeting the overall time commitment.

The second-ranked item, *'*If my employer had a better awareness and understanding of the [fire service] and the role of volunteers*'* (Item 2), was supported by about 47% of respondents overall. However, this item only applies to the 60% of respondents who are employees (as distinct from self-employed). Among those respondents, 83% report that employer understanding would make it *'*Much easier*'* or *'*A bit easier*'* to volunteer. Thus, volunteers who are employees expressed a need for their role to be better explained to employers.

The third-ranked way respondents reported for making it easier to volunteer was, *'*If the atmosphere in the brigade was more harmonious*'* (Item 3), supported by about 51% of respondents. Improving brigade leadership is an important means of improving the level of harmony in brigades, and this may be addressed by increasing, and perhaps mandating, leadership training and accreditation for aspiring brigade leaders. The issue of disharmony in brigades emerged repeatedly during the project, and is addressed further in the section on *Leadership* on (p. 120), the section headed *What did you enjoy least?* (p. 107) and in the section on *Major Issues Emerging Across Studies* (p. 170).

The next-ranked item shows that about 42% of respondents worry about leaving their homes or families unprotected when they volunteer with the [fire service] (Item 4). This is consistent with the finding of Study 2, in which it was found that about 40% of community members were reluctant to volunteer with the fire service because they felt they could not protect their own or their neighbours' properties if they were away on duty with the fire service. This is the fourth-highest ranked item here, and was the sixth-highest ranked of 37 barriers in the community survey, Study 2.

About 50% of respondents reported that reducing the time commitments of the fire service would make it easier to volunteer (Item 5). However, relatively few respondents (15%) reported that it would make things 'Much easier', so this item ranks fifth. This is consistent with Item 7 in Table 12 in which about 50% of respondents reported that 'The increased time demands of the [fire service]' limited their participation in fire service activities.

The lowest-ranked item was, 'If my own or my family's specific requirements are better catered for' (Item 6), endorsed by about 40% of respondents. This is consistent with Items 9 and 12 in Table 12 in which about 40% of respondents reported 'Parenting and family activities', and 35% reported 'Domestic duties', as limiting their participation in the fire service.

VOLUNTEERING AND WORK OR BUSINESS

(Studies 3c and 10)

The factor most frequently endorsed as limiting volunteer participation across our studies is the competing demands of work or business. Across our studies, about 85% of fire service volunteers report being in the labour force (employed, self-employed or unemployed).

We created a set of eight of the main activities that occupy people's lives, both income-generating and non-income-generating. For convenience, we refer to this set of activities as 'work status' to distinguish it from the similar set of categories that ABS defines as 'labour force status'. We asked respondents, 'What is your work status?' and instructed them to tick checkboxes for one or more of the eight categories that applied to them. Table 17 compares the percentage of respondents who ticked each work status category from two studies[20] with ABS data for the Australian population. The studies used here are Study 3c, a survey of recruit volunteer firefighters, surveyed 3 years after joining, and Study 10, a general survey of volunteer firefighters in a different state. The percentages reported have been calculated as a proportion of the number of valid responses for the work status question: 346 for Study 3c and 1,450 for Study 10.

[20] Note that in Table 17, where respondents ticked more than one category they have been counted only for the first category ticked in order of precedence as the categories appear in this table from the top down. In other words, if a respondent ticked both 'full-time employee' and 'part-time employee', perhaps indicating that they have a second part-time job, they are only counted in this table as a 'full time employee'. As such, this table presents a view of the data that is simple and comparable with the ABS data, in which the categories are mutually exclusive. The total of the ABS column is not 100% (actually 103.4%) because the percentages have, of necessity, been collated from disparate ABS sources.

Table 17 Work status of volunteers

	Percentage		
	Study 3c (Recruits 3 years after joining)	Study 10 (Serving volunteers of all lengths of service	Australian population aged 15+ years (a)
Full-time employee	41.9	50.3	39.5
Business or farm owner without employees	19.9	14.6	5.4
Part-time employee	18.8	12.1	15.2
Retired	14.7	10.0	17.9
Home duties	12.4	2.2	(b) 10.5
Business or farm owner with employees	9.0	6.6	1.7
Student	4.6	1.4	(c) 10.5
Unemployed	2.3	2.8	(d) 2.7

(a) Unless otherwise stated, percentages in this column are calculated as a proportion of the civilian population of Australia aged 15 years and over in November 2008 (Australian Bureau of Statistics, 2009a).

(b) Includes ABS data for the categories 'home duties' and 'caring for children' taken from the ABS Persons Not in the Labour Force Survey in September 2007 (Australian Bureau of Statistics, 2009g).

(c) For greater consistency with the samples in our studies, which only included respondents aged 18 years and over, this percentage was calculated as a proportion of the estimated resident population of Australia aged 18 years and over. The number of students was filtered for the 18 years and over age range by excluding 'Year 12 or below' and 'Level not determined' categories (Australian Bureau of Statistics, 2009d, 2009h).

(d) For comparison with data from the two studies, this value is the percentage of persons unemployed calculated as a proportion of the civilian population of Australia aged 15+. It should not be confused with the official ABS unemployment rate, which is calculated as the percentage of the *labour force*, and was 4.1% in November 2008 (Australian Bureau of Statistics, 2009a).

The pie chart in Figure 24 shows the percentage of respondents from Study 10 who ticked each work status category. About 50% of respondents were full-time employees and 12% part-time employees, giving 62% who were employees as distinct from self-employed. About 7% of respondents were employers, and about 13% were self-employed business proprietors or farm owners without employees, giving 21% who were self-employed. Overall, 87% of respondents in Study 10 were employed, self-employed, or unemployed and therefore in the labour force as defined by ABS.

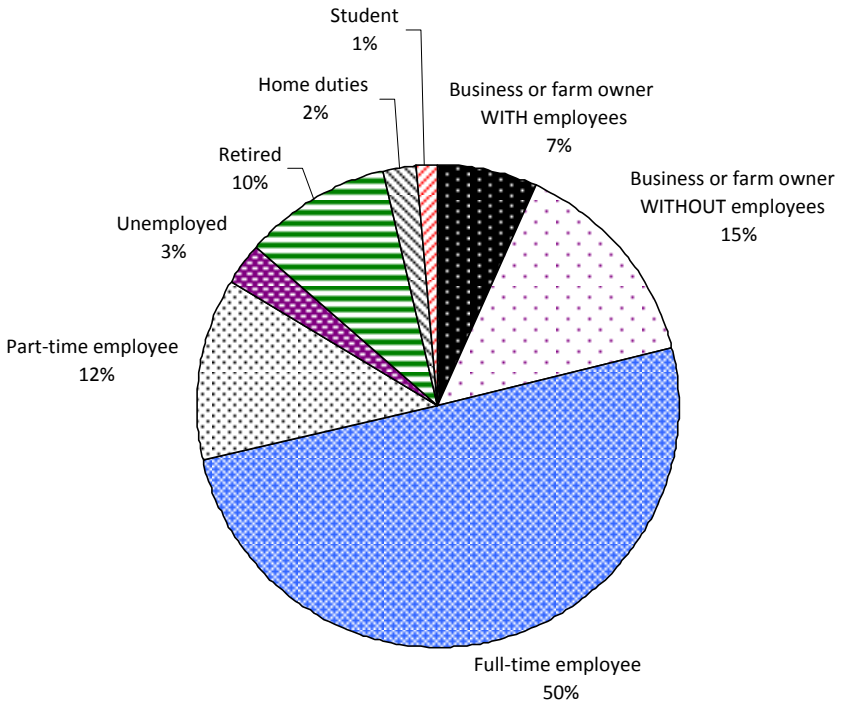

Figure 24 Work status of volunteer firefighters (Study 10)

In reality, people undertake multiple roles in life. For example, many farmers supplement their farm-based income with off-farm employment. In Study 10, there were significant overlaps between work status roles, with many respondents ticking more than one work status category.

In Table 18, the work status categories from Study 10 have been cross-tabulated with each other to reveal and quantify the overlaps between all possible pairs of the eight categories. For example, of the 212 'business or farm owners without employees', 36 are also 'full-time employees' and 22 are 'part-time employees'.

Of the 135 respondents who ticked 'home duties', 74 (55%) were women. Of those, 71% were also employed or business or farm owners and 15% were students. This potentially challenges traditional notions that many women are home during the working day, mainly occupied with domestic duties, and consequently available for turnouts.

Similarly, of the 115 respondents who ticked 'student', almost 80% were also employed or business or farm owners. The time demands of these two roles are likely to limit students' capacity for fire service activities. This appears evident in the low proportion of respondents who ticked 'Student' (7.9% in Study 10) compared with their proportion of the Australian population (14%). About 60% of students were aged less than 25 years, and they make up about one third of respondents aged below 25.

The implication of these findings is that women and students, two of the main potential sources of volunteers below retirement age, may be limited in availability because most are also employed or self-employed.

Table 18 Work status cross-tabulated with itself (Study 10)

	Work status								
Count	Business or farm owner with employees	Business or farm owner without employees	Full-time employee	Part-time employee	Unemployed	Home duties	Student	Retired	**Total**
Business or farm owner with employees	**95**	0	11	1	0	4	3	3	95
Business or farm owner without employees		**212**	36	22	2	24	8	11	213
Full-time employee			**776**	9	0	30	29	0	776
Part-time employee				**207**	0	42	48	8	207
Unemployed					**43**	8	6	0	43
Home duties						**135**	18	13	135
Student							**115**	4	115
Retired								**167**	167
Total (*n* = 1,450)	95	212	776	207	43	135	115	167	**1,750**
Percentage of 1,450 respondents	6.7	14.6	53.5	14.3	3.0	9.3	7.9	11.5	

Knowledge of respondents' work status helps us to compare the patterns of outside demands on fire service volunteers with those on the general population. The ABS measures the economic activity of the Australian population using tools such as the Labour Force Framework (Australian Bureau of Statistics, 2007f). This framework classifies the population into categories of economic activity, as set out in Figure 25. Within the framework, ABS defines the 'population in scope' to be the 'usually resident population' aged 15 years and older who are not members of the Australian Defence Forces. It divides that population into 'currently [economically] active' and 'currently inactive'. The 'currently active' population, also called the 'labour force', comprises both the 'employed' and 'unemployed'. All other members of the population in scope are defined as 'currently inactive' or 'not in the labour force'.

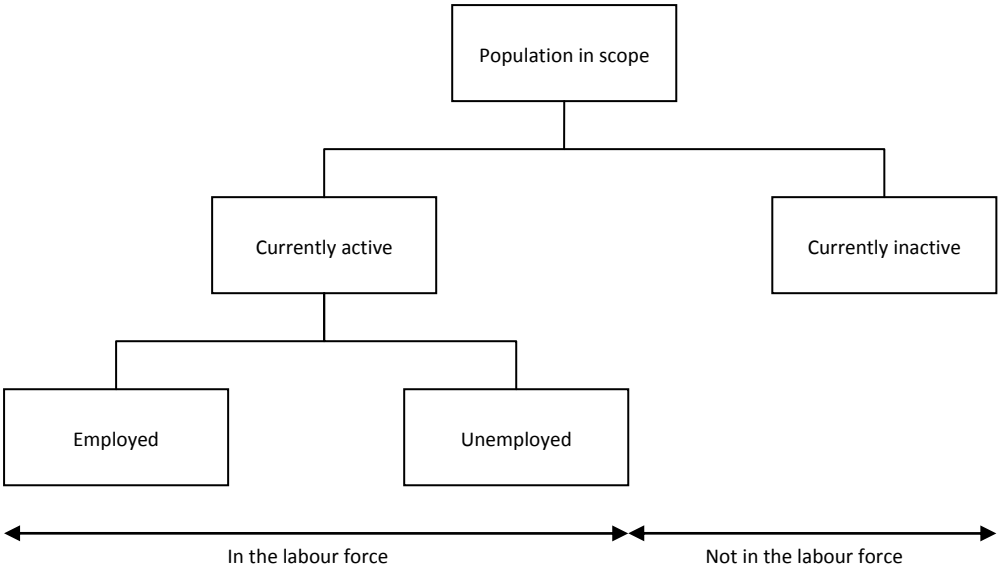

Figure 25 The ABS Labour Force Framework
Source: (Australian Bureau of Statistics, 2007f)

In general terms, ABS defines 'employed' people as those who have worked for 1 hour or more per week, for pay, profit, commission, or payment in kind, in a job or business or on a farm. 'Unemployed' people are those who are not employed, are actively looking for work, and available to start work. People 'not in the labour force' are those aged 15 years and over who are neither 'employed' nor 'unemployed'. They include: people who are keeping house (unpaid); people who are retired, voluntarily inactive, or permanently unable to work; people in institutions (hospitals, gaols, sanatoriums, etc.); members of contemplative religious orders; and people whose only activity during the reference week was jury service or unpaid voluntary work for a charitable organisation. The eight categories of work status in our questionnaires enable us to approximate the categories of labour statistics used by ABS.

Table 19 compares the distribution of the 'labour force status' of Study 10 respondents with that of the population of the state where that study was conducted[21] (Australian Bureau of Statistics, 2008e). Respondents who are business or farm owners have been included into the category 'employed full-time' if they reported working 35 hours per week or more, and 'employed part-time' if they reported working less than 35 hours per week or did not report the number of hours worked.

The table shows that about 86% of survey respondents were in the labour force, compared with about 63% of the state population. On the one hand, this seems plausible because volunteer firefighting is a work-like activity. Many of the factors that determine peoples' ability to participate in the labour force, such as health, age and having someone to care for any children, will also influence whether they can participate in firefighting. On the other hand, brigades may inadvertently reinforce membership by volunteers who are in the labour force, for example by scheduling training to suit people who work during normal

[21] Data for the civilian population aged 15 years and over, September 2007, seasonally adjusted.

business hours. This might not suit parents who stay home with their children or shift-workers. Fire agencies should explore how the scheduling of brigade activities suits various categories of volunteer and potential volunteers.

Opportunities for recruitment of volunteers may exist where certain limiting factors are marginal or transitional, for example, parents whose children have reached an age where they do not need full-time parental supervision, and people who have retired but still enjoy good health and fitness.

The ratio of full-time to part-time employees is much higher among volunteers responding to Study 10 (5:1) than among the labour force in the state concerned (2.5:1), suggesting that part-time employees are under-represented among volunteer firefighters. This seems counter-intuitive. We might suppose that part-time employees have more free time for fire-service activities compared with full-time employees. However, part-time employees are more likely to have other commitments or be employed on a casual basis[22] with its attendant disadvantages. In Table 17, higher proportions of respondents who were part-time compared with full-time employees reported additional time commitments, notably parenting and study, which might have reduced their overall availability for volunteering.

According to the Australian Bureau of Statistics (2009e), 10% of full-time employees are casuals compared with 58% of part-time employees. ABS also reports that while casuals enjoy greater flexibility in employment than other workers, most work in short-term jobs with high turnover of employees, irregular hours and unpredictable opportunities. In particular, casual employees may not be given notice or severance pay when they are terminated. Casual employees are more likely than other employees to have variations from week to week in hours (35 and 17% respectively), and pay (47 and 16% respectively) (Australian Bureau of Statistics, 2009c).

Table 19 Comparison of labour force status of survey and population

	Volunteers responding to Study 10		Residents of the surveyed state aged 15+ years
	Count	Percentage	Percentage
Employed full-time	1013	69.9	43.4
Employed part-time	199	13.7	17.0
Unemployed	41	2.8	2.9
Not in the labour force	197	13.6	36.7
Total	1450	100.0	100.0

[22] ABS commonly uses the absence of entitlements to paid sick leave or holiday as a proxy to define casual employment.

Study 10 respondents were asked, 'How many hours per week on average [do you work]?' and were able to write their response as free text which we manually coded into an average number of hours for each respondent. Of the 1,212 respondents who reported currently working, 1,187 (99%) answered this question. Figure 26 shows the distribution of hours worked per week in 5-hour groupings. Respondents reported working for up to 168 hours per week, with a median of 40 and a mean of 43. This is 20% higher than the mean of 36 hours per week worked by employed persons in the same state in the August quarter 2007 (Australian Bureau of Statistics, 2007e).

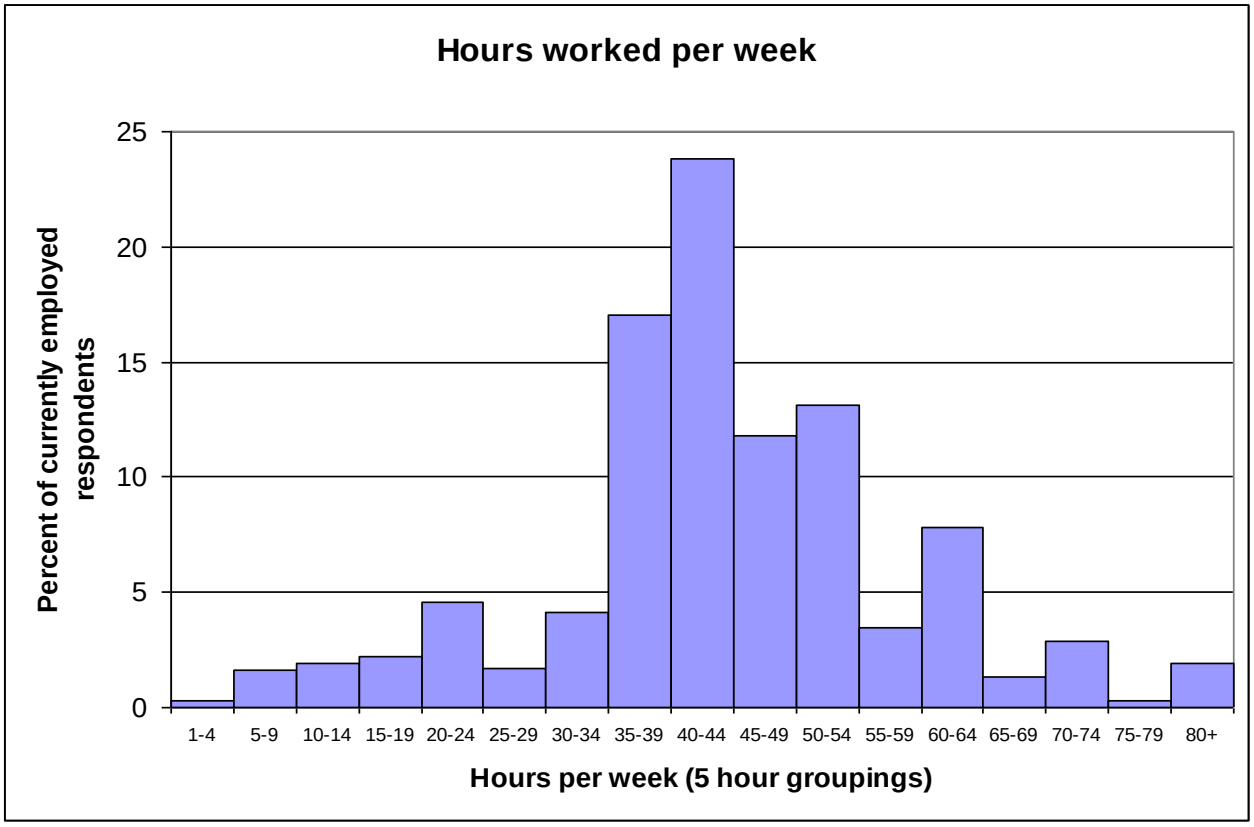

Figure 26 Volunteers' average hours per week worked in their normal employment
Study 10

ABS reports hours worked in unevenly sized age groupings. Figure 27 uses the ABS age groupings to illustrate the comparison between hours worked per week by respondents and 'usual hours worked per week' by the Australian labour force (Australian Bureau of Statistics, 2007b). Respondents (volunteers) were more prominent among the longer working-week groupings.

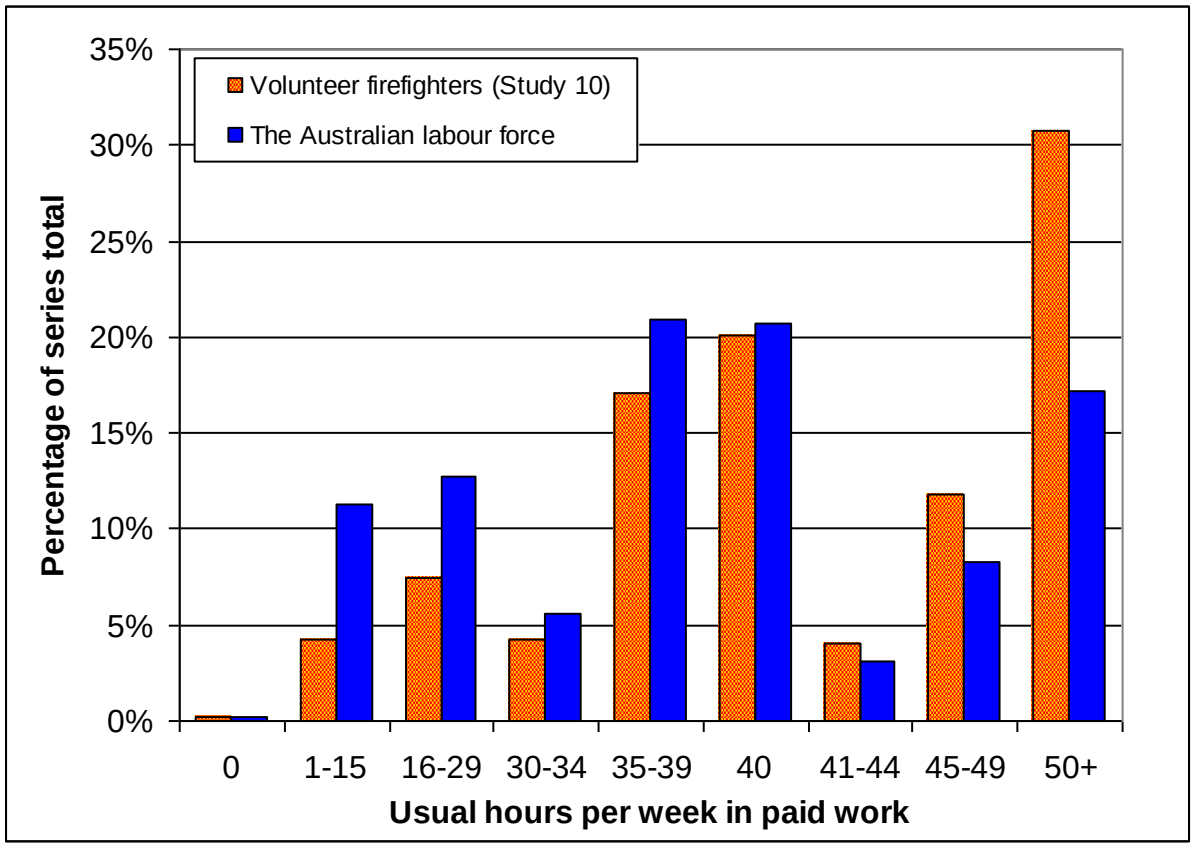

Figure 27 Hours worked per week—volunteer firefighters and the Australian labour force

Currently employed volunteers

Study 10 identified 905 respondents who indicated they were either full-time (761) or part-time (144) employees, excluding those who were self-employed[23]. Respondents were asked to answer a series of questions relevant to employment.

We asked respondents, 'If you are currently employed; do you and your employer have a clear understanding about when you can take time off to attend callouts?' About 64% reported having such an understanding. Clear understandings help maintain good relationships between employers, employees and the fire service. We infer that the 'Not applicable' response in this question means the volunteer was not permitted to take time off, or did not feel they needed an agreement. As such, the results suggest that approximately 5% of volunteers are not permitted to take time off work to respond with the fire service. This is consistent with Study 8, a survey of employers about employing fire

[23] Note: in the questionnaire, categories of employed and self-employed were not mutually exclusive, so a given respondent could nominate both categories. To simplify the analysis, respondents who nominated both categories were classified as self-employed.

service volunteers, in which about 5% of employers reported prohibiting employees from taking any time off to volunteer with the fire service.

Approximately 32% of volunteers reported not having a clear understanding with their employer about when they can take time off work to volunteer. Fire services may benefit from helping to bridge this communication gap with an information campaign targeted at both volunteers and their employers. The fire service that participated in Study 10 has now posted examples of agreements about emergency services leave from several major employers on its website. Such agreements should be actively promoted as models for others to draw upon.

We asked Study 10 respondents, 'Would it be helpful if the fire service supplied a sample agreement between you and your employer about taking time off work?' About two thirds (66%) of respondents agreed that a sample agreement would be helpful.

To help clarify these responses we cross-tabulated, 'Do you have an understanding…?' with 'Would a sample agreement be helpful…?' The results in Table 20 show that responses to the two questions were logically consistent. Of the 550 respondents who already had an agreement with their employer, 61% thought a sample agreement would be helpful, 27% thought it would not help, and 13% thought it 'Not applicable', presumably because they already had an understanding. Of the 271 respondents who did not have an understanding with their employer, 86% thought an example agreement would be helpful, 13% thought it would not, and 1% thought it 'Not applicable'. Among the 42 respondents who endorsed having an understanding with their employer as 'Not applicable', possibly because it was impractical to leave the workplace, 24% thought a sample would be helpful, 7% thought not and 70% thought it 'Not applicable'. Volunteer induction kits should draw to the attention of recruits the value of employer agreements and the availability of sample agreements.

Table 20 Understanding with employer by helpfulness of sample agreement

			Would it be helpful if the fire service supplied a sample agreement between you and your employer about taking time off work?			
			Yes	No	Not applicable	Total
Do you and your employer have a clear understanding about when you can take time off to attend callouts?	Yes	Count	328	150	72	550
		Row %	59.6	27.3	13.1	100.0
	No	Count	232	36	3	271
		Row %	85.6	13.3	1.1	100.0
	Not applicable	Count	10	3	29	42
		Row %	23.8	7.1	69.0	100.0
	Total	Count	570	189	104	863
		Row %	66.0	21.9	12.1	100.0

This result contrasts with the results from Study 8, our survey of employers about employing fire service volunteers. While about 60% of volunteers report (a) having an agreement with their employer, and/or (b) regarding a formal agreement as useful, a much smaller proportion of employers believe they have formal provisions in place. Just 11% of employers reported having formal leave provisions in place to allow employees time off to volunteer with the fire service, and only 16% thought they would benefit from help in drafting such leave provisions.

We asked volunteers in Study 10, 'Roughly what percentage of callouts that occur during your working hours do you attend?' Of the 905 respondents who were employees, but not self-employed, 779 (86%) provided an estimate. Table 21 and the bar chart in Figure 28 show that about 30% do not attend any callouts during working hours, and a further 25% attend up to 10% of callouts. The remaining 45% of respondents report attending between 11 and 100% of callouts, including 4.5% who report attending all callouts.

Table 21 Percentage of working-hours callouts that employed respondents attended
n=779

Percentage of callouts during working hours that employed respondents reported attending	% of employed respondents …full-time	…part-time	Total
0%	23.2	6.2	28.6
1-10%	23.0	2.7	25.3
11-20%	7.6	1.2	8.4
21-30%	4.5	0.8	5.3
31-40%	2.1	0.8	2.9
41-50%	8.3	1.5	9.9
51-60%	1.8	0.5	2.4
61-70%	1.4	0.3	1.7
71-80%	4.1	1.0	5.3
81-90%	2.3	1.5	4.2
90-99%	0.9	0.5	1.6
100%	3.1	0.8	4.5
Total	82.3	17.7	100.0

The median percentage of callouts during working hours that employees reported attending, if those who report attending 0% are included in the calculation, is 10%. If those reporting no turnouts are excluded from the calculation, the median is 25% of callouts attended.

The stacked bar chart in Figure 28 shows percentages of employed volunteers attending working-hour callouts, separated into full-time and part-time employees. It is clear that most employed volunteers report attending no callouts, or a small proportion of callouts, that occur during working hours.

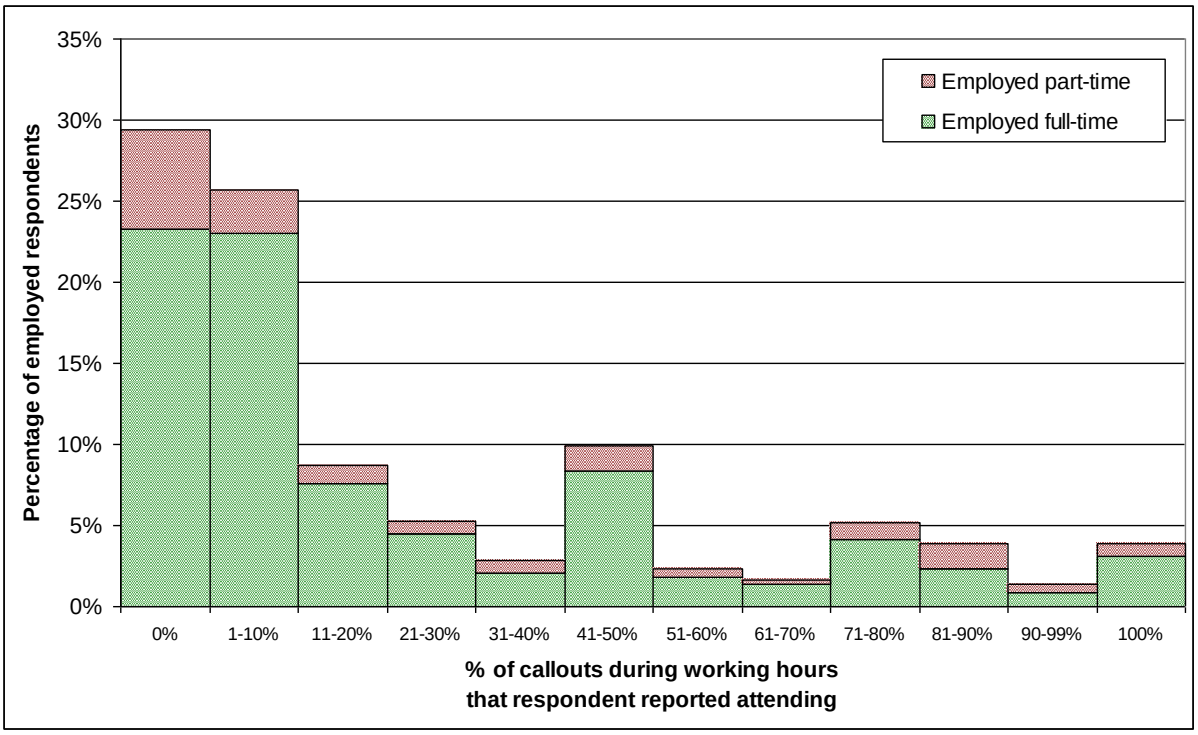

Figure 28 Percentage of callouts during working hours attended by employed volunteers

We asked respondents in Study 10 to describe 'the main limitations on you turning out during work hours', and received 859 responses (95% of the respondents who were employees). The responses were categorised into themes and sub-themes for statistical analysis. Where a respondent touched on more than one sub-theme, the first two sub-themes mentioned were coded, giving 1,090 responses. The results are shown in Table 22 below.

The main limitation nominated was working somewhere that was too 'distant' or required excessive travel time to allow them to turn out (34%). The second most common limitations related to some aspect of their work (34%). A number of respondents (8%) reported that their employer did not understand, or did not sympathise with the rationale for releasing employees from work to volunteer with the fire service. A similar number of respondents reported that there were not enough staff members at their workplace to allow their employer to spare them (9%). Respondents also reported several other reasons why their employer could not spare them from work including that:

- They had specialised skills or knowledge which meant that the workplace could not operate effectively without them;
- Their workplace was too busy;
- Their work was pre-scheduled through appointments or contractual commitments to customers;
- They were responsible for vulnerable members of the community: children, sick, disabled or elderly people;
- They were the sole person employed or on duty at their workplace;

- They had a heavy workload, or deadlines that were inflexible or urgent.

Relatively few respondents (5%) reported concern about the financial costs to themselves or their employer of taking time off to turn out. This suggests that offering financial incentives to volunteers or their employers will do little to free volunteers to attend more callouts.

It is encouraging to note that very few respondents (1%) expressed fears of dismissal, harassment, or discrimination from their employers.

Table 22 The main limitations on employed volunteers turning out during work hours?

	Count of responses	Percentage of responses
Distance or travel time		
Distance or travel time issues—general	176	16.1
Distance or time (assuming a fixed workplace)	152	13.9
Work in multiple places or in different areas during work hours	28	2.6
Limited transport options (e.g. public transport, bike, no transport available)	10	0.9
Distant places—interstate, overseas	6	0.6
Subtotal Distance or travel time	**372**	**34.1**
Aspects of work		
Staffing—not enough to leave or can't find replacements (especially quickly)	98	9.0
Employer attitude or lack of understanding	83	7.6
Can't leave because only one (or one of few) with particular skills or hold a management position	48	4.4
Workload/too busy	32	2.9
Nature of work—general	24	2.2
Pre-scheduled appointments or commitment to clients	24	2.2
Duty of care to children in workplace (child-carers, teachers, lecturers, etc.)	24	2.2
Urgency of deadlines	16	1.5
Only person at work generally or at time of call	15	1.4
Feeling guilty about leaving other staff or team-mates	15	1.4
Unable to leave or very difficult to leave once at work	14	1.3
Work commitments (unspecified)	12	1.1
Fear of getting sack, reduced hours, limited responsibilities, or harassed	9	0.8
Government employer rules	9	0.8
Working for small business	7	0.6

	Count of responses	Percentage of responses
Tasks cannot be terminated at any point (e.g. leaving equipment out, or in transport industry)	6	0.6
Responsibility to not leave staff (OH&S)	4	0.4
Duty of care to disabled	2	0.2
Perceived importance of task (NOT specifying essential service)	2	0.2
Subtotal Aspects of work	**367**	**33.7**
Financial cost		
Loss of income	41	3.8
Impact on business or cost to employer	11	1.0
Casual or contract work specified as problem	2	0.2
Subtotal Financial cost	**54**	**5.0**
Emergency or essential services conflicts		
[Fire agency] duties override	22	2.0
Work for a non-fire emergency service (e.g. military, police, ambulance)	12	1.1
Work in other essential service (e.g. nurse, hospital)	8	0.7
Subtotal Emergency or essential services conflicts	**42**	**3.9**
Type or number of callouts		
Type of callout—serious or sustained	38	3.5
Number of callouts	1	0.1
Subtotal Type or number of callouts	**39**	**3.6**
No problems, not an issue	35	3.2
Subtotal No problems, not an issue	**35**	**3.2**
Availability or other priorities		
Availability unspecified—or other commitments (e.g. other volunteer work, study)	9	0.8
Childcare (own children) responsibilities	4	0.4
Family has priority	3	0.3
Work has priority, commitment to work (not work commitments though), work ethic	9	0.8
Subtotal Availability or other priorities	**25**	**2.3**
[Fire agency] issues		
Don't want to be left waiting around, have false alarm, or insufficient crew	7	0.6

	Count of responses	Percentage of responses
Don't get called	5	0.5
Not on fire crew or qualified	2	0.2
Enough other members turn out first	2	0.2
Perception that [fire agency] staff view callouts as unimportant	1	0.1
Being excluded by brigade	1	0.1
Subtotal [Fire agency] issues	**18**	**1.7**
Communications issues		
Communications issues	7	0.6
Technology—means of communications limited in that area (e.g. radio black spots)	5	0.5
Lack of communications equipment, i.e. pager, phone	3	0.3
Condition of communications equipment	1	0.1
Subtotal Communications issues	**16**	**1.5**
Other		
Insufficient detail to accurately code	13	1.2
Irrelevant response	6	0.6
Age or physical condition	1	0.1
Subtotal Other	**20**	**1.8**
Time of call		
Time of call, or not enough time free	12	1.1
Lack of media coverage	1	0.1
Subtotal Time of call	**13**	**1.2**
Not elsewhere classified		
Not elsewhere classified	12	1.1
Subtotal Not elsewhere classified	**12**	**1.1**
Total	**1,090**	

We asked respondents to Study 10 to describe, 'What would make it easier for you to turn out during working hours?' and 655 (72% of respondents who were employed but not self-employed) provided answers to this item. The responses were categorised into themes and sub-themes for statistical analysis. Where a respondent touched on more than one sub-theme, the first two sub-themes mentioned have been coded, giving 706 responses. The results are in

Table 23 below.

The main factor respondents nominated to make it easier for them to turn out during working hours was the ability to 'respond faster' to their fire station (21%). Most of these (12%) reported that this would require them to be working closer to the fire station or working from home. Travel times were also identified as a barrier to joining by community members who had never volunteered with a fire service in Study 2. Refer to the section on Barriers to joining (p. 225).

The second most common response involved 'changes' to their working arrangements (21%). In particular, they reported that it would help if their employer had a better appreciation of the necessity of the fire service and the desirability for people to take time off work to turn out (9%). Some also reported that it would help if there were more employees at their workplace or others who could fill-in for them and carry out their duties.

A significant proportion of respondents (16%) reported that 'not much can be done', but were not more specific.

A modest proportion of respondents (11%) suggested legislation to protect employees who volunteer during working hours, or various formal arrangements between the fire service and employers to make management easier.

About 9% suggested that financial compensation to either their employer or themselves would make it easier to turn out. Note our findings in the previous section that only 5% of respondents mentioned financial burden as restricting their availability for working-hours callouts.

Table 23 What would make it easier for you to turn out during working hours?

	Count of responses	Percentage of responses
Ability to respond faster		
If I worked closer to station/station closer to work	81	11.5
If I had a different job/quit current job	22	3.1
If I did not work at all/retired/dole	20	2.8
If we had warning light system to get to incidents faster	9	1.3
Transport (e.g. taxi vouchers or pick-up)	6	0.8
If I worked from home	7	1.0
A Cat 9 vehicle (heavy tanker)	1	0.1
Subtotal Ability to respond faster	146	20.7
Changes at work		
If employer appreciated/understood/was informed about necessity of the service	63	8.9
If there were more employees at work/relief staff available	34	4.8
If others at work could do my duties/responsibilities	15	2.1

	Count of responses	Percentage of responses
[Fire agency]/Government campaigns to improve awareness of importance of service (including material to give employers, [fire agency] to contact employers, etc.)	11	1.6
If employer was more flexible re: time or place of work activities	8	1.1
Changes at work—general non-specific	8	1.1
If employer had ability to release me	3	0.4
If I did not have to 'catch up' at work or workload was reduced	2	0.3
If I could be sure employer wouldn't penalize me/would be brought to account	2	0.3
If leave entitlement was processed faster	1	0.1
Nothing my employer can do	1	0.1
If other staff had more positive attitude	1	0.1
Nothing [fire agency] can do	3	0.4
Subtotal Changes at work	149	21.1
Nothing, not much, don't know		
Nothing can be done (non-specific—not relating to employer or fire agency)	81	11.5
I don't know/am unsure/you tell me, etc.	19	2.7
Not much can be done	8	1.1
Nothing NEEDS to be done	2	0.3
Subtotal Nothing, not much, don't know	110	15.6
Agreements and legislation		
Agreements and legislation (fire agency, govt, employer co-ordination)	22	3.1
Legislative support for volunteer work rights—some/more Emergency Service Leave	22	3.1
An agreement between government agency employers, and government bodies and [fire agency]	12	1.7
An agreement between employer (assumed private) and [fire agency]	7	1.0
Agreement between employee and employer	4	0.6
Fire certificate (like doctor's certificate) for employer/fire details sent to employer	4	0.6
Legislative support for both employer and employee	2	0.3
Agreements or legislation for extreme weather condition callouts	1	0.1
Subtotal Agreements and legislation	74	10.5

	Count of responses	Percentage of responses
Compensation to self or employer		
Financial issues (general, unspecified)	9	1.3
If I was paid to turn out	29	4.1
If my employer was compensated/reimbursed/given tax break or deduction	20	2.8
If there was a tax incentive or rates rebates or Centrelink payment	4	0.6
If employers' contribution was thanked/recognized	2	0.3
Permanent employment	1	0.1
Subtotal Compensation to self or employer	63	8.9
Changes to turnout practices		
Greater notice of other activities	10	1.4
Better co-ordination of volunteers so not called unnecessarily	5	0.7
Make callout details more explicit (e.g. not a blind page, accurate information, expected duration)	6	0.8
If there was greater notice of [total fire bans] (e.g. 6 hours)	4	0.6
Alerts to changes in situation (e.g. escalation, de-escalation), especially internet-streaming radio	3	0.4
If there were more volunteers	2	0.3
If I were deployed with a closer crew	2	0.3
Subtotal Changes to turnout practices	32	4.6
Improved communications		
Communication issues	4	0.6
It the pager system was more reliable/had better coverage	10	1.4
If I was called	2	0.3
If I had a pager	1	0.1
If I received a text message or SMS	3	0.4
Subtotal Improved communications	**20**	**2.8**
[Fire agency] employees-specific		
If I worked for the [fire agency]	7	1.0
If I did NOT work for the [fire agency]	3	0.4
If other [fire agency] staff were trained to do my duties	1	0.1
Subtotal [Fire agency] employees-specific	11	1.6
Miscellaneous		
Answer irrelevant to question	42	5.9

	Count of responses	Percentage of responses
Insufficient detail	16	2.3
Facetious answers given: six suggest providing them with helicopters; one suggested his wife be taken away!	16	2.3
If there were callouts	1	0.1
Babysitter/childcare	4	0.6
If call came at a better time	4	0.6
If I had more time	2	0.3
Not elsewhere classified	11	1.6
Subtotal Miscellaneous	**96**	**13.6**
Total	**706**	

Self-employed, or business or farm owners

We asked respondents in Study 10, 'If you are self-employed or a business or farm owner: roughly what percentage of callouts that occur during your business hours do you attend?' Table 18 shows that 95 respondents reported being business or farm owners with employees and 212 reported being business or farm owners without employees, giving 307 respondents who were self-employed. A total of 274 of those (89%) responded to this item.

The results are set out in Table 24. The median percentage of callouts during business hours that self-employed respondents reported attending was 80%. This remains true regardless of whether the 6% of respondents who reported attending no callouts during business hours are included in the calculation. It is far higher than the percentage of callouts employees report attending during working hours (medians of 10 or 25% depending on the method of calculation). However, caution should be exercised in interpreting these findings, as self-employed respondents may have less structured business hours which may extend well beyond a the 35- or 40-hour week common for employees.

Table 24 Percentage of business-hours callouts that self-employed respondents attended

n = 274

Percent of callouts during business hours that respondents reported attending	% of self-employed business or farm owner …with employees	…without employees	Total
0%	0.0	8.9	6.2
1-10%	11.9	6.3	8.0
11-20%	1.2	2.6	2.2
21-30%	7.1	3.2	4.4
31-40%	2.4	2.6	2.6
41-50%	10.7	12.1	11.7
51-60%	3.6	1.6	2.2
61-70%	6.0	2.6	3.6
71-80%	11.9	13.7	13.1
81-90%	17.9	14.2	15.3
90-99%	9.5	10.0	9.9
100%	17.9	22.1	20.8
Total	30.7	69.3	100.0

The stacked bar chart in Figure 29 shows the percentages of self-employed volunteers attending business-hour callouts, separated into those with and without employees. Self-employed respondents without employees account for 70% of this group. It is clear that the majority of self-employed volunteers, with or without employees, report attending high proportions of callouts during business hours.

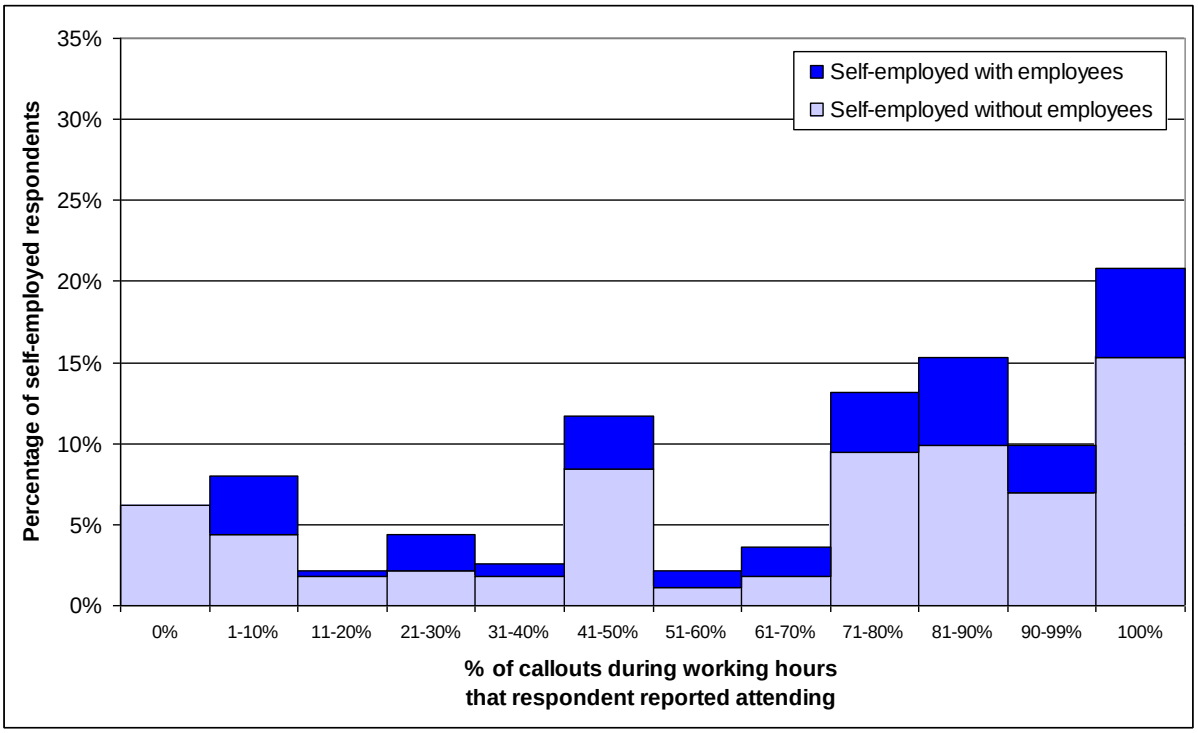

Figure 29 Percentage of callouts in business hours attended by self-employed volunteers

Respondents who were self-employed were also asked, 'What are the main limitations on you turning out during business hours?' and 289 (94%) provided a free text response. The responses were categorised into themes and sub-themes for statistical analysis. Very few respondents described multiple limitations so we coded just one limitation for each respondent. The results are shown in Table 25 below.

The main theme respondents nominated as limiting them turning out during their business hours was 'distance and time' to travel from their place of business to the fire station (33%). This was consistent with the proportion for employed respondents (34%).

The second ranked theme was the 'nature of the business', accounting for 30% of responses to this question. This is also comparable to the proportion for employed respondents (34%). Within this theme, the most common sub-theme was that the business made pre-scheduled appointments and commitments to clients (8%). Other significant sub-themes were; that business tasks and processes could not be interrupted at random, and that there were not enough spare staff to allow the respondent to leave.

Concern about 'finances' was mentioned as a limitation by both self-employed and employed respondents in similar proportions (5%), with the main consideration being personal loss of income. However, 53 of the employed respondents (8%) reported that it

would be easier to turn out during working hours if they, or their employer, were compensated financially.

A higher proportion of the self-employed respondents 28 (10%) reported that there were 'no problems' for them turning out during business hours compared with employed respondents 35 (3.8%).

Childcare was more of a concern for self-employed respondents than for employed respondents. While 11 self-employed respondents (4%) mentioned the need for child-care as a limitation, it was mentioned by just 4 employed respondents (0.4%).

Table 25 What are the main limitations on you turning out during business hours?

	Count of responses	Percentage of responses
Distance/travel time		
Work in other areas / requires travel	59	20.4
Distance from fire station –general	35	12.1
Subtotal distance/travel time	**94**	**32.5**
Nature of the business		
Pre-scheduled appointments/ commitment to clients	22	7.6
Nature of the business – general	15	5.2
Tasks cannot be terminated at any point (e.g. leaving equipment out)	16	5.5
Staffing – not enough to leave	13	4.5
Workload	9	3.1
Can't leave because I am the only one with particular skills	9	3.1
Duty of care to animals	7	2.4
Urgency of deadlines/ limited time available for jobs (e.g. harvesting)	5	1.7
Unable to leave unspecified	2	0.7
Responsibility to not leave staff	1	0.3
Subtotal nature of the business	**84**	**29.1**
No problems, not an issue		
No problems, not an issue	28	9.7
Subtotal no problems, not an issue	**28**	**9.7**
Other priorities		
Child-minding	11	3.8
Want to protect own property	6	2.1
Perceived seriousness of callout	3	1.0
Study/Training	2	0.7
Family (general… children not mentioned)	2	0.7
Sleep – shift work	1	0.3
Other priorities N.E.C.	1	0.3
Subtotal RFS/brigade climate	**26**	**9.0**

	Count of responses	Percentage of responses
Finances		
Loss of income	9	3.1
Costs the business too much	4	1.4
Financial issues	1	0.3
Fuel costs	1	0.3
Subtotal finances	**15**	**5.2**
RFS/brigade climate		
Politics/internal relations	2	0.7
Excluded on basis of age	2	0.7
Don't get called	2	0.7
Brigade or fire service politics	1	0.3
Being excluded by brigade (boys club)	1	0.3
Being excluded by staff or team leader	1	0.3
Subtotal RFS/brigade climate	**6**	**3.0**
Communications issues		
Communications issues	2	0.7
Technology – means of communications limited in remote area	2	0.7
Lack of communications equipment i.e. pager, phone	1	0.3
Subtotal communications issues	**5**	**1.7**
Miscellaneous		
Insufficient detail	5	1.7
Irrelevant response	3	1.0
Age	1	0.3
Time	1	0.3
Not Elsewhere Classified	3	1.0
Subtotal miscellaneous	**13**	**4.3**
Total	**289**	

The stacked bar chart in Figure 30 combines respondents' estimates of attendance at working-hours callouts from both employed and self-employed respondents. Percentages are calculated as a proportion of the 1,104 employed and self-employed respondents who supplied working-hours attendance estimates.

Self-employed respondents, particularly those without employees, report attending a much higher proportion of business hours callouts compared with full- and part-time employees. While 60% of self-employed respondents reported attending more than 70% of callouts that occur during business hours, 40% of employed respondents reported attending less than 10% of working-hours callouts. Recall that, as reported in Table 17, self-employed respondents are over-represented in volunteer ranks compared with their proportions in the Australian population. Self-employed respondents with employees constitute 1.7% of the population aged 15 years and over, but 7–9% of respondents. Self-employed respondents without employees constitute 5.4% of the Australian population aged 15 and over, but 15–20% of respondents. Thus it appears that, not only are self-employed respondents overrepresented among volunteer firefighters by a factor of 3–4 compared with their proportions in the Australian population, but they are much more likely to attend business-hours callouts than employed volunteers are to attend working-hours callouts. This represents a very strong case for fire agencies to target recruitment of self-employed volunteers to improve business-hours response rates.

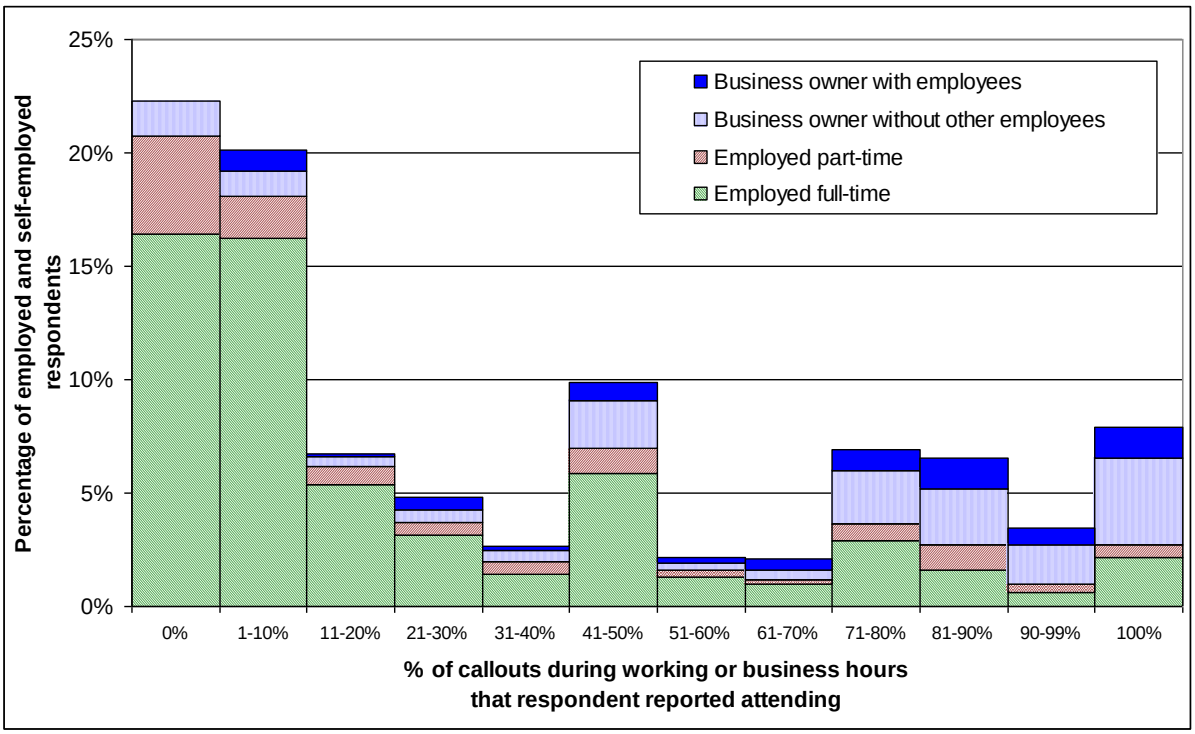

Figure 30 Response during business hours by employed and self-employed respondents

VOLUNTEERING AND FAMILY

(Studies 2, 3c and 10)

There are important interactions between volunteers, their families and the fire services. Family commitments, particularly parenting commitments, are important factors limiting volunteers' greater participation with the fire services. Among volunteer recruits, surveyed three years after joining, a minority report that fire service volunteering impacts negatively on their family commitments, while most report that joining a brigade was a good way to become involved with other families in the local area. However, community members who have never volunteered cite family and parenting commitments among the major reasons for not volunteering with the fire services.

In Study 10, a survey of volunteers of all lengths of service, respondents were asked to what extent 'parenting and family activities' limited their participation with fire service activities. The results, in Table 26, show that about 40% of respondents reported 'parenting and family activities' limited their participation, mostly to a 'Moderate extent'. Table 12 (p. 54) reports results for the full list of factors limiting participation, showing that 'parenting and family activities' rank in the middle of the list.

Table 26 Parenting and family activities limit more participation with the fire service

	Count	Percent
Great extent	158	10.8
Moderate extent	457	31.3
Not at all	706	48.4
Don't know	15	1.0
Not applicable	122	8.4
Total	1458	100.0

Also from Study 10, 23% of respondents agreed that they were able to remain volunteering with the fire service because they had someone to mind the children while they attended callouts. About 64% of respondents endorsed 'Not applicable' to this question, most likely to indicate that they have no children (refer to Table 43 p. 110).

From another question in the same set, respondents were almost equally divided about whether they remained a fire service volunteer because their partner was also a volunteer firefighter, with 23% agreeing and 17% disagreeing. A much higher proportion of female respondents agreed (45%) than did males (17%). About 40% of female respondents and 62% of male respondents endorsed 'Not applicable' indicating that about 60% of female volunteers have partners who are also volunteers, while about 38% of male volunteers' partners are volunteers. This high concentration of partnering links within the fire services suggest high levels of bonding social capital, but may also limit the inclusiveness of brigade membership from the wider community.

About 40% of Study 10 respondents endorsed, 'It would be easier to volunteer if I didn't have to leave my property or family unprotected' while 13% indicated it would not be

easier, 6% did not know and 41% endorsed 'Not applicable'. The responses did not differ according to gender.

In Study 3c, a survey of volunteer firefighting recruits who remained three years after joining, half of the respondents nominated both (a) 'parenting commitments', and (b) 'family commitments other than parenting' as factors limiting greater participation with the fire service.

As shown in Table 27, the proportion of females reporting that parenting commitments were 'Very' or 'Somewhat limiting' of their fire service volunteering was only marginally higher than the proportion of males. There were no differences between genders regarding family commitments other than parenting.

Table 27 Parenting as a barrier to participation according to gender
n = 128

			% within Gender		
	Gender	*n*[24]	Very or somewhat limiting	Not limiting	Don't know
Parenting commitments	Male	114	44	53	3
	Female	53	53	47	<1

Differences according to age were also evident. To examine this, respondents were classified into three age categories: (1) less than 30 years; (2) 30–50 years; and (3) older than 50 years. As shown in Table 28, differences according to age were found in the reported barriers of parenting commitments and family commitments other than parenting.

The category 'parenting commitments' was endorsed by a higher proportion of respondents in the 30–50-year age group when compared with respondents from the other two age groups.

The category 'family commitments other than parenting' was endorsed as a limiting factor by a lower proportion of respondents aged less than 30 years when compared with respondents from the two higher age groups.

[24] The number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

Table 28 Parenting and family commitments as barriers according to age

			Parenting and family commitments % within Age groups		
	Age group (years)	n[25]	Very or Somewhat limiting	Not limiting	Don't know
Parenting commitments	*<30*	21	29	57	14
	30–50	104	61	39	<1
	>50	53	36	64	<1
Family commitments other than parenting	*<30*	46	35	57	9
	30–50	123	53	47	<1
	>50	77	47	53	<1

Differences according to marital status were also observed, as shown in Table 29. A higher proportion of respondents in married or de facto relationships endorsed 'parenting commitments' as a barrier to participation compared with the other two categories.

Table 29 Parenting as a barrier according to marital status

		Parenting commitments % within marital status category		
Marital status	n[26]	Very or Somewhat limiting	Not limiting	Don't know
Single	19	26	58	16
Married or de facto	155	53	47	<1
Divorced or separated	6	17	83	<1

Parenting commitments were naturally most strongly endorsed as limiting participation if respondents had children with them. About 38% of respondents reported having children living at home with them. Table 30 shows that about two thirds of respondents who had children living with them endorsed parenting as 'Somewhat' or 'Very Limiting' of their participation in the fire service. Note however, that almost 20% of respondents who did not have children living with them also nominated parenting as 'Somewhat' or 'Very limiting'. Presumably this group includes people who are separated or divorced and without custody of any children, or respondents who assist others with parenting duties as family or friends.

[25] Number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

[26] Number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

Table 30 Parenting as a barrier according to the presence of children

			Parenting commitments % within 'Do you have children living with you?'			
		n	Somewhat limiting	Somewhat limiting	Not limiting	Don't know
Do you have children living with you?	Yes	114	22.8	43.9	33.3	0.0
	No	65	4.6	13.8	76.9	4.6
Total		179	16.2	16.2	33.0	49.2

The age of the youngest child living in the same household as the respondent strongly determined the extent to which parenting commitments limited participation in the fire service. These results, in Table 31, show that in households where the youngest child was aged less than 5 years, about 84% of respondents found parenting commitments 'Somewhat' or 'Very limiting' of volunteer participation. The proportion decreased as the age of the youngest child increased, dropping to 53% when the youngest child was aged 13—18 years. Nineteen percent of respondents with no children in the household also endorsed parenting commitments as a limitation. Presumably they are providing parenting care for adult children, family or friends, or are separated or divorced. These results are consistent with responses from community members who have never volunteered as firefighters in Table 64 (p. 147).

Table 31 Parenting limits participation by age of youngest child in household

		Parenting commitments % within age group category		
		Somewhat or Very limiting	Not limiting	Don't know
Age group of youngest child living in household	No children in household	19	77	5
	Youngest child aged 13–18 years	53	47	0
	Youngest child aged 5–12 years	68	33	0
	Youngest child aged <5 years	84	15	0
Total		51	48	2

Respondents were asked five questions to explore the relationship between volunteering and family life. The results, in Table 32, show that a minority of respondents indicated that fire service volunteering had notable negative impacts on family life, including: taking too much time away from family activities, preventing them from contributing to family responsibilities, or missing family activities. Rather, the majority of respondents reported positive impacts, particularly that of assisting their families to become more involved with other families in the area. In this sense brigades are acting as a means of building social capital in communities. Brigades in new housing developments, who are struggling to attract members from relatively mobile young families, can attract members by promoting the benefit of getting to know other families in the local area.

A smaller majority reported that their families enjoyed social activities associated with their volunteering. This is an area worthy of further research. If the families of volunteers are

unenthusiastic about attending social occasions organised by brigades, such occasions may be a waste of effort or even counter-productive. Some brigade leaders might need support to organise family activities that the diverse families of volunteers will find stimulating.

Table 32 Impacts of volunteering on family life.

		Impact of volunteering on family life % within categories of 'impact'		
	n[27]	Strongly agree / agree	Neutral	Strongly disagree / disagree
My volunteering impacts on my family activities more than I would like	298	16.8	35.2	48.0
The time I devote to volunteering impacts on my capacity to contribute equally to household responsibilities	303	16.5	28.1	55.5
I have to miss family activities due to the amount of time I spend on emergency services work	284	14.5	25.7	59.8
My being a volunteer firefighter has helped us to be more involved with other families in the area	312	70.5	21.2	8.3
My family enjoys the social activities associated with my fire service volunteering	281	58.0	30.6	11.4

As shown in Table 33, a higher proportion of men (~20%) reported negative impacts of fire service volunteering on family life when compared with women (~11%). Readers may find this surprising given that women are often assumed to be more family-oriented than men. One possible explanation is that women who encounter competing demands between volunteer firefighting and family have less hesitation in prioritising family, whereas men may be torn between the two responsibilities. Some support for this explanation can be found in our study of community members who had never volunteered with a fire brigade (Study 2), in which 26% of women endorsed 'I wouldn't be able to leave my family duties to go to fires' as a 'Major reason' for not joining a fire brigade, compared with 7% of men (Table 63, p. 146). This Study 2 result perhaps helps to explain why only 17% of Australian volunteer firefighters are women (Table 6, p.31).

The volunteers in Study 3c did not differ between genders in reporting that brigade membership had 'helped us to be more involved with other families in the area'. However, women were more likely to report that their families enjoyed social activities associated with volunteering (68%) than were men (52%).

[27] Number of respondents to each item excluding non-response to the item and respondents selecting 'Not Applicable'

Table 33 Impacts of fire service volunteering on family life that differ between genders

			Impacts of volunteering on family life % within gender categories		
	Gender	*n*[28]	Strongly agree / agree	Neutral	Strongly disagree / disagree
My volunteering impacts on my family activities more than I would like	Male	186	20	39	41
	Female	95	12	30	58
The time I devote to volunteering impacts on my capacity to contribute equally to household responsibilities	Male	190	20	30	50
	Female	100	11	23	66
I have to miss family activities due to the amount of time I spend on emergency services work	Male	178	17	28	55
	Female	86	9	20	71
My being a volunteer firefighter has helped us to be more involved with other families in the area	Male	186	68	31	11
	Female	99	72	22	6
My family enjoys the social activities associated with my fire service volunteering	Male	172	52	36	12
	Female	90	68	23	9

Differences in the effects on family life were also observed according to whether respondents had children living in their household. Table 34 shows, from Study 3c, the percentage of respondents endorsing the impacts of volunteering on family according to the presence of children in the household.

While a minority of respondents endorsed experiencing negative impacts of volunteering on family life, they were about twice as likely to do so if children formed part of their household. Between 20- and 26% of respondents with children living in the household 'Strongly' or 'Somewhat agreed' that volunteering impacted negatively on family activities, compared with 11–13% of respondents without children in the household.

The presence of children made no difference with regard to the two positive impacts of volunteering: helping volunteers to become more involved with other families in the area, and whether their families enjoyed social activities associated with volunteering.

[28] Number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

Table 34 Differing impacts of volunteering on family life by the presence of children

	Children living in the household	*n*[29]	% within 'children in the household' categories		
			Strongly agree / agree	Neutral	Strongly disagree / disagree
My volunteering impacts on my family activities more than I would like	Yes	117	26	33	41
	No	176	11	37	52
The time I devote to volunteering impacts on my capacity to contribute equally to household responsibilities	Yes	120	20	31	49
	No	178	13	26	61
I have to miss family activities due to the amount of time I spend on emergency services work	Yes	115	20	30	50
	No	165	11	22	61

Supplementary analyses were then conducted to further examine whether the age of the children influenced the impacts of volunteering on families. The results, in Table 35 and Table 36, show that about 44% of respondents living in households where the youngest child was aged less than 5 years endorsed 'volunteering impacts on family life more than I would like', compared with about 18% of respondents where the youngest was aged 5–18 years, and 11% from households where there were no children. Similar, though less pronounced results were found for the other two items of negative impact on family.

No differences were found according to the age of the youngest child, nor the absence of children, on the positive item 'my being a volunteer has helped us to meet other families in the area'. However families in which the youngest child was aged less than 5 years, or aged 13-18 years, were less likely to endorse 'My family enjoys the social activities associated with my fire service volunteering' than were families where the youngest was of primary school age, or in which there were no children in the household. This may indicate that brining very young children or teenagers along to brigade social functions can be difficult.

[29] Number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

Table 35 Impacts of volunteering on family life that differ with age of youngest child

			% within 'age of youngest child' categories		
	Age of youngest child in household	*n*[30]	Strongly agree / agree	Neutral	Strongly disagree / disagree
My volunteering impacts on my family activities more than I would like	None in household	176	11	37	52
	13–18 years	28	21	39	39
	5–12 years	43	16	40	44
	<5 years	39	44	26	31
The time I devote to volunteering impacts on my capacity to contribute equally to household responsibilities	None in household	178	14	26	60
	13–18 years	29	10	41	48
	5–12 years	45	16	33	51
	<5 years	39	36	26	39
I have to miss family activities due to the amount of time I spend on emergency services work	None in household	165	11	22	67
	13–18 years	29	10	41	48
	5–12 years	42	21	26	52
	<5 years	37	27	24	49
My being a volunteer firefighter has helped us to be more involved with other families in the area	None in household	184	71	22	7
	13–18 years	32	69	25	6
	5–12 years	44	77	18	5
	<5 years	39	70	22	8
My family enjoys the social activities associated with my fire service volunteering	None in household	161	60	29	11
	13–18 years	30	57	37	7
	5–12 years	44	66	23	11
	<5 years	33	42	46	12

[30] Number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

Table 36 Impacts on family life according to child age—younger or older than 5 years

			Percentage within age of youngest child categories		
	Age group of youngest child living with respondent	n[31]	Strongly agree or agree	Neutral	Strongly disagree or disagree
My volunteering impacts on my family activities more than I would like	<5 years	39	44	26	31
	≥5 years	69	17	58	42
Time I devote to volunteering impacts on my capacity to contribute to household	<5 years	39	36	62	38
	≥5 years	78	13	38	50

Differences in impacts on family according to respondents' 'employment status' were also noted, as shown in Figure 31. Full-time employed respondents were proportionally most likely to report negative impacts on family, generally. By way of explanation, it seems probable that full-time workers experience greater impacts on family life because of the nature of their work schedule. In particular, full-time employment may be associated with large time demands from work compared with part-time workers and retired respondents, as well as limited flexibility in scheduling work role requirements (compared with self-employed workers who, presumably, have relatively more freedom to determine their own working hours). As such, these full-time workers may experience negative impacts on family because their volunteering is additional to high demands from relatively inflexible employment.

However, self-employed respondents were proportionally more likely to report missing family activities owing to time spent volunteering. Even though self-employed respondents may have greater flexibility to respond to incidents during working hours, they may also be required to complete their paid work responsibilities out of working hours (e.g. evenings, weekends), thus reducing time available for family. Self-employed respondents report working in paid employment for longer hours than full-time employees. The mean working time reported by Study 3c respondents who were business or farm owners with employees was 57 hours per week, compared with 48 hours per week for business or farm owners without employees and 42 hours per week for full-time employees.

[31]Number of respondents to each item excluding non-response to the item and respondents selecting 'Not applicable'.

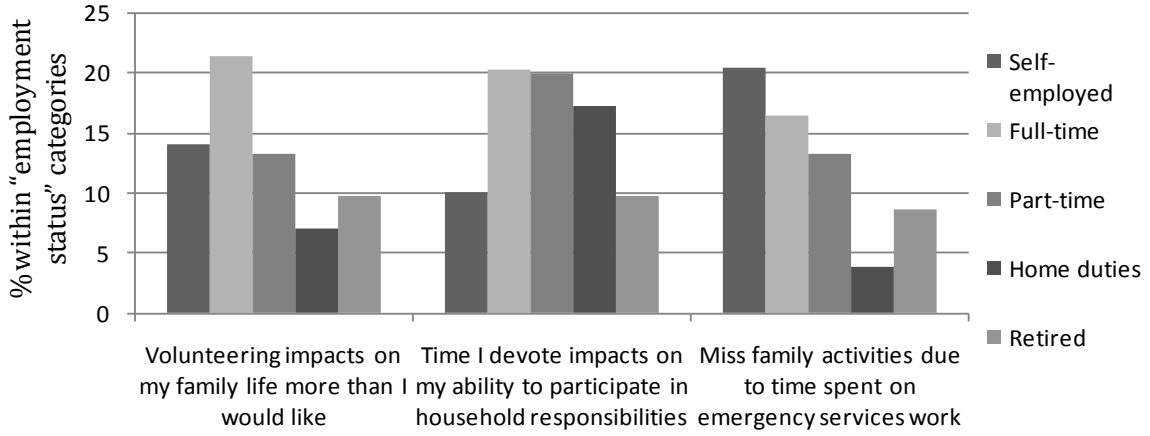

Figure 31 Impacts of volunteering on family by 'employment status' of volunteer

RETENTION OF VOLUNTEERS

(Studies 3b, 10 and 11)

Aside from recruiting new volunteers, the other strategy for sustaining adequate numbers of volunteer firefighters is to retain current volunteers for longer. High rates of volunteer turnover place added burdens on fire agencies in terms of equipment and administrative costs, and on current volunteers conducting recruit training. Increasing volunteers' average length of service can improve the experience profile of the fire service but can also increase the age profile of volunteers, which carries limitations of physical fitness and age-related health risks. Excessive length of service can fill a brigade with older volunteers and effectively block entry to younger members with fresh ideas.

In 2004, Australian volunteer fire agencies reported that 17,500 volunteers had left their agencies over a 12-month period (McLennan, 2004b). Gross loss rates, shown in Table 37, ranged between 6 and 13% with a mean loss rate of 8%. McLennan calculated that the total replacement cost was approximately $12.5 million per annum, based on agency-supplied estimates including recruitment publicity, training materials, new protective clothing, apparel, and the administrative costs of registration.

Accordingly, we directed several of our studies towards better understanding why volunteers leave fire brigades, and what agencies could do to keep them longer. We used several research strategies to gain a thorough understanding of factors contributing to resignation and retention. Study 11 was an exit survey of recently resigned volunteers, Study 10 investigated current volunteers including their reasons for staying, and three other studies were New Member Tracking Surveys[32] which aimed to monitor the experiences of recruits during their first years with the fire services. Most of our other studies also contained items exploring why people choose to leave or stay with the fire service.

[32] See the outlines of Studies 3, 6, 9, 13 and 16 in Appendix A.

Table 37 Annual gross loss of volunteer firefighters by state[33]

State or Territory	ACT	Vic.	NSW	Qld	SA	Tas.	WA	Total
Agency	**ESA**	**CFA**	**RFS**	**F&RS**	**CFS**	**TFS**	**FESA**	
Total number of volunteers	400	59,000	67,000	48,000	15,000	4,000	27,000	220,400
Gross annual loss[34] of volunteers	100	3,700	5,800	3,800	1,500	500	2,100	17,500
Gross loss as a percentage of total volunteers	25%	6%	9%	8%	10%	13%	8%	8%

LEAVING AND RE-JOINING

(Study 10 and Study 11)

The exit survey (Study 11), provided us with data on the length of service of respondents shortly after they left a particular fire service. This study supplies data that are important in two respects. Firstly, they are conclusive data on the full length of service of respondents because, by definition, the respondents have left the fire service. In our other studies of volunteers, the respondents are on-going volunteers so their ultimate length of service is unknown. Secondly, because Study 11 sampled from all volunteers who left the fire service during the study period (December 2005 to December 2007), ex-volunteers with all lengths of service are equally likely to have been surveyed[35].

Using data from Study 11 we were able to calculate the length of service of respondents by subtracting the date they reported joining the fire service from the date they reported resigning. The bar chart in Figure 32 shows the frequency distribution of length of service in single-year increments. The highest proportion of respondents left during their third year of service, and one third left within 5 years. The median length of service was 10 years, and the greatest length of service was 51 years. Significant gains in volunteer numbers could be achieved by taking measures to reduce the high turnover of recruits during the first 5-10 years of service.

[33] The Northern Territory is excluded because it was not a participant in the Bushfire CRC.

[34] Gross loss refers to the number of volunteers who left the agency without consideration of replacement by new recruits.

[35] Ex-volunteers who had changed address after resigning, without leaving a forwarding address, may not have received a questionnaire. About 13% of the 2,438 questionnaires sent out were returned marked 'Not at this address'.

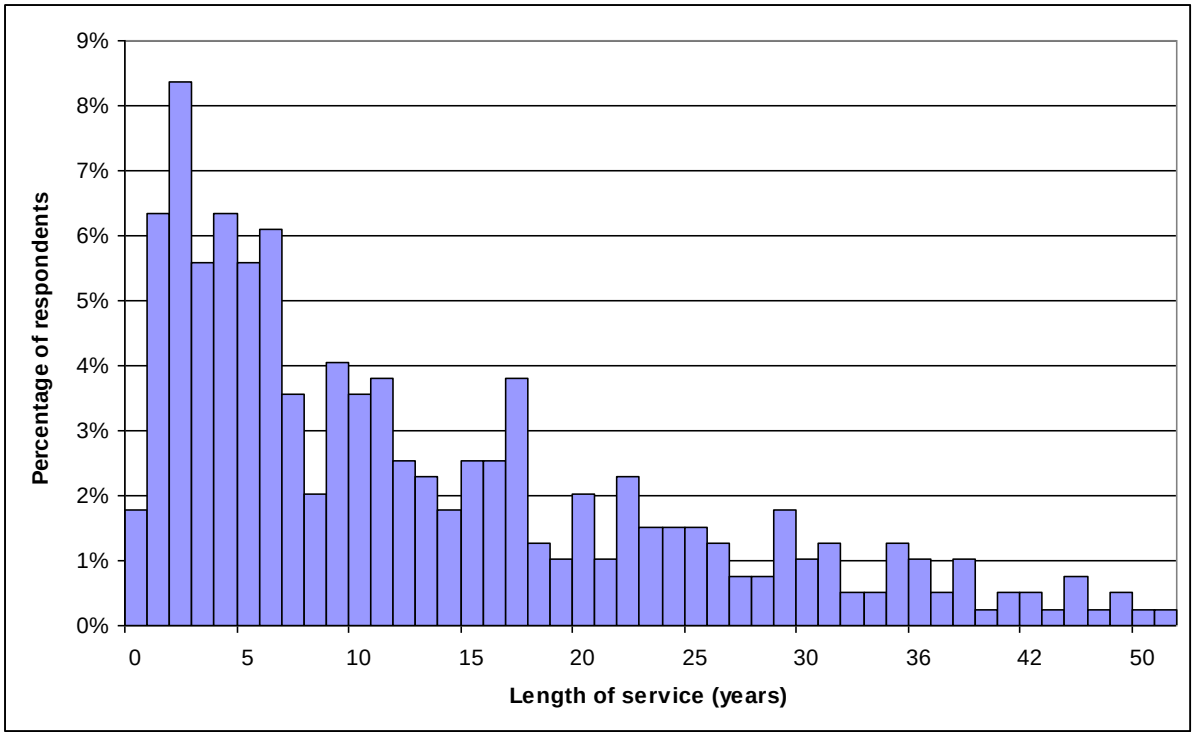

Figure 32 Length of service reported by ex-volunteers in Study 11
n=394

The data from Study 11 contain a single date of joining and date of resigning for each respondent. As such they cannot tell us about volunteers who leave the fire service and then rejoin. This is potentially important information about a pattern of membership that might be relevant to young volunteers who leave the fire service for a period when they move to a capital city for study or work, or women who leave while caring for young children but later re-join. To explore such patterns of discontinuous membership, we asked respondents in Study 10 (currently serving volunteer firefighters); 'Roughly for what years have you been a volunteer firefighter in [the fire service]? (e.g. 1983–90, then 1995–present day)'. The question asked respondents to describe any discontinuous periods of service, thus giving a more complete understanding of patterns of membership, resignation and re-joining.

The written responses were initially entered into the survey database as free text and subsequently coded into five numeric variables for the starting year and finishing year of each period of service. As the respondents were all current volunteers, there was no final finishing year, but we used the year of the survey as the final finishing year for calculating lengths of service. The five numeric variables created sufficient starting-year–finishing-year pairs to capture up to three periods of membership.

Fifty-four respondents, 3% of the sample, reported having left and returned to the fire service involved at least once. Only five respondents reported having left the fire service on a second occasion before returning.

Respondents reported first leaving at ages ranging from 16 to 55 years. No respondents reported having left after the age of 55 and returned. As shown in the bar chart in Figure

33, two thirds of returning respondents had left by the age of 29 years. Naturally, the younger volunteers are when they leave, the more years they have available in which to return. However, only 35% of returning respondents had left after the age of 29 years returned.

The fact that only 3% of the respondents in this survey reported having returned to the fire service after leaving indicates that the vast majority of volunteers who leave are lost to the organisation forever. It reinforces the importance of strategies to improve the rates of retention of volunteers. Prospective returning volunteers may be discouraged if they think they will be required to repeat basic training and accreditation. Fire agencies should be wary of requiring experienced firefighters to repeat basic training. Each case should be treated on its merits. The fire services might also encourage ex-volunteers to return by publicising on-going improvements in the service.

Table 38 Age of first leaving (5-year age groups)

Age (years)	Count	Percentage	Cumulative percentage
<20	10	18	18
20–24	16	29	47
25–29	10	18	65
30–34	5	9	74
35–39	4	7	81
40–44	3	5	86
45–49	3	5	91
50–54	4	7	98
55–59	1	2	100
Total	56	100	

Figure 33 shows that respondents who left and subsequently returned were most likely to leave the fire service during their early 20's.

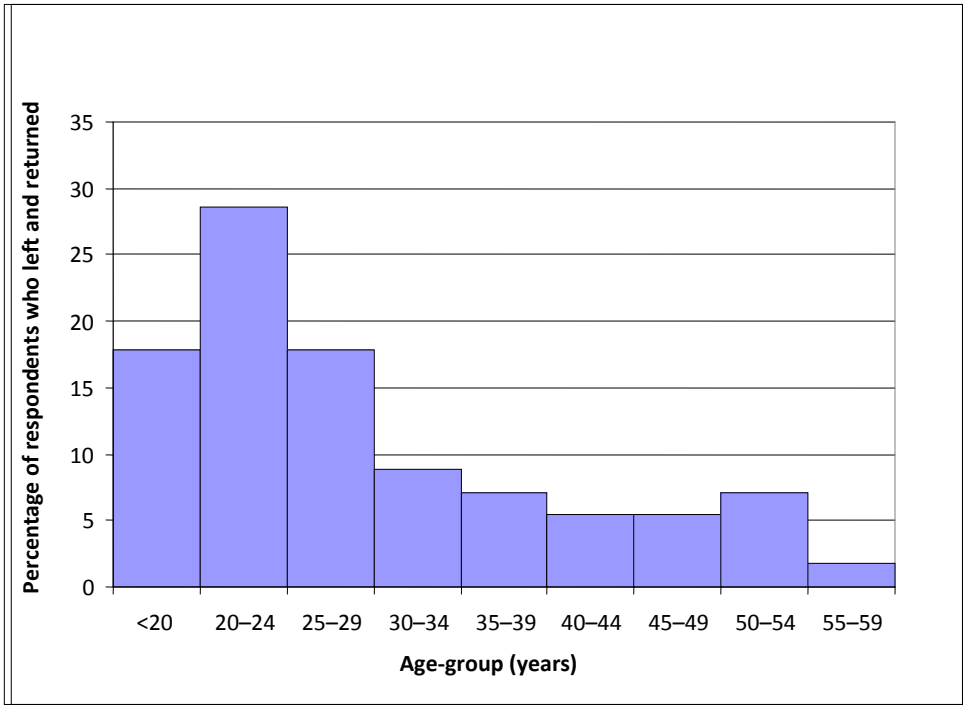

Figure 33 Age of first leaving the fire service before returning

REASONS FOR LEAVING

(Studies 10 and 11)

Study 11, the exit survey, was conducted in two phases in 2005 and 2007. The following analyses are based on the sample of 394 valid questionnaires (20%) returned during the 2007 phase of the survey. The sample comprised 78% men and 22% women which was consistent with the gender distribution of the agency's membership database in 2008, and as such there is no evidence that men and women were leaving the agency at different rates. The median age of respondents at the time of leaving was 46 years for men and 37 years for women. The reasons for this different rate are not apparent in the data, but may relate to the responsibilities of family and childcare traditionally fulfilled by women.

The bar chart in Figure 34 compares the age distribution of the sample of former volunteers when surveyed with the age distribution of continuing volunteers who were current in February 2008. It suggests that volunteers are proportionally more likely to leave when they are younger than 25, or older than 55.

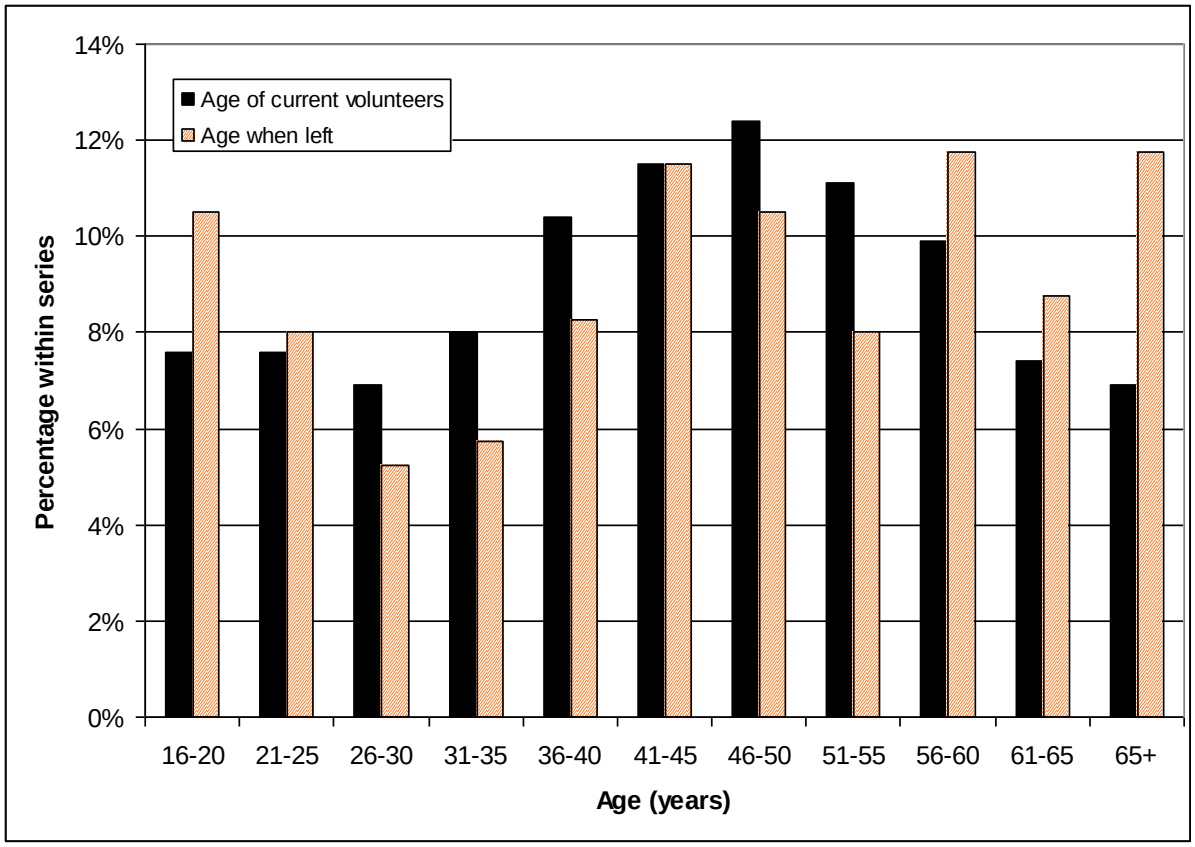

Figure 34 Age distributions comparing continuing volunteers with those who left

The median length of service at the time of leaving (2007) was 10 years for men and 5.6 years for women. Reasons for the difference in median length of service are not apparent in this data set, but presumably relate to an overall greater involvement of women generally in family and childcare.

The questionnaire suggested 12 possible reasons for resigning, listed in Table 39, and respondents could endorse up to five reasons, in order of importance: 1, most; 5, least.

Table 39 'Reasons for leaving' items from the questionnaire

Why did you decide to stop volunteering with the fire service? *(Please rate your top five responses in order of preference, with 1 being the highest and 5 being the lowest)*
Moved out of the area
Retired; felt like I was too old to continue being a fire service volunteer
Ill-health/medical reasons
Family commitments
Commitments to paid work
Commitments to other volunteer work
Unhappy with brigade (or higher-level) management
Unhappy with direction of the fire service as an organisation
Lost interest in the fire service
Didn't feel like there was a role for me in the brigade
Felt excluded from brigade activities
Dispute with another member
Other *(please specify)* ……

Cluster analysis was used resolve the 12 items into four groups of items that respondents tended to nominate together[36].

The four Clusters identified were:

1. Moved from the area.

2. Retired; felt like I was too old to continue being a CFS volunteer
   Ill health/medical reasons

3. Family commitments
   Commitments to paid work

4. Unhappy with brigade (or higher level) management
   Felt excluded from brigade activities
   Didn't feel there was a role for me in the brigade
   Unhappy with [fire agency] as an organisation
   Dispute with another member
   Lost interest in the [fire agency]

Table 40 shows the percentage of respondents who nominated the four groupings.

[36] The method of analysis chosen to assess the extent to which respondents' reasons were linked to each other (i.e. formed identifiable subgroups) was cluster analysis using Ward's Method.

Table 40 Main reasons for leaving the fire service

Item no.	Reasons for leaving	Percentage of respondents
1	Work or family commitments	51
2	Moved out of the district	38
3	Age or health concerns	28
4	Dissatisfaction with fire service volunteering	25

Note that the reasons for leaving are broadly consistent with the factors that volunteers in Study 10 indicated as limiting their participation with the fire service in Table 12.

Table 41 Comparison of reasons for leaving and factors limiting participation

Reasons for leaving (Study 11)	% Reporting reason	Factors limiting participation (Study 10)	% Reporting Great or Moderate extent
Work or family commitments	51	Business, farm or work commitments	62
		Parenting and family activities	43
		Domestic duties	35
Age or health concerns	28	Health problems	15
Dissatisfaction with fire service volunteering	25	Perceived bureaucratic nature of the [fire service]	62
		The increased complexity of [fire service] activities	51
		Increased time commitments required by the [fire service]	51
		Increased or ongoing demands of training or assessments	44
		Internal brigade politics	41
		Out-of-pocket expenses	41
		Lack of resources provided by the [fire service]	31
		Losing interest in the [fire service]	20
		I'm finding some incidents too distressing to attend	7

Dissatisfaction with fire service volunteering is also reflected in Item 3 in Table 16, which shows that 50% of respondents reported that it would be easier to volunteer if the atmosphere in the brigade was more harmonious.

Poor health and age was endorsed more strongly as a reason for having left (Study 11) than poor health was as a factor limiting participation (Study 10). This might have occurred because age was not mentioned in the question relating to limiting factors. It may also have occurred, in part, because volunteers are free to leave at any time. There are no compelling reasons, such as the need to earn an income, for volunteers to remain if health problems

emerge that limit meaningful participation. Thus, volunteers limited by health problems may simply leave and appear in surveys of ex-volunteers rather than serving volunteers.

There were no significant differences between men and women, overall, in their patterns of reasons for resigning.

Table 42 Reasons for leaving cross-tabulated by age group

	% within age group (years) endorsing reason		
Reason for leaving	**18–34**	**35–44**	**45+**
Moved away from district	55	41	28
Work or family commitments	56	67	43
Age or health concerns	12	17	40
Dissatisfaction	20	25	22

There were, however, significant differences across age groups, as shown in Table 42:

- Those aged 18–34 years were significantly more likely to cite 'moving from the district' as a reason for resigning, compared with the other two age groups. This is consistent with ABS data showing that people are more likely to relocate between the ages of 15 and 40 years, with mobility peaking at the about the age of 30 years. Figure 35 shows the age distribution of persons in Australia who changed their place of residence between the 2001 and 2006 census and confirming that Australians are most mobile in the 20- to 30 year age range.
- Those aged 35–44 years were significantly more likely to cite 'Work or family commitments' as a reason for resigning, compared with the other two age groups.
- Those aged 45+ years were significantly more likely to cite 'Age or health concerns' as a reason for resigning, compared with the other two age groups.
- There were no significant differences among the three age groups in likelihood of resigning for dissatisfaction reasons.

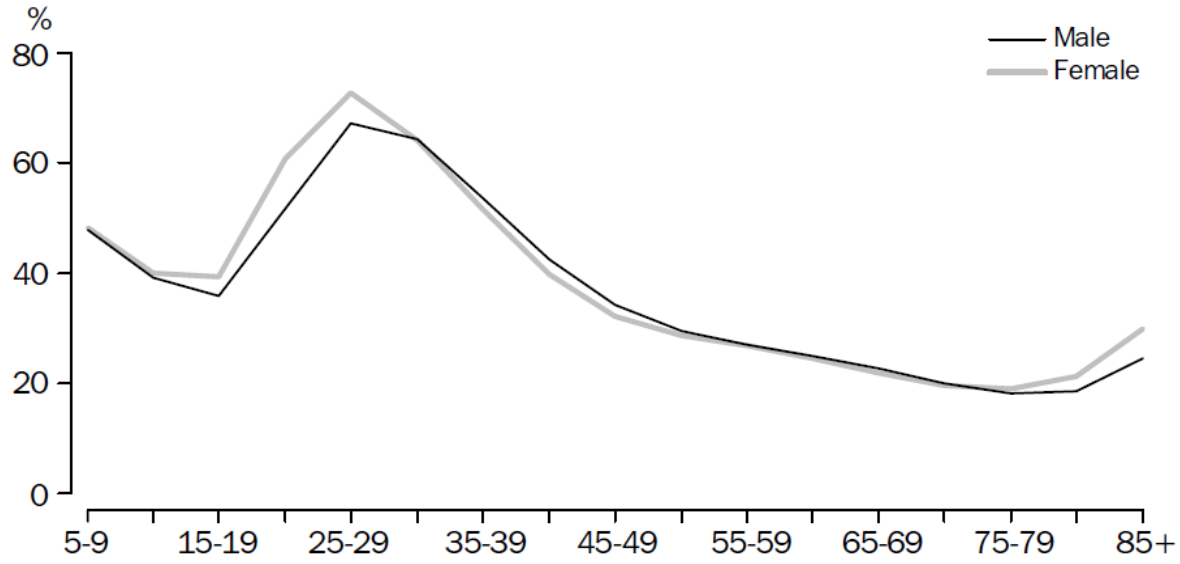

Figure 35 Population mobility of persons in Australia by age (years) and sex (2001–06)
Source: (Australian Bureau of Statistics, 2009f)

Dissatisfaction

It is difficult for fire agencies to address reasons for leaving such as 'Moving from the district', 'Work or family commitments', or 'Age and health concerns'; however, there may be steps fire agencies can take to address the causes of generalised dissatisfaction.

We analysed the relative importance of each of the potential causes of dissatisfaction suggested to respondents in the questionnaire. In the results shown below, the number in brackets is an indicator of the relative importance of that reason contributing to dissatisfaction[37]. The number can range from -1 to +1 and higher numbers indicate greater relative importance.

1. Unhappy with brigade (or higher-level) management (0.73)
2. Felt excluded from brigade activities (0.68)
3. Didn't feel there was a role for me in the brigade (0.57)
4. Unhappy with the direction of the fire service as an organisation (0.55)
5. Dispute with another member (0.45)
6. Lost interest in the fire service (0.41)

Item 2, 'felt excluded from brigade activities', is consistent with the exclusionary behaviours characteristic of bonding forms of social capital. Further analysis is required determine the nature of exclusionary behaviour perceived by a significant proportion of volunteers.

[37] A Principal Components Analysis of intercorrelations among the items in Cluster 4 confirmed that all six items loaded significantly on a single component. The numbers are the item-component loadings, which can range from –1 to +1.

We also analysed the aspects of the fire service volunteering experience associated most strongly with dissatisfaction[38]. The number in brackets at the end of each questionnaire item indicates the relative strength of the association between response to that item and level of dissatisfaction.

1. If you had a complaint or serious request, how satisfied were you that you had a fair hearing and resolution to your complaint or serious request at local level?—'Not at all' (0.25)
2. How well did you feel your efforts as a volunteer were recognised and appreciated by the fire service?—'Poorly' (0.23)
3. At the time you left, how would you describe the morale of your brigade?—'Poor' (0.18)
4. How satisfied were you that the training you received enabled you to do your duties safely and efficiently?—'Not at all' (0.13)

What did you enjoy least?

The questionnaire invited respondents to write what they enjoyed least about volunteering with the fire service. There were 286 written text responses and some former volunteers described more than one source of dissatisfaction. The responses were assigned to one of seven major categories. These are listed below, in descending order of frequency of response category with the actual counts listed. Where possible, sub-categories have been listed.

[Note that these responses are self-reports of volunteers' perceptions.]

1. 'Dissatisfaction with brigade life':
   - Poor brigade climate: conflicts, factionalism, exclusion, bullying: 64
   - Poor brigade leadership: autocratic, favouritism, incompetence: 23
   - Negative impacts of other volunteers: lazy, unsafe, troublemakers: 9
     Total: 96 (34%)

2. 'Time demands of volunteering':
   - Time required: 32
   - Time wasted: operations, training: 30
     Total: 62 (22%)

3. 'The nature of the work of a fire service volunteer':
   - Risks and stressors: mostly anxieties associated with attending vehicle accidents: 32
   - Physical conditions: heat, smoke, fatigue, dirt, climbing ladders: 10
     Total: 42 (14%)

[38] In order to identify the minimum number of non-redundant items in the questionnaire that predicted level of dissatisfaction (the sum of ratings on the six items making up Cluster 4), a stepwise multiple regression analysis was carried out. The numbers are the standardised regression coefficients (beta weights can range from –1 to +1) of the items retained in the prediction equation.

4. ‘Bureaucracy, red tape, rules, forms’: 33 (12%)

5. ‘Fire service structures, staff, and processes (above the level of brigade)’:
   - Locals not consulted, ignored, over-ruled: 15
   - Negative behaviours/attitudes of paid staff to volunteers: 8
   - Inadequate resources/equipment: 4
   - Lack of communication with brigades: 2
     Total: 29 (9%)

6. ‘Training’:
   - Excessive demands: 13
   - Inadequate/poor quality: 3
     Total 16 (6%)

7. ‘Local community: lack of interest, support, recognition’: 8 (3%)

Note that the aspect of volunteering most frequently described as ‘enjoyed least’ is dissatisfaction with brigade life, particularly disharmony among fire service personnel and poor brigade leadership. A large proportion of respondents also complained of the time demands of fire service volunteering and the bureaucratic impositions of rules and paperwork. While relatively few nominated the physical discomforts of firefighting, a relatively large proportion nominated stress and anxiety related to attending motor vehicle accidents.

INTENTION TO REMAIN 12 MONTHS AFTER JOINING

(Study 3b)

In a separate study with another fire agency (Study 3b), we surveyed volunteer recruits 12 months after joining. Among other things, we asked respondents how likely[39] it was that they would remain with the fire service in 3 years. We used the results to create an indicator of ‘Strength of intention to remain with the fire service’.

We then identified those experiences of the respondents likely to be related to volunteer retention. The level of overall ‘Intention to remain’ was strongly linked with ‘Overall positive feelings’ about being a fire service volunteer, and somewhat less strongly linked with ‘Overall level of benefits gained’ from being a fire service volunteer[40].

[39] Responses to three items were summed to give an overall ‘Intention to remain’ score: How likely is it that you will still be a [fire service] volunteer in 12 months? How likely is it that you will still be a [fire service] volunteer in 3 years? If you moved to another area served by [the fire service], would you apply for a transfer to the local brigade? Response options were: ‘Very unlikely’ (1); ‘Somewhat unlikely’ (2); ‘Don’t know’ (3); ‘Somewhat likely’ (4); ‘Very likely’ (5). Scores could thus range from a low of 3 to a high of 15.

[40] An overall ‘Positive feelings’ score was derived by summing responses to five items listed as potential positive experiences associated with being a [fire service] volunteer. Each was answered on a 1 to 5 scale, so scores could range from 5 to 25. An overall ‘Benefits’ score was derived by summing responses to eight items listed as potential benefits. Each was answered on a 1 to 5 scale, so scores could range from 8 to 40.

High levels of overall 'Intention to remain' were linked significantly to two perceived benefits of being a volunteer:

(1) 'Broadening of social networks in the community', and
(2) 'Contributing to protecting members of the community'[41].

Low levels of 'Intention to remain' were linked significantly to four reported experiences:

(1) 'Volunteering with the fire service because I feel I have to';
(2) Disagreement with the statement that 'Fire service drivers always drive fire service vehicles safely and responsibly;'
(3) Disagreement with the statement that 'After doing assessments, the certificate of agreement arrives quickly'; and
(4) Reporting that 'Fire service takes up more time than I really want to give'.

High levels of 'Intention to remain' were linked significantly to two reported experiences:

(1) 'I find fire service membership as rewarding as I expected'; and
(2) 'My brigade and the fire service deal with troublesome members promptly'.

'I find fire service membership as rewarding as I expected' was strongly linked to three other reported experiences:

(1) 'I find I am being included in the group by all members of my brigade';
(2) 'The brigade officers are good leaders'; and
(3) 'My brigade gets on well with other agencies (e.g. land management agency and SES)'.

Low levels of 'Intention to remain' were strongly linked to two reported problems:

(1) 'I feel pressure from my brigade to turn up more often than I want'; and
(2) 'I have difficulty getting to all scheduled training and assessments'.

In summary, Study 3b highlighted a small subset of the many factors that could affect retention of recent recruits as being particularly important:

- Two benefits derived from fire service volunteering are especially important: enhanced social networks in the community, and involvement in community protection.
- Important negative retention factors comprise: being a reluctant volunteer in the first place; lack of confidence in the safety of drivers of fire service vehicles; delays in results following assessments; and conflict between time demands of training and turning out, and other activities, especially study.
- Important positive retention factors comprise: being included in brigade activities; good leadership by officers; harmonious relationships within the brigade; and harmonious relationships between the brigade and other agencies.

[41] In this and subsequent analyses, multiple regression procedures were used. Details are available from the author.

REASONS FOR STAYING

(Study 10)

In Study 10, we asked a large sample of current volunteers, 'Why do you remain a volunteer with [the fire service]?' and presented them with a list of nine items to rate on a scale of 'Strongly agree', 'Somewhat agree', 'Don't know', 'Somewhat disagree' or 'Strongly disagree' or 'Not applicable'.

The results are set out in Table 43, in which items are sorted in descending order based on the percentage of respondents who selected 'Strongly agree'.

Table 43 Reasons for remaining with the fire service

			Percentages					
#	**Item**	n	Strongly agree	Somewhat agree	Don't know	Somewhat disagree	Strongly disagree	N/A
1	The fire service performs an important function	1478	82	15	1	0	0	1
2	I enjoy most aspects of being in the [fire service]	1464	60	34	2	2	1	1
3	I enjoy the responsibility	1473	52	34	4	5	2	3
4	It is an important part of my community life	1474	51	37	3	5	2	3
5	To protect my home and assets	1474	38	33	4	9	5	0
6	I hope to become an officer in my brigade (current officers excluded)	699	26	18	17	10	13	16
7	My partner is in the [fire service]	1446	13	9	2	5	12	59
8	There's no-one in the community to take my place	1463	11	22	9	22	25	12
9	I can because I have someone to mind the children	1442	11	12	3	5	5	64

Item 1 in Table 43 shows that the main reason respondents reported for remaining is that they think 'The fire service has an important function to perform'. This was one of the strongest results in the survey, with 82% reporting that they 'Strongly agree' and 15% reporting they 'Somewhat agree'.

The second-highest ranked reason for remaining is that respondents 'enjoy most aspects of being in the fire service', (Item 2), though fewer respondents 'Strongly agree' (60%) and more 'Somewhat agree' (34%) than with the previous item. Similar proportions report remaining because they 'enjoy the responsibility' (Item 3) and consider it an 'important part of [their] community life' (Item 4).

There was a noteworthy drop in support for the next-ranked item, 'to protect my home and assets (Item 5), which is more self-oriented. Thirty-eight per cent of respondents reported that they 'Strongly agree' and 33% 'Somewhat agree' with this item. The unusually high 11% reporting 'Not applicable' may be respondents who do not own a home or other significant assets, or whose assets are actually under the jurisdiction of another fire service, for example an urban fire service.

For the analysis of whether respondents remain because they 'hope to become an officer in my brigade one day', 711 serving officers (50%) were excluded. A total of 26% of non-officer respondents reported that they 'Strongly agree', and 18% that they 'Somewhat agree'. The 44% of respondents who remain because they aspire to being officers is well below the 70% who remain 'to protect my home and assets'.

Respondents whose partners were in the fire service were evenly divided as to whether that was an incentive for remaining (Item 7). About 60% of respondents endorsed 'Not applicable' indicating that their partners are not in the fire service; however, the remaining 40% were about equally divided with 22% agreeing, 18% disagreeing, and 2% endorsing 'Don't know'.

About one third of respondents (34%) agree that they remain because 'There is no-one else in the community to take my place' (Item 8) while about 46% disagree. This is consistent with results suggesting that about 30% of officers and office-bearers find it necessary to hold multiple elected positions because no-one else is available to occupy them. We speculate that volunteers who undertake the role because there is no-one else available may feel imposed upon and be susceptible to burn-out. Similarly, the results for Items 1 and 2 suggest that respondents report remaining because they believe the function is important rather than because they enjoy it.

About 64% of respondents reported that Item 9, 'I am able to remain because I have someone to look after the children when I am called out' was 'Not applicable' for them. When we filtered for the 35% of respondents who reported that childcare was applicable, about 23% agreed and 11% disagreed.

It might be assumed that childcare would be of more concern to women, on the basis of traditional parenting roles; however, cross-tabulation by gender indicated that women did not differ from men in their responses to this item.

However, cross-tabulation by age, shown in Table 44, shows that, while having someone to look after the children had modest relevance across all age groups, it was notably more relevant for 30- to 50-year-olds (shaded cells). Within that 20-year age span, the 'Not applicable' rate drops to about 40%, compared with about 70% for other age groups. Similarly, within that age range the percentage of respondents agreeing is about 40% and disagreeing about 18%, compared with about 10% agreeing and 8% disagreeing in the other age groups. This is noteworthy because almost half the respondents (44%) are concentrated within the 30- to 50-year age range.

Table 44 'I have someone to look after the children' cross-tabulated by age

			I am able to remain because I have someone to look after the children when I am called out						
			Strongly agree	Somewhat agree	Don't know	Somewhat disagree	Strongly disagree	Not applicable	Total
Age in 5-year groupings	<20	Count	7	4	4	4	5	83	107
		% within age	6.5	3.7	3.7	3.7	4.7	77.6	100.0
	20–24	Count	4	3	3	3	2	85	100
		% within age	4.0	3.0	3.0	3.0	2.0	85.0	100.0
	25–29	Count	8	10	6	4	4	75	107
		% within age	7.5	9.3	5.6	3.7	3.7	70.1	100.0
	30–34	Count	20	38	5	12	9	69	153
		% within age	13.1	24.8	3.3	7.8	5.9	45.1	100.0
	35–39	Count	29	29	4	19	12	62	155
		% within age	18.7	18.7	2.6	12.3	7.7	40.0	100.0
	40–44	Count	29	42	5	10	16	56	158
		% within age	18.4	26.6	3.2	6.3	10.1	35.4	100.0
	45–49	Count	31	25	2	12	13	90	173
		% within age	17.9	14.5	1.2	6.9	7.5	52.0	100.0
	50–54	Count	16	10	4	7	9	119	165
		% within age	9.7	6.1	2.4	4.2	5.5	72.1	100.0
	55–59	Count	11	4	3	2	7	109	136
		% within age	8.1	2.9	2.2	1.5	5.1	80.1	100.0
	60–64	Count	3	2	2	2	5	96	110
		% within age	2.7	1.8	1.8	1.8	4.5	87.3	100.0
	65–69	Count	2	1	2	0	4	51	60
		% within age	3.3	1.7	3.3	.0	6.7	85.0	100.0
	70–74	Count	1	0	0	1	1	26	29
		% within age	3.4	.0	.0	3.4	3.4	89.7	100.0
	75–79	Count	0	1	0	0	0	5	6
		% within age	.0	16.7	.0	.0	.0	83.3	100.0
	80–84	Count	0	0	0	0	0	2	2
		% within age	.0	.0	.0	.0	.0	100.0	100.0
	85+	Count	0	0	0	0	0	1	1
		% within age	.0	.0	.0	.0	.0	100.0	100.0
	Total	Count	161	169	40	76	87	929	1462
		% within age	11.0	11.6	2.7	5.2	6.0	63.5	100.0

WOMEN VOLUNTEERS

(Studies 3a, 3b, 4, 5, 9, 13 and 14)

One possible way in which volunteer fire services can respond to declining numbers is to recruit from a hitherto under-utilised pool of potential firefighting volunteers in local communities: namely, women (McLennan, 2004c); (Palmer, 2003). At the time of this study, the percentage of women volunteer firefighters in Australian agencies ranged from about 12- to 23% (see Table 6, p. 31). However, Beatson and McLennan (2005) recommended caution: they observed that firefighting (both career and volunteer) was traditionally a very male-dominated activity. They further noted that research from the United Kingdom, the United States and Australia suggested that some women members of fire services were likely to encounter a variety of discriminatory and other negative experiences, which might lead to early resignation.

There are few published reports available that provide any systematic accounts of the experiences of women volunteers in Australian volunteer-based fire services. A report prepared by Country Fire Authority, which summarised the findings from 51 focus groups of CFA volunteers, noted that 'In many cases, brigades were viewed as 'boys clubs' or 'cliques' which inhibited the involvement of 'outsiders''(p. 7), and:

> For women, perceptions existed about male chauvinism within brigades and the wider community; women lacked knowledge and/or confidence about roles available to them within CFA. Many women had significant barriers to attendance at CFA through the responsibilities of childcare and unpaid work. (p. 8)(Country Fire Authority, 1998)

In a discussion of changes to the Australian workforce, Palmer (2003) noted an increase in the number of women entering the workforce, especially in part-time positions. She identified women who worked part-time as a potential source of fire service volunteers—especially for daytime crewing. However, she also observed that childcare responsibilities were likely to prove a barrier to high levels of participation by women in the fire service. In her report to a Fire Service Board, Palmer referred to the work of (Benn, 2001), who discussed in detail issues of childcare impacting on fire service and SES volunteering.

The South Australian Country Fire Service commissioned a survey of 1,495 former volunteer firefighters who left the service between January 2004 and May 2005. Overall, 205 responses (14%) were received and analysed by the consultants. The report on the survey noted that 'Women felt both isolated and sidelined'. Many cited the need for more women (p. 16)—presumably to counter feelings of isolation and being discriminated against in relation to opportunities for full participation in firefighting activities.

Our Studies 4 and 5 are among the few focusing on women volunteers in the Australian fire services. Hitherto, such research had been sparse but indicated that some women were likely to experience difficulties specifically related to gender issues. However, beyond a clear indication that childcare responsibilities impacted particularly on women volunteers, the

nature, extent, and severity of gender-related issues they experienced in Australian fire services was unknown.

Most of our studies recorded the gender of respondents, enabling us to analyse the effects of a range of issues on female volunteers. In 2009, we prepared a multi-agency Occasional Report integrating the major findings regarding women volunteers from seven of our studies (Beatson, Birch, McLennan, Cowlishaw, & Hayes, 2009). Selected findings from that report are present below.

Intention to remain

Five of our surveys contained an item to measure respondents' intention to remain with the fire service in 12 months. The item asked, 'How likely is it that you will still be a [fire service] volunteer in 12 months?', and provided respondents with a five-point response scale from 'Very unlikely' to 'Very likely' with 'Don't know' at the mid-point. We observed significant gender differences in Study 3a (recruits after 6 months) and Study 17 (volunteers of all lengths of service), and a marginal gender difference in Study 13 (a smaller sample of recruits after 6 months). The results, in Table 45, show that compared with men, the percentages of women reporting that they were 'Very likely' still to be with the fire service in 12 months was appreciably lower in these three studies.

Table 45 Intention to remain by gender (from multiple studies)

	Percentage within gender					
	Study 3a		Study 13		Study 17	
Responses	Men	Women	Men	Women	Men	Women
Very unlikely	1.0	2.0	1.6	3.9	4.2	7.2
Somewhat unlikely	0.2	1.1	1.7	0.6	0.0	1.4
Don't know	3.6	4.8	3.3	5.8	2.1	1.4
Somewhat likely	10.2	14.8	8.7	18.2	7.7	17.4
Very likely	85.0	77.3	84.7	64.6	86.0	72.5
n	866	454	698	154	143	69

Feeling accepted, welcomed or included

In a number of our surveys, we asked respondents about the extent to which they felt accepted, welcomed, appreciated or included. The statement 'I feel that I have been fully accepted into the brigade' was included in three surveys: Studies 3a, 3b and 13. While there was no evidence of any gender difference in feeling accepted in these three studies, in Study 9, a very similar question worded, 'I feel that I have been fully accepted into the brigade/group/unit' did show some gender differences. The responses from 99 men and 29 women who had completed minimum skills training were as follows: 'Strongly disagree' (1.0 vs. 3.4% respectively), 'Somewhat disagree' (1.0 vs. 13.8%), 'Don't know' (6.1 vs. 6.9%), 'Somewhat agree' (38.4 vs. 27.6%), and 'Strongly agree' (53.5 vs. 48.3%). The responses to this item suggest that women volunteers may feel less accepted than their male counterparts. Indeed, summing the 'Agree' options suggests that 91% of male firefighters

felt accepted, compared with 76% of female firefighters. Conversely, while 2% of men indicated that they were not entirely accepted, 17% of women felt they were not entirely accepted.

The same four studies included the item, 'Most brigade members have made me feel welcome', and included the response options: 'Not at all true', 'Not very true', 'Somewhat true', 'Very true' and 'Not applicable.' There was no evidence among those who had completed minimum skills training that men and women differed in their responses to this item.

Three of our new volunteers studies included the item 'I feel that my being in the brigade is appreciated by other members', and included the following response options: 'Not at all true', 'Not very true', 'Somewhat true' and 'Very true'. The results, in Table 46, show that in Study 17 marginally lower proportions of women than men reported feeling appreciated. In Study 9, the proportion of men who reported feeling very appreciated (69%) was considerably higher than the proportion of women (51%). However, in Study 3b, of new volunteers 12 months after joining, the differences between genders were marginal, perhaps because they had twice as long to fit in with other members of the brigade. This might suggest that women take longer to feel appreciated by their brigades than do men.

Table 46 'My being in the brigade is appreciated by other members' by gender

	Percentage within gender					
	Study 3b New volunteers at 12 months		**Study 9** New volunteers at 6 months		**Study 17** Volunteers of all lengths of service	
Responses	Men	Women	Men	Women	Men	Women
Not at all true	1.6	3.9	1.9	0.0	1.2	1.1
Not very true	1.7	0.6	1.3	6.2	2.8	5.1
Somewhat true	3.3	5.8	22.0	26.2	30.1	33.0
Very true	8.7	18.2	68.6	50.8	64.1	58.0
Not applicable	84.7	64.6	4.4	16.9	1.8	2.8
n	698	154	159	65	866	454

Finally, two studies, Study 17 (volunteers of all lengths of service) and Study 3b (recruits 12 months after joining) incorporated items about feeling included in the group. A gender difference emerged on the Study 17 item, 'I am included in the group by all members of my brigade', but not on the Study 3b item, 'I find I am being included in the group by all the members of my brigade'. The responses from 748 men and 157 women in Study 17 were as follows: 'Strongly disagree' (1.9 vs. 5.1%), 'Somewhat disagree' (5.7 vs. 9.6%), 'Don't know' (1.1 vs. 1.9%), 'Somewhat agree' (29.8 vs. 26.8%), and 'Strongly agree' (61.5 vs. 56.6%). There is therefore some evidence that women volunteers do not feel as included as their male counterparts do. However, the difference is quite small, and as such we detected it only in the survey with the larger sample size. It is notable, too, that this is a survey of volunteers of all lengths of service, not recent recruits.

Bullying, harassment and discrimination

Several of our studies provided useful information about the extent to which both men and women volunteers feel they have experienced bullying, harassment or discrimination in their brigade.

Study 17 (volunteers of all lengths of service) included three separate items: 'I have not been discriminated against in my brigade'; 'I have not been harassed in my brigade' and 'I have not been bullied in my brigade'. Analyses conducted with all respondents indicated that there was a gender difference on the discrimination item, but not the harassment or bullying items. On the discrimination item, the responses from 751 men and 158 women were as follows: 'Strongly disagree' (2.9 vs. 8.2%), 'Somewhat disagree' (3.7 vs. 5.7%), 'Don't know' (1.2 vs. 1.8%), 'Somewhat agree' (10.3 vs. 13.9%), and 'Strongly agree' (81.9 vs. 70.2%). Overall, then, whereas 6.6% of men indicated experiencing discrimination, 13.9% of women did so.

Study 3b (recruits after 12 months) included two similar items: 'I have never experienced bullying in [the fire service]' and 'I have never experienced harassment or discrimination in [the fire service]'. While there was no gender difference detected on the bullying item, the analysis of responses from 289 men and 123 women who had completed minimum skills training indicated that compared with male firefighters, a greater percentage of female firefighters had experienced harassment or discrimination. Responses from men and women, respectively, were as follows: 'Not at all true' (4.5 vs. 10.5%), 'Not very true' (0.7 vs. 5.7%), 'Somewhat true' (13.1 vs. 11.4%) and 'Very true' (81.7 vs. 72.4%). Thus, whereas 16% of women indicated they had experienced discrimination or harassment, only 5% of men did so.

Taken together, the responses from Studies 17 and 3b suggest that women in Australia's fire services are two to three times more likely to experience discrimination than are their male counterparts. Even recruits who have been with the fire services for as little as 12 months appear to experience this.

Bullying, harassment or discrimination of women in leadership roles

From several theoretical perspectives, there are good reasons to expect differences in the extent to which men and women in leadership positions experience bullying, discrimination, and harassment. Data from the Study 17 are particularly useful for examining the extent to which this is the case; the large sample size together with information about respondent rank and separate items concerning bullying, harassment and discrimination permit comparisons between men and women occupying various roles.

Analyses were conducted separately for those occupying operational leadership positions (i.e. leading firefighter, 4th Officer or above) and those not occupying such positions. As shown in Table 47, there was evidence that a greater percentage of women than men occupying operational leadership positions experienced not only discrimination, but also harassment and bullying.

Table 47 Bullying, harassment or discrimination experienced by leaders by gender

	Percentage within gender					
	Have not experienced discrimination		Have not experienced bullying		Have not experienced harassment	
Responses	Men	Women	Men	Women	Men	Women
Strongly disagree	3.8	9.8	3.4	5.9	3.1	7.8
Somewhat disagree	2.3	7.8	2.6	13.7	3.8	11.8
Don't know	1.0	0.0	0.5	0.0	1.3	0.0
Somewhat agree	11.0	11.8	8.8	5.9	11.0	7.8
Strongly agree	81.8	70.6	84.8	74.5	80.8	72.6
n	390	51	388	51	390	51

Summing the 'Strongly' and 'Somewhat disagree' options suggests that, of women leaders, 17% experienced discrimination, 20% bullying, and 19% harassment. In contrast, the corresponding figures for male leaders were 6%, 6%, and 7%. Among those not occupying leadership positions, however, there was no evidence of a gender difference in either bullying (9.4% of women vs. 10.0% of men) or harassment (7.5% of women vs. 8.0% of men).

Thus, there is evidence that among volunteers occupying leadership positions, women are approximately three times more likely than men to indicate that they have experienced bullying, discrimination and harassment in the course of their volunteering. Looked at slightly differently, women who take on leadership positions appear to be twice as likely as those who do not to experience bullying and harassment. It would appear to be the case that women who challenge dominant gender stereotypes, threatening the status quo, are twice as likely as those who do not to become the targets of bullying and harassment.

Maltreatment affects gender differences in intentions to remain

Beatson conducted analyses on data from Study 17 and showed that 'lower intentions of remaining among female than male firefighters are in part explained by women firefighters in leading positions experiencing negative treatment more so than their male counterparts'. She also used Studies 17 and 3b to show that the relationship between bullying and gender predicted lower intentions to remain among women than among men. She concludes that 'consistent with other research … women are more likely than their male counterparts to respond to bullying by leaving the organisation.' (Beatson, et al., 2009)

Attitudes towards measures to reduce maltreatment

In Study 10, respondents were asked, 'Do you think that the organization would benefit from education, training, or information regarding bullying, harassment and discrimination?' Consistent with the responses to questions about having experienced these negative behaviours, we observed a significant gender difference. The responses, in Table 48, show that a greater percentage of women than men agreed that the organisation would benefit from measures to combat bullying, harassment and discrimination.

Table 48 Attitudes to maltreatment mitigation measures

	Attitudes to interventions against maltreatment	
Responses	Men	Women
Strongly disagree	9.4%	5.4%
Somewhat disagree	14.0%	7.6%
Don't know	16.5%	5.4%
Somewhat agree	35.0%	35.1%
Strongly agree	25.1%	39.5%
n	1,194	185

Gender differences in receipt of induction information

Women's reports of experiencing discrimination are supported by other evidence that women volunteers are treated differently from their male counterparts, and very early in their service. Three surveys of new volunteers (Studies 3a, 9 and 13) included the item 'Have you been given induction information that explained things such as structure of brigade, OH&S, and attendance?' Significant differences emerged on the Study 3a, and Study 9, and similar differences emerged in Study 13. As shown in Table 49, in all three cases a greater percentage of women than men indicated that they had not received induction information.

Table 49 Gender differences in receipt of induction materials

	Percentage within gender					
	Study 3a		Study 9		Study 13	
Responses	Men	Women	Men	Women	Men	Women
Yes	86.0	76.0	71.3	55.6	93.0	82.1
No	11.3	17.8	22.4	44.4	6.3	16.4
Don't know	2.7	6.2	6.3	0.0	0.7	1.5
n	865	449	160	63	144	67

Overall, women respondents were about twice as likely as their male counterparts to report that they had not received induction information. In Studies 3a and 13, about 17% of women said they had not received induction information. The percentage of women who

had not received induction information in Study 9 was notably higher (44%); however, the percentage of men indicating that they had not received this information was also higher in this study suggesting part of the cause may be specific to the relevant fire agency.

It is also worth noting that further analyses in the larger Study 3a showed the difference emerged for both operational and non-operational volunteers. The responses from those who had, versus those who had not, completed minimum skills training are presented in Table 50.

Table 50 Receipt of induction material by gender and operational status

	Percentage within gender			
	Operational		Non-operational	
Responses	Men	Women	Men	Women
Yes	89.6	83.7	78.1	67.7
No	8.3	12.0	18.7	24.4
Don't know	2.1	4.3	3.2	8.1
n	613	234	219	186

As shown in the table, those in non-operational roles were more likely than others to indicate that they had not received induction information explaining brigade structure, OH&S issues and attendance requirements. This was the case among men as well as women. Thus, the overall gender differences do not appear to be due to the higher percentage of women in non-operational positions. It is somewhat concerning that almost one in four non-operational women indicated that they had not received induction information, and that one in three either thought they had not received this information or were unsure if they had received it. This raises serious questions not only about the extent to which women in non-operational roles are counted as important members with a significant role to play, but about the extent to which they are adequately briefed about OH&S issues.

In her survey of Australian women firefighters, Childs (2006) similarly found 21% of respondents indicating that induction was unlikely to have occurred when they first joined the fire service. It may be the case that those responsible for processing the paperwork associated with induction of new members do not value non-operational members as highly as operational members, or women as highly as men—independently of their operational status. It would be prudent for fire agencies to establish why these discrepancies between men and women, and operational and non-operational volunteers are occurring, and take steps to rectify the situation.

We conducted further analysis to test whether having received induction information predicted intentions of remaining. 'Yes' responses were coded 1, while 'No', and 'Don't know' responses were coded 0. Regression analysis on the Study 9 data, controlling for

gender, showed that receipt of induction information predicted intentions of remaining[42], as did the Study 3a data[43]. In contrast, receipt of induction information was not related to intentions of remaining in Study 13.

To summarise, data from all three surveys suggests that a greater proportion of female than male volunteers do not receive adequate induction information, at least in their first 6 months of volunteering. Moreover, data from two out of the three surveys provide evidence that the perception one has not received this type of information predicts lower intentions of continuing to volunteer with the service.

Physical strength and fitness

As noted in the section of the present report on age and fitness (p. 59), imposing mandatory health and fitness requirements on volunteer firefighters would have a more detrimental effect on the numbers of female than male volunteers. This preliminary evidence suggests that imposing the ACT ESA fitness requirements in other Australian fire agencies would lead to forced retirements from operational duty of about 40% of female and 33.5% of male volunteers.

LEADERSHIP

(Studies 11 and 15)

It is evident from the preceding results that there are several factors affecting retention that are difficult for fire agencies or brigades to influence. These include members resigning owing to: leaving the district, age and infirmity, and the competing demands of work and family. However, results in a survey of volunteer firefighters who had recently resigned (Study 11), indicated that about 25% of respondents left for reasons of dissatisfaction with the volunteering experience. Respondents who reported dissatisfaction described a range of reasons for their discontent, but the most frequent category (n = 96, 34%) was of perceptions of unhappy brigade life:

- Poor brigade climate: conflicts, factionalism, exclusion, bullying: n = 64
- Poor brigade leadership: autocratic, favouritism, incompetence: n = 23
- Negative impacts of other volunteers: lazy, unsafe, troublemakers: n = 9

The reasons given include poor leadership itself, or behaviour among volunteers that good leadership would be likely to address. Improving the quality of volunteer management among agency personnel and the quality of leadership among brigade personnel is likely to reduce these sources of dissatisfaction and improve morale, the level of participation, and the retention of volunteers.

We conducted a series of studies among fire agency personnel, including senior managers, volunteer leaders and volunteers, to gain a more detailed insight into the limitations of current management and leadership, and views on how to improve them.

[42] B = 0.53, SE = 0.11, t = 5.04, p < 0.001, and bootstrap results confirmed that the indirect effect was significant (95% CI: –0.192 to –0.008).

[43] B = 0.20, SE = 0.05, t = 4.03, p < 0.001, and bootstrap results confirmed that the indirect was significant (95% CI: –0.038 to –0.007).

In Study 15, we asked fire agency employees who have supervisory responsibilities over volunteers what defined good and poor leadership in the fire service. Their responses are summarised below.

Skills and abilities that make a good brigade leader

- The core of good volunteer brigade leadership is the same as good leadership anywhere: commitment to the job and credibility to the members.
- Charismatic local icons do not necessarily make good brigade leaders, but the election system means that they sometimes become brigade chiefs. Then there are likely to be problems.
- When a brigade is at risk of falling over, the leader really needs to encourage, persuade, and emphasise the importance of working together as a team.
- There is a lot to be done in getting it accepted that a brigade, like any workplace, has to be fair in how it operates. Acceptance of diversity continues to be a problem, especially in rural brigades.
- Willingness to delegate and promote teamwork. Really good brigade chiefs engage the membership, delegate, resolve conflicts, advocate for their brigade by keeping in touch with the Region, and they have a strategic way of thinking about how to position their brigade in the community.
- Listening skills—many people who want to become chief want to use their telling skills.
- The ability to coach members in lifting their game.
- The brigade functions as a team. There is a lot of delegation of responsibility, all the way down the line. The personality of the chief is important. He behaves just the way a CEO of a small business should. Keeps his finger on the pulse, talks to members, keeps them informed, talks to staff at District and Region, knows members' strengths and weaknesses. He makes sure members are involved.
- There is excellent communication within the brigade, information flows freely to all.
- Tasks are spread around the membership, but it is always clear who is responsible for what. There are disagreements to resolve, but people seem to always respect others.
- Most of the good brigade leaders are leaders in their jobs, so they bring this experience to their brigade leadership. They like people, and they like to listen.
- It is close-knit, but members are approachable and new volunteers are welcomed.
- There is an active social program involving families of members. The leadership is in no way authoritarian. The members are active in other community roles.
- It is a middle-sized brigade, about 15 active members. The officers are very experienced. It is a very well-disciplined brigade. You know there will never be any problems at fires.
- The chief is very highly respected because he knows his job. Equipment is well maintained. The chief is a strong advocate for the brigade, but has no problems with Region and District staff.
- It is a very democratic brigade. Members meet frequently to make decisions (about equipment and training mostly). Things are voted on, everyone has their say, but at the end of the day, a decision is made one way or the other.

Brigade leadership skills that are sometimes lacking

- What is most lacking is leadership training courses that are action-oriented: what and how to do it, how to recognise and address problems in a brigade.
- Containing discontent and factionalism, especially in hobby brigades—I know of one brigade where there were three coups in a year! And each outgoing brigade chief undercut the incoming chief.
- People management generally, but especially conflict management and resolution.
- Keeping the need for leadership succession planning in mind.
- Being able to establish realistic goals for the brigade.
- There are problems with composite brigades. There can be an adversarial stance between career firefighters and volunteers.
- Characterised by selfishness about leadership—'I want to be the brigade chief!' The officers are defensive toward the members, pull rank when challenged rather than discuss issues. It seems that training centres on how to obey the rules. There is a lack of empathy or respect toward the rank-and-file members.
- Poorly led, a one-man band. There is no delegation, just a rigid hierarchy. The chief has been the chief since forever. He is in his 70s. He is authoritarian, not approachable, not interested in new members, or in new ideas, or in new technologies and new approaches to firefighting. He is the one with all this experience, *he* knows.
- No one is really interested in training, a lot of the members are shift workers, the officers are reluctant to organise training. So they are not confident, and really not able to do a great deal.
- The brigade was effectively hijacked. The new chief doesn't want to actually do anything, doesn't want to actually lead the brigade, it has become more or less just a drinking club.
- It is a 'dead' brigade, effectively. The chief hoards information and does not pass it on to the membership. There is no training plan. The members hardly ever meet. There is nothing on the brigade noticeboard; there are no manuals or handbooks at the station. The chief and the officers actually insulate the brigade members from the fire service.

RECRUITMENT OF VOLUNTEERS

(Study 2, 3a, 9 and 10)

THE IMPACT OF MAJOR FIRES ON RECRUITMENT RATES

(Study 10)

Following the Black Saturday fires in 2009, CFA and other volunteer fire agencies reported a surge in the number of membership inquiries and new recruits. Anecdotal evidence from a number of fire agencies describes similar surges following large fires in past years. We explored this phenomenon with data from Study 10, a survey of volunteers, by listing years in which respondents joined alongside years in which severe bushfires occurred. Table 51 lists, by year, the number of respondents who reported joining the fire service and summaries of major bushfire losses, as documented in a report from the Australian Government Department of Transport and Regional Services (2005). The Study 10 data are based on a sample of volunteers who were current in 2007, so the number who joined in each year diminishes with natural attrition as the data extend back in time. Figure 36 illustrates the relationship in a bar chart showing the number of respondents who joined each year from 1977. Years in which high rates of bushfire damage or mortality were reported have been coloured black. Such years are often followed by a year in which the number of respondents who joined increased compared with the previous year.

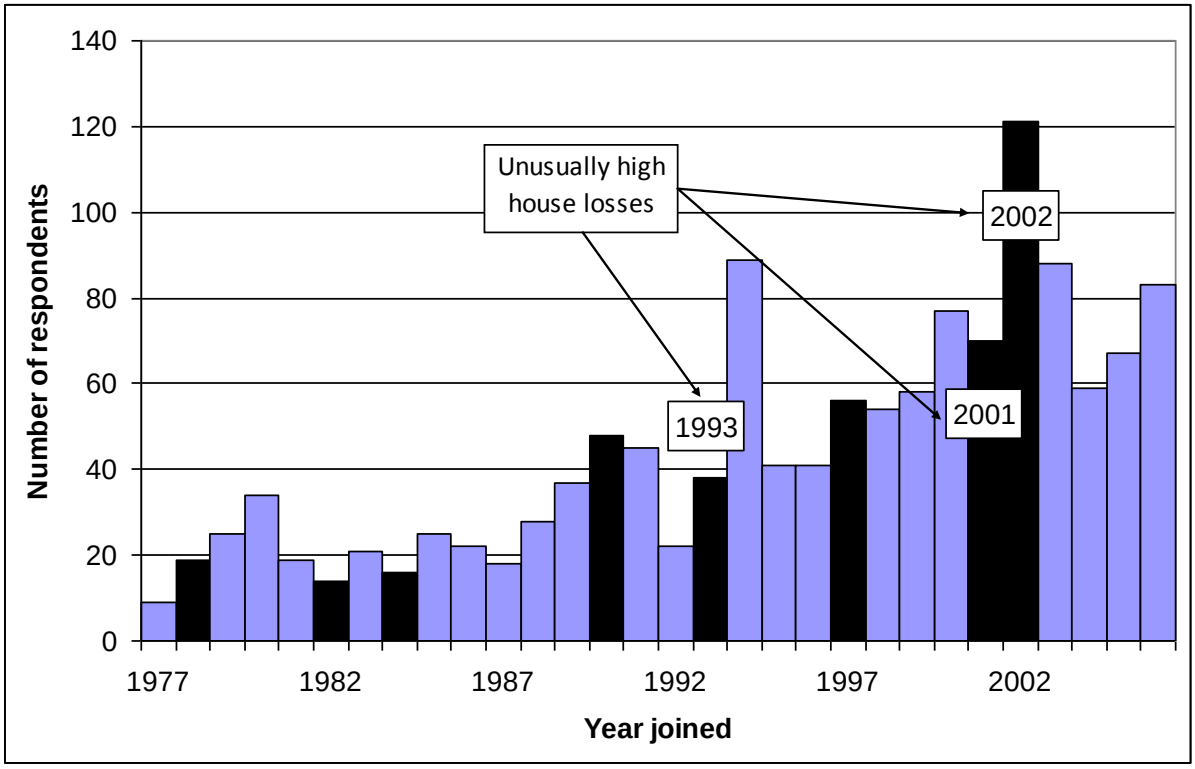

Figure 36 Year respondent first started as a volunteer firefighter
Source: Study 10 and (Australian Government Department of Transport and Regional Services (DOTARS), 2005)

However, years of high bushfire damage are not always followed by surges in volunteer membership. The Department of Transport and Regional Services noted in its report that the salience of a bushfire season to the general public may not correspond closely to an objective assessment of the severity of the season (2005). The data from Study 10 suggest that the general public is more sensitive to house losses than other indicators of bushfire risk. They show that years in which unusually high levels of house loss were reported, 1993 (286) and 2001 (109), were followed by years in which the number of respondents who had joined increased markedly.

While it might seem to be self-evident that severe bushfire seasons are followed by surges in volunteer recruitment, it is equally plausible that rates of recruitment might decrease owing to heightened fear among potential recruits of injury or death, or anxiety about leaving family or assets unprotected. In fact, among the respondents to Study 2, who had never volunteered with a fire service, 31% gave as a reason for not volunteering 'I would find it too upsetting, distressing or frightening' (Table 62). However, while an appreciable proportion of the population are deterred from volunteering through fear of harm, other people are motivated to volunteer when there is heightened public consciousness of the risk of bushfire losses, particularly house losses. There may be a variety of factors that affect the level of consciousness of bushfire risk among the population, including the extent and nature of media coverage or personal experience of bushfires, either directly or through friends or relations.

The finding that people appear to volunteer more following a severe fire season is consistent with other findings in the present report, for example, that volunteers are strongly motivated by a sense that the role of the fire service is important (Table 43, Item 1 of the present report), that volunteering enables them to contribute to protecting the members of their community, and that concerns about injury or death do not rank highly among barriers to participation and are rarely mentioned among respondents' written comments. However, a moderate percentage of respondents do worry about leaving their family or properties unprotected when they are away with the fire service (Table 62, Item 6 of the present report).

Table 51 Respondents who joined each year and history of major fires

Source: Study 10 and (Australian Government Department of Transport and Regional Services (DOTARS), 2005)

Volunteers in Study 10			Major wildfire events and losses				
Year first joined	Count	Change from previous year (%)	Fire season	No. of civilian deaths	Area burnt (ha)	Buildings lost	Losses
1977	9						
1978	19	111	**1978–79**		**50,000**	**5**	**Heavy stock losses**
1979	**25**	32					
1980	34	36					
1981	19	–44					
1982	14	–26	**1982–83**		**60,000**		**$12 million worth of pines**
1983	**21**	50					
1984	16	–24	**1984–85**		**3,500,000**	**5**	**40,000 stock, $40 million of damage**
1985	**25**	56					
1986	22	–12	1986–87		10,000		
1987	18	–18	**1987–88**	**4**	**180,000**		
1988	**28**	56					
1989	37	32					
1990	48	30	1990–91		280,000	8	176,000 sheep, 200 cattle, hundreds of km of fencing
1991	45	–6	1991–92	2		14	
1992	22	–51					
1993	38	73	**1993–94**	**4**	**800,000**	**286**	**206 houses, 80 other buildings**
1994	**89**	134					
1995	41	–54					
1996	41	0					
1997	56	37	1997–98	3	500,000	10	10 houses
1998	54	–4					
1999	58	7					
2000	77	33					
2001	70	–9	**2001–02**		**744,000**	**109**	**109 houses, 6000 stock**
2002	**121**	73	2002–03	3	1,464,000	86	86 houses, 3,400 stock, 151 days of severe fire activity
2003	88	–27					
2004	59	–33					
Total	1,344						

AGE OF JOINING

(Studies 3a and 10)

Data on the age at which volunteers join the fire services can be obtained from several of the Volunteerism Project studies. Note that the details will vary from state to state depending on the relevant agency's joining-age regulations. In this section we analyse age of joining data from Study 10, a survey of volunteer firefighters of all lengths of service, and Study 3a, and a survey of recruits six months after joining.

The joining-age distribution from Study 10 has been calculated from respondents' reported year of birth, year of joining and the survey date. It has been tabulated in 5-year groupings for the full age range in Table 52, and in single-year increments for the younger half of respondents in Table 53. The fire service involved in this study currently allows recruits to join as cadets between the ages of 12 and 15 years, and as full volunteers from 16 years of age[44].

Joining ages calculated from Study 10 data varied between 7 and 70 years[45]. The median joining age was 27 years. The results in Table 52 show that almost one third of respondents joined before the age of 20 years, and two thirds by the age of 34 years.

Table 52 Age on joining in 5-year age groups (Source: Study 10)

n = 1,589

Age (years)	Frequency	Valid Percentage	Cumulative Percentage
<20	467	31.7	31.7
20-24	178	12.1	43.7
25-29	179	12.1	55.9
30-34	161	10.9	66.8
35-39	160	10.8	77.6
40-44	123	8.3	86.0
45-49	78	5.3	91.3
50-54	66	4.5	95.7
55-59	41	2.8	98.5
60-64	18	1.2	99.7
65-69	2	.1	99.9
70-74	2	.1	100.0
Total	1,475	100.0	

[44] Note that respondents aged less than 18 years when completing the questionnaire were asked to forward a consent form signed by a parent or guardian. No responses were received from respondents who were aged less than 18 years.

[45] The joining ages calculated for a small number of respondents were less than the current minimum of 12 years, but these results may be owing to respondents' inaccurate recollections of the year they joined, or to less formal membership arrangements in rural areas in a past era.

To examine more closely the age distribution of younger recruits, Table 53 displays the age of joining in single-year increments from the lowest age reported up to the median age of 27] years. The bar chart in Figure 37 shows the entire joining-age distribution in single-year increments. Approximately 9% of respondents appear to have joined as cadets aged 12-15 years. The lower rate of joining at cadet ages may reflect the fact that many brigades do not run cadet programs. The most common single-year age for joining was 16 years (6.5%), the age at which people are first eligible to join as full volunteers. This suggests that young people are enthusiastic to join as soon as they are old enough. About 23% of respondents had joined before reaching the age of 18. The age distribution drops substantially in the first few years such that by the age of 20, only half as many respondents (3.1%) joined. For the ages of 21-40 years, the percentage of volunteers joining in each age year fluctuates around 2%. Beyond the age of 40 years the percentage of volunteers joining declines steadily through to the age of 70.

Table 53 Age on joining in 1-year increments, youngest 50% (Source: Study 10)
n = 1,589

Age (years)	Frequency	Valid Percentage	Cumulative Percentage
7	2	.1	.1
9	1	.1	.2
10	3	.2	.4
11	9	.6	1.0
12	7	.5	1.5
13	15	1.0	2.5
14	47	3.2	5.7
15	63	4.3	10.0
16	**96**	**6.5**	**16.5**
17	93	6.3	22.8
18	70	4.7	27.5
19	61	4.1	31.7
20	46	3.1	34.8
21	43	2.9	37.7
22	30	2.0	39.7
23	32	2.2	41.9
24	27	1.8	43.7
25	40	2.7	46.4
26	24	1.6	48.1
27 (median)	**42**	**2.8**	**50.9**
...	...	...	...
Total	1,475	100.0	

A consideration in using the joining-age distribution from Study 10 is that the sample was drawn from all volunteers in the participating fire service. Consistent with length of service data from the exit survey in Study 11, the respondents to Study 10 had served for up to 50 years with a median of 10 years. As such, the joining ages reported relate to volunteers who joined up to 50 years ago, and on average reflect joining age trends in 1997, 10 years prior to the survey.

A more current age distribution of recruits emerged from Study 3a, a study of all new volunteers who joined another fire agency over a 12-month period, surveyed 6 months after they joined. Study 3a achieved a large sample size of 1,361 respondents, 32% of volunteers who joined during the sampling period. In contrast to Study 10, the respondents in Study 3a all joined at about the same time (May 2005 – April 2006) so historical trends in joining-age are absent and year of joining is known precisely. However, Study 3a excluded volunteers who were under the age of 18 at the time of the survey for ethical reasons. Therefore the youngest joining-age in the data set is 17 years and 6 months. One advantage of the methodology in Study 10 was that, because the sample consisted of respondents with all lengths of service, it included valuable data on respondents who had joined when they were much less than 18 years. The fire agency participating in Study 3a also allows people to join as full volunteers from the age of 16 years, and some brigades operate junior firefighter programs for people aged 11-15 years. The absence of joining-ages below 17½ years from the Study 3a data is an important consideration when comparing it with the Study 10 data. The median age of joining from Study 3a was 40 years, much higher than the median of 27 years in Study 10. The difference is mainly due to the absence of respondents aged less than 17½ years from Study 3a.

Table 54 shows the age of joining for Study 3a respondents in 5-year age groups. About one third of recruits joined when they were less than 31 years of age and two thirds below the age of 45 years. The oldest recruits joined when they were 77 years of age.

Table 54 Age on joining in 5-year age groups (Source: Study 3a)
n = 1,361

Age (years)	Frequency	Valid Percentage	Cumulative percentage
<20	113	8.6	8.6
20–24	149	11.4	20.0
25–29	116	8.9	28.9
30–34	135	10.3	39.2
35–39	132	10.1	49.2
40–44	182	13.9	63.1
45–49	139	10.6	73.7
50–54	113	8.6	82.4
55–59	107	8.2	90.5
60–64	67	5.1	95.6
65–69	33	2.5	98.2
70–74	22	1.7	99.8
75–79	2	.2	100.0
Total	1,310	100.0	

Table 55 shows the lower half of the joining-age distribution from Study 3a in single-year increments.

Table 55 Age on joining in single-year increments (Source: Study3a)
n =1,361

Age (years)	Frequency	Valid percentage	Cumulative percentage
16	7	.5	.5
17	19	1.5	2.0
18	41	3.1	5.1
19	46	3.5	8.6
20	30	2.3	10.9
21	45	3.4	14.4
22	33	2.5	16.9
23	18	1.4	18.2
24	23	1.8	20.0
25	19	1.5	21.5
26	35	2.7	24.1
27	23	1.8	25.9
28	21	1.6	27.5
29	18	1.4	28.9
30	28	2.1	31.0
31	25	1.9	32.9
32	24	1.8	34.7
33	30	2.3	37.0
34	28	2.1	39.2
35	32	2.4	41.6
36	23	1.8	43.4
37	32	2.4	45.8
38	22	1.7	47.5
39	23	1.8	49.2
40 (median)	**38**	**2.9**	**52.1**
41	36	2.7	54.9
...	...	...	...
Total	1,310	100.0	

Figure 37 and Figure 38 show the distributions of joining-age from Studies 10 and 3a respectively as bar graphs. The median ages of joining (27 and 40 years respectively) are shown as darker bars. The age of 18 years is also highlighted with a darker bar, as it is the age of eligibility for a driver's licence in both states, and the age most tertiary students commence. A driver's licence may facilitate volunteers by enabling them to drive to their fire station for callouts, but it also gives them the freedom to travel outside the effective callout radius of their local brigade.

In both studies, the most frequent ages of joining are in early adulthood. In Study 10, the peak ages for joining were 16 and 17 years, and joining rates fell away rapidly between the ages of 18 and 22 years. As discussed, Study 3a excluded respondents who joined when aged less than 17½ years. In the Study 3a graph, there is a dip in joining rates between the ages of 23 and 40, whereas in Study 10 the rate of joining drops from ages 17 to 20 years and then remains about level until the age of 40, after which it declines steadily to the age of 72. In Study 3a, the most common joining-age is 19 years. Rates of joining are high between 18 and 21 years but then fall in the low 20s and rise unevenly up to the age of 44 years. Joining rates are consistently higher among recruits aged between 40 and 46 years, after which they steadily decline to the age of 77 years.

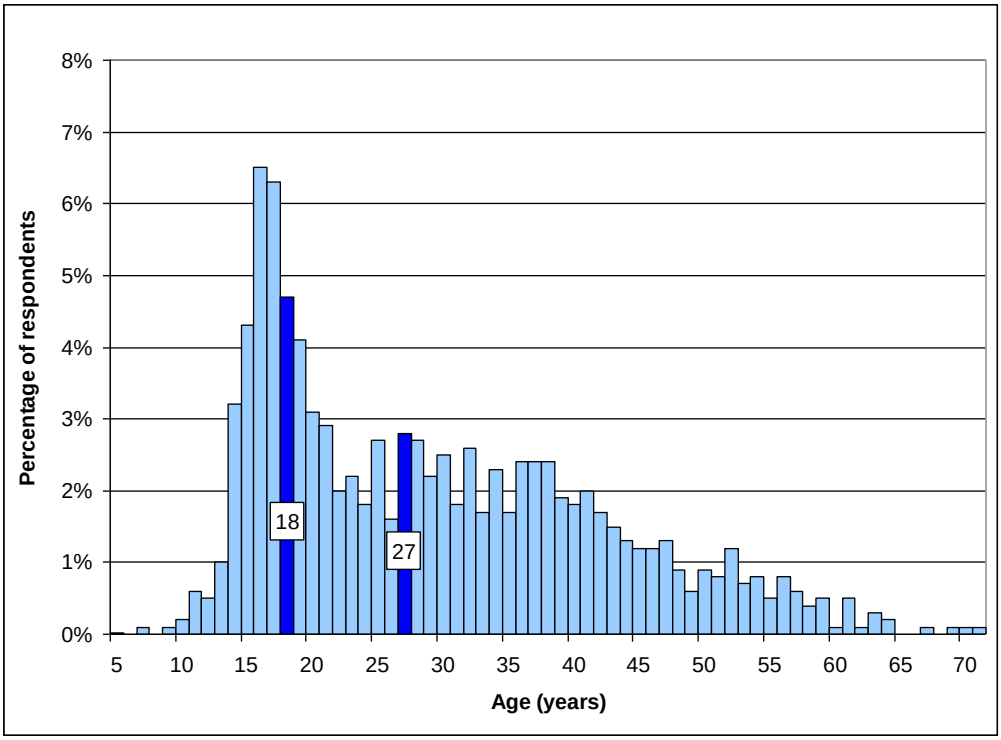

Figure 37 Age of joining; volunteers of all lengths of service (Study 10)

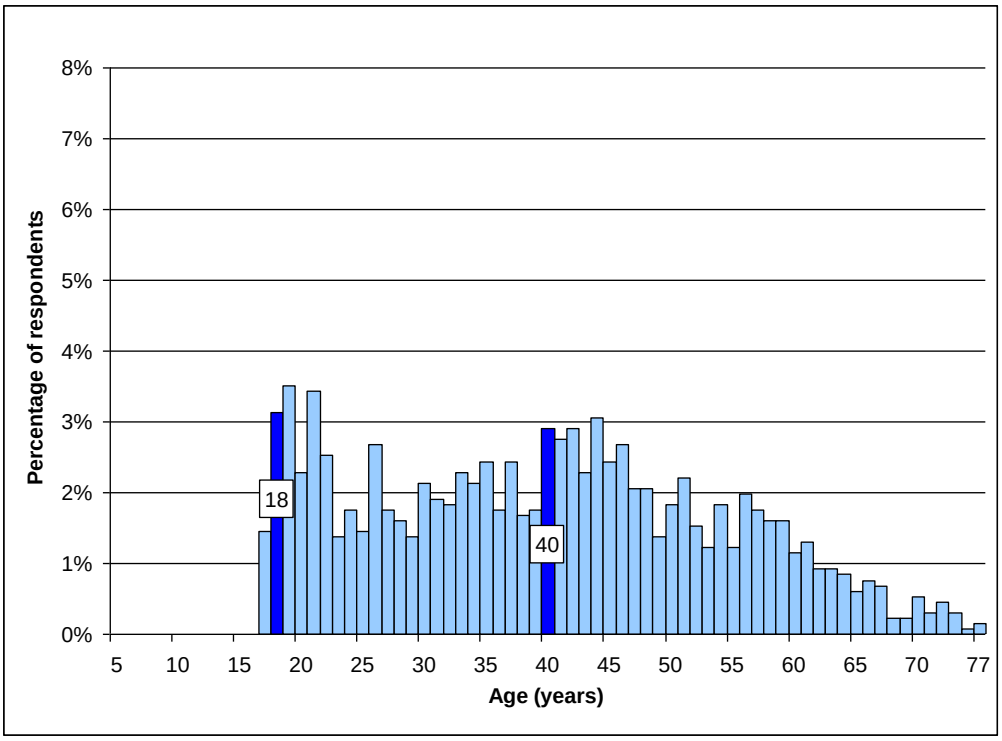

Figure 38 Age of joining; recruits, 6 months after joining (Study 3a)

These age-related patterns of joining the fire service are consistent with lifecycle factors influencing recruitment. We explored these factors in several studies, notably Study 2 (community members who have never volunteered as firefighters) and Study 3c (new recruits, 3 years after joining). These are discussed in the next two sections of the present report.

REASONS FOR JOINING

(Study 3a and 9)

In Studies 3a and 9, new recruits 6 months after joining were asked why they decided to join the fire brigade. They were prompted with 10 possible reasons and asked to endorse each reason as either: 'Very important', 'Somewhat important' or 'Not important'. The percentage of respondents endorsing 'Very' or 'Somewhat important' is presented in Table 56, arranged in descending order of the percentages from Study 3a.

Table 56 Why did you decide to join the fire brigade?

	% endorsing reason as 'Somewhat' or 'Very important'	
	Study 3a	Study 9
To protect the community	94.8	96.0
To give back to the community	94.7	95.6
Wanted to learn new skills	83.9	79.7
My local brigade needed volunteers	80.3	86.8
To protect own property	77.8	77.7
I have friends or family in the [fire brigade]	76.0	69.4
Wanted the camaraderie or mateship	70.3	66.8
Wanted the challenge of firefighting	64.8	61.9
Felt more secure knowing someone was doing the job	60.9	62.2
Felt it would improve career opportunities	38.1	22.8

We adapted these statements from three previous studies of Australian volunteer firefighter motives[46]. Both the scores and the rankings are consistent between Studies 3a and 9, which were carried out in different states[47]. We subjected Study 3a data on the 10 motivation items to factor analysis and interpreted the results as forming three categories of motivation: I, Self-oriented motives; II, Fire Safety Awareness-oriented motives; III, Community-oriented motives (McLennan & Birch, 2009). We then conducted a MANOVA[48] in which the independent variable was age group in the groupings 18–34; 35–44; 45+ years, and the dependent variable was the score on the three motivations.

We concluded from our analyses that overall, individuals are motivated to become volunteer firefighters by a mix of community-contribution desires, fire safety concerns, and enlightened self-interest. In relation to age-related motivations, the data suggest that self-oriented motivations (career advancement, skills development, new challenges and friendship opportunities) were indeed more important on average for the 18–34-year age group than volunteers in the older two age groups. However, this did not come at the expense of the other two motivations. Volunteers in this age group were just as motivated

[46] Three studies that investigated Australian fire service volunteers' reasons for volunteering have been reported previously: (Aitken, 2000), (Clancy, 2005) and (Gare, 2000) All three indicated the importance of a mixture of community-oriented and self-oriented motives, with community-oriented motives dominating. However, all three suffer from methodological shortcomings:

1. Most respondents had been fire service volunteers for several years (median ~10 years), so that self-reported motivations for joining were confounded with motivations for remaining.
2. The instructions prevented respondents from indicating the possible operation of multiple motives and/or differences in the relative importance of motives.
3. None examined possible age-related differences in motivations for volunteering.

[47] The main differences were that the item 'my local brigade needed volunteers' was more strongly endorsed in Study 9, and the item 'I felt it would improve my career opportunities' was much more strongly supported in Study 3a. Both of these differences could arise because the fire agency in Study 3a also employs career firefighters, while the agency in Study 9 does not. The practice of employing career firefighters may alleviate the need for volunteers in some communities, and may also create a career path that some volunteers find attractive.

[48] Multivariate analysis of variance.

by perceived safety concerns and community needs, on average, as were the two older age groups.

While it may be that the observed differences in relative importance of self-oriented motivations reflect different generational values, as argued by (Salt, 2006a, 2006b) and others, it may also be that they result simply from life-cycle factors: people aged 18–34 years are more likely to be in the early stages of career and friendship network development compared with older volunteers. Thus, it is not surprising that self-oriented motivations of 18–34-year-old volunteers were reported to be relatively more important compared with those of older volunteers.

Regardless of the extent to which the findings reflect generational values or life-cycle factors, they suggest that potential volunteer firefighters aged 18–34 years are somewhat more likely (compared with older individuals) to be attracted by the personal benefits resulting from fire service volunteering: career enhancement, skills development, the challenge, and opportunities for friendship and camaraderie. This implies that volunteer-based fire services wishing to attract younger volunteers (<35 years) should employ a recruiting strategy that emphasizes the personal benefits likely to accrue to the volunteer, but not at the expense of the motives of contributing to community safety and community development.

These findings are derived from results in Study 3a, but appear to be confirmed in Study 9, a similar study of recruits in another fire service 6 months after joining.

UNTAPPED POTENTIAL: INTEREST AMONG PEOPLE WHO HAVE NEVER VOLUNTEERED (Study 2)

Study 2 was a postal survey of all households in 29 small communities in the inland parts of an Australian state to investigate how community members viewed the fire service and what factors influenced their consideration of volunteering as a firefighter. While the respondents to this study included some current and ex-volunteer firefighters, all the analyses in this section are confined to respondents who had never volunteered with a fire service. Many of these small rural communities are experiencing population decline due to rural restructuring and the effects of drought.

The questionnaire asked respondents how 'interested' they were in volunteering with the fire service and also asked them to assess how 'likely' it was that they would do so within 12 months. It distinguished between volunteering 'as a firefighter', and volunteering 'in a specialist role (communications, assisting at fire control centres, catering, community education, fire prevention, etc.)'.

While almost 40% of respondents expressed 'interest' in volunteering in a specialist, non-firefighting role, only about 20% were interested in a firefighting role. About one third of those who expressed 'interest' in either role respectively thought it 'likely' that they would volunteer within the next 12 months.

In other words, only one sixth of respondents who expressed any interest in some role in fire service volunteering thought there was a likelihood of volunteering for an operational role within 12 months.

Table 57 Interest in, or likelihood of, volunteering with the fire service

	Role	%
Somewhat or very interested in volunteering in a:	Specialist role	39
	Firefighting role	21
Somewhat or very likely, in the next 12 months, to volunteer in a:	Specialist role	13
	Firefighting role	8

The findings suggest that a relatively small proportion of the population of regional Australia, who have not already volunteered with the fire services, is likely to do so. It is therefore important that we understand more about what motivates and inhibits this limited resource from volunteering.

GENDER DIFFERENCES IN INTEREST OR LIKELIHOOD

(Study 2)

The results in Table 58 show that twice as many men (30%) than women (16%) were 'Somewhat or very interested' in firefighting roles. About half the number of men (16%) and one third the number of women (5%) thought it 'Somewhat or very likely' that they would volunteer in a firefighting role within the next 12 months.

A slightly higher proportion of men (35%) and nearly three times as many women (43%) were 'Somewhat or very interested' in a specialist non-firefighting role than a firefighting role. However, about 13% of both genders thought it 'Somewhat or very likely' that they would volunteer for a specialist role within the next 12 months.

Compared with men, women seemed to perceive more barriers to translating interest into likelihood. About 30% of women who were interested in a role thought it likely they would volunteer compared with about 40% of men.

Table 58 Interest in, and likelihood of, joining by role and g

	Percentage within gender	
	Male	Female
Interested in volunteering with the fire service in a firefighting role	30	16
Interested in volunteering with the fire service in a non-firefighting role	35	43
Likely to volunteer with the fire service in a firefighting role in the next 12 months	13	5
Likely to volunteer with the fire service in a non-firefighting role in the next 12 months	13	13

DIFFERENCES IN INTEREST OR LIKELIHOOD ACCORDING TO AGE

(Study 2)

Peoples' interest or likelihood of volunteering for firefighting varies with age. There appear to be three major reasons for this: (1) firefighting can be very demanding physically and mentally, and people's health and capabilities naturally diminish with age; (2) people's lifestyles and commitments vary with age, through pursuits such as study, work or business, marriage, parenthood and retirement; and (3) people migrate between regional and metropolitan areas at different stages of life.

The following series of graphs show how interest and likelihood in firefighting and specialist roles vary with age. The graphs all show the percentage of respondents in each age group who indicated that they were 'Somewhat or very interested' or 'Somewhat or very likely' to volunteer for either role. For brevity, the combined categories have been shortened to 'interest in' or 'likelihood of' volunteering respectively.

The graph in Figure 39 shows the percentage of respondents, as a proportion of those within each age group, who expressed interest in and thought there was a likelihood of volunteering in a firefighting role. Each of the two series is presented as a smoothed line with markers showing the actual data points. About 70% of respondents aged 18-19 years expressed interest in volunteering with the fire service. This is consistent with the data from Studies 3a and 10 (surveys of recruits after 6 months, and volunteers of all lengths of service respectively) which showed that the volunteers' highest rates of joining occurred in the 16-19 year age group. However, in Study 2 only eight of the 1,065 respondents fell into the 18-19 year age group so any results for this age group should be treated with caution. The high level of interest in volunteering among 18–19-year-olds is not matched by their expressed likelihood of doing so within 12 months (14%), which is only moderately high compared with that of other age groups.

The interest in firefighting roles declines rapidly to about 20% of respondents aged 20-24 years, but climbs to about 34% for respondents aged 30-34 years. It again drops rapidly to 20% for the 35-39 year age group and climbs steadily to 26% for the 50-54 year age group before dropping steadily for higher age groups and reaching zero for 80-84-year-olds. The level of likelihood of volunteering generally runs parallel to, but lower than, the level of interest in volunteering for most age groups. It is likely that lifecycle factors such as parenting, and the pursuit of education and work, are important in limiting the level of interest in and likelihood of volunteering at various ages.

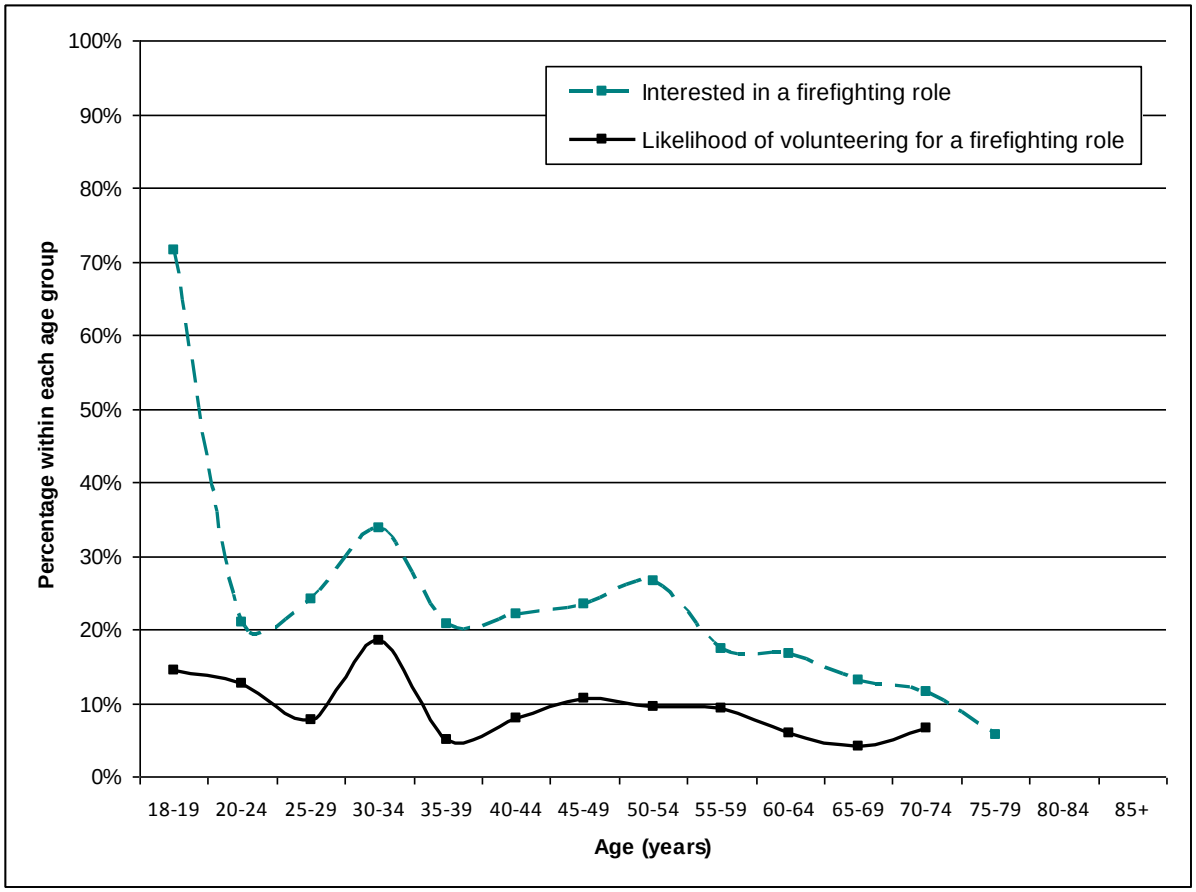

Figure 39 interest in and likelihood of volunteering for a firefighting role by age

The graph in Figure 40 shows the levels of interest in and likelihood of volunteering for a specialist, non-firefighting role by age. Interest in specialist roles is about twice as high (~40%) compared with interest in firefighting roles (~20%). Interest in specialist roles declines much more gradually with age compared with interest in firefighting roles. Presumably, this is because non-firefighting roles are not so physically demanding and therefore not so heavily reliant on age-related factors such as health and fitness. However, the line showing interest in volunteering does exhibit some age-related variations starting at a high of 57% for 18-19-year-olds, peaking again at ages 30-34 and 50-54 years and dipping from the ages of 35 to 45 years. Once again, the high level of interest among 18–19-year-olds is not matched by a proportionally high likelihood of volunteering. For other age groups the likelihood line generally parallels the interest line, although the dip in likelihood among 35–39-year-olds appears to occur one age-group before the corresponding dip in interest among 40–44-year-olds. The ratio between interest and likelihood for specialist roles (3.5:1) is larger than the corresponding ratio for fire-fighting roles (2.5:1). In other words, while fewer respondents expressed interest in firefighting than specialist roles, a higher proportion of those reported being sufficiently motivated to translate interest into likelihood.

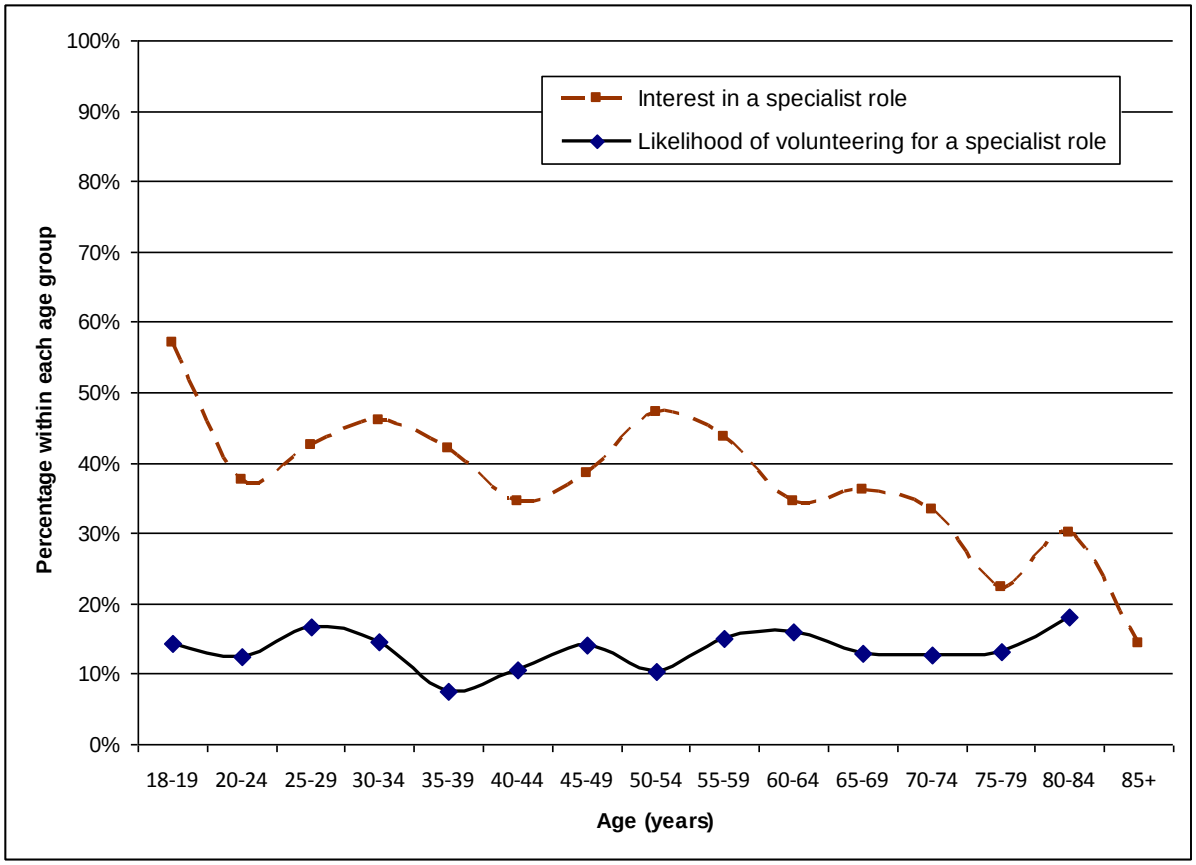

Figure 40 Interest in and likelihood of volunteering in a specialist, non-firefighting role

DIFFERENCES IN INTEREST OR LIKELIHOOD WITH EMPLOYMENT STATUS

(Study 2)

Respondents who were in the labour force were appreciably more likely to express both interest in, and likelihood of, volunteering. About 54% of the community members sampled in Study 2 reported being employed at the time of the survey, as indicated by an affirmative response to the question 'Did you work in any paid jobs or your own business in the past 7 days?'. By comparison, 60–70% of respondents who expressed interest in, or likelihood of, volunteering had worked in the past 7 days (Table 59). The relatively high proportion of respondents interested in volunteering who are also in the labour force is consistent with the high proportion of new recruits, 3 years after joining, in Study 3c, who are in the labour force.

Also from Table 59, Study 2 respondents who expressed interest in or likelihood of volunteering in a firefighting role were more likely to have worked than respondents favouring a specialist, non-firefighting role. People who are able to contemplate volunteering for a firefighting role are able to do so for the similar reasons as are people who are able to work, that is, they are able-bodied and if there are any dependants there is someone else can take care of them.

Table 59 Interest and likelihood of joining cross-tabulated by employment status

	Did you work in any paid jobs or own business in the last 7 days?		
	Count	% as a proportion of respondents Interested or Likely to volunteer	
	Total	Yes	No
Interested in volunteering with the fire service in a firefighting role	188	67	33
Interested in volunteering with the fire service in a specialist role	343	64	36
Likely to volunteer with the fire service in a firefighting role	75	69	31
Likely to volunteer with the fire service in a specialist role	112	62	38

DIFFERENCES IN INTEREST OR LIKELIHOOD WITH OCCUPATION

(Study 2)

In Study 2, the 54% of respondents who reported having been employed or having operated a business in the past 7 days were asked to describe their main occupation. Their occupations were coded according to the Australian Standard Classification of Occupations (ASCO) (Australian Bureau of Statistics, 1986). Just over 551 respondents (52%) provided a valid occupation. Prominent occupations were farmers and farm managers (21%) and school teachers (11%).

Variations in interest in volunteering according to the respondent's occupation category were analysed. The results are summarised in Table 60 which shows counts and percentages 'Somewhat or very interested' as a proportion of respondents in each occupation category. Interest in volunteering in a specialist, non-firefighting role ranged from 32% of labourers and related workers up to 56% of sales and personal services workers. Interest in a firefighting role ranged from 13% of clerical and service workers up to 33% of managers and administrators. Farmers and farm managers are included in the managers and administrators category of ASCO.

Table 60 Interest in firefighting roles by occupation

	Interested in a…			
	Specialist role		Firefighting role	
Occupation (ASCO Major Group)	Count	%	Count	%
Managers and administrators	57	41	46	33
Professionals	47	51	25	27
Para-professionals	7	41	4	22
Tradespersons and related workers	14	34	9	22
Clerical and service workers	26	39	9	13
Sales and Personal Service Workers	37	56	15	23
Plant and machine operators, and drivers	16	52	8	26
Labourers and related workers	16	32	11	22
Total	220		127	

PERCEIVED BENEFITS OF JOINING

(Study 2)

We also asked respondents in Study 2 what benefits they thought they might derive from volunteering with the fire services. The questionnaire listed 16 suggested benefits and asked respondents to endorse each as 'Very important', 'Somewhat important', 'Not important' or 'Not applicable'. Table 61 displays the percentage of respondents endorsing each item as a 'Very' or 'Somewhat important' benefit in descending order.

The benefit most frequently endorsed by respondents was 'the chance to put something back into the community' (74%). Equivalent, pro-community items are consistently the highest-ranked motivations in surveys of serving volunteer firefighters. It is the most apparently altruistic of the listed benefits.

The next two ranked items: 'it would allow me to make a difference…', and '…learn new skills', were each endorsed by about 70% of respondents. They are not as purely altruistic as the first item, although both clearly benefit the fire service.

Between 50 and 60% of respondents endorsed a range of more pragmatic motives including: 'it would help me to get involved in the community' (60.1%), 'if there is a genuine shortage of volunteers I would join' (58.0%), 'it would help to motivate me to keep fit' (55.4%), 'I would be proud to be a fire service volunteer' (55.3%), and 'it would allow me to meet new people' (50.5%).

Around half of the respondents thought they would get satisfaction from specific support roles including: catering (48.5%), community education (46.5%), using their office skills to assist with brigade administration (45.3%), and developing and using leadership skills (44.8%).

Table 61 Perceived benefits of volunteering

How important would each of the following possible benefits be as reasons to consider volunteering with the fire service?	% within benefit category endorsing item as a 'Somewhat' or 'very important' benefit
Volunteering with the fire service would be a chance to put something back into the community	74
It would allow me to make a difference at emergencies	70
It would allow me to learn new skills	69
It would help me to get involved in the community	60
If there is a genuine shortage of volunteers, I would join	58
It would help to motivate me to keep fit	55
I would be proud to be a fire service volunteer	55
It would allow me to meet new people	50
I would find catering for firefighters rewarding	48
I would enjoy teaching the community about fire safety	46
Using my office skills to help with brigade administration or in fire control centres would be rewarding	45
It would allow me to develop and use leadership skills	44
I would find fund-raising rewarding	37
It's something a bit adventurous	37
I could get qualifications to help my career	36
It would help me to start a career as a paid firefighter	14

A modest 38% of respondents thought they would find fund-raising rewarding.

The opportunity for excitement, 'It's something a bit adventurous', ranked fairly moderately, endorsed by only 37%. It appears that a minority of community members are attracted by the prospect of adventure through fire service volunteering.

A similar proportion of respondents (36%) thought volunteering could help them get qualifications that would benefit their career. However, the least nominated benefit, by some margin, was 'it would help me start a career as a paid firefighter', endorsed by 14% of respondents.

There is good consistency between the ranking of motivations endorsed by people who have never been firefighters in Study 2 (Table 61) and the ranking of comparable motivations endorsed by serving volunteers after their first 6 months of service in Study 3a (Table 56). The consistency in rankings between the two studies is also noteworthy because the studies were carried out in different states. As might be anticipated, many motivations were more strongly endorsed by the recruits than by members of the community who have never been firefighters.

BARRIERS TO JOINING

(Studies 2, 3c and 10)

We also asked respondents in Study 2 about the reasons why they might not volunteer with the fire service. The questionnaire listed 37 suggested reasons for not joining and asked respondents to endorse each as a: 'Major reason', 'Minor reason', 'Not important' or 'Not applicable'. Table 62 displays the percentage of respondents endorsing each item as a 'Major' or 'Minor reason' in descending order.

Table 62 Reasons for not volunteering with the [fire service]

Item No.	How important would each of the following reasons be for you for not joining the fire service?	% endorsing item as a 'Major' or 'Minor' reason
1	I have spare time but it is unpredictable so I couldn't meet regular commitments	49
2	I don't have any spare time after work, business or farm and family commitments	45
3	Volunteering with the fire service is a low priority for me	44
4	If there's a big enough fire, I'll be there to help anyway, so I don't need to join the fire service	42
5	I can't leave my work, business or farm to attend fires	41
6	My first priority is to protect my own property and my neighbours, family or friends' properties. I can't do that if I'm off somewhere else with the fire service	40
7	I would be concerned about my safety	40
8	I'm not suited for the kinds of things firefighters do	39
9	I would rather help by donating to the fire service	38
10	I'm too old to be fighting fires	37
11	I wouldn't find fighting fires enjoyable	36
12	I have poor health, poor fitness or other disabilities that prevent me from volunteering	36
13	I wouldn't be able to leave my family duties to go to fires	36
14	I'm concerned about loss of income if I'm injured	36
15	I didn't know they needed more volunteers	33
16	Volunteering with the fire agency just doesn't interest me	33
17	I'm concerned about being sued by someone	32
18	I would find it too upsetting, distressing or frightening	31
19	The fire service has become too bureaucratic	30
20	Fire service volunteering takes too much time	29
21	I don't know how to become a volunteer	28
22	Things are too tough for me financially	27
23	My employer wouldn't be happy about me attending fires	26
24	I have spare time; I just prefer to use it doing other things	26
25	I don't have anyone to mind the children	26
26	I believe the fire brigade should be paid, not made up of volunteers	25
27	My family wouldn't be happy about me joining	23

28	The fire service is not sufficiently supported by the government or council so I'm not prepared to give up *my* time	21
29	The local brigade has too much internal politics	21
30	I don't want to take a job away from a paid firefighter	20
31	I feel I wouldn't fit in with members of the local brigade	20
32	I work too far from the fire station to respond in time	19
33	I didn't realise the fire brigade was made up of volunteers	18
34	I am concerned about personal costs like petrol when I drive to training or callouts	18
35	I don't think we need a local fire brigade	17
36	I live too far from the fire station to respond in time	16
37	I don't have any transport to get to the fire station	11

Time and priorities

Lack of time and competing priorities were the main barriers respondents nominated as preventing them from volunteering with the fire service. The most frequently nominated barrier to volunteering with the fire services, nominated by 49% of respondents, was the unpredictable nature of their other commitments. This was followed closely by a perceived lack of spare time after work or family commitments (45%). A similar proportion (44%) endorsed 'volunteering with [the fire service] is a low priority for me'.

Significantly, fewer respondents (29%) thought that fire service 'volunteering takes too much time' (Item 20). In other words, respondents tended to identify the issue of time shortage in terms of their own lack of time rather than of excessive time demands imposed by the fire service.

Forty-one per cent of respondents indicated that, 'My first priority is to protect my own property and my neighbours, family or friends' properties. I can't do that if I'm off somewhere else with the [fire service]' (Item 6). This suggests that many people are conscious of prioritising their own interests, and the needs of close friends and family, over the interests of the community or state-oriented fire service. Fire agencies may need to take this widespread attitude into account when planning for days of high fire danger. There is anecdotal evidence that this self-oriented attitude has been reinforced by publicity of the so-called 'Stay or Go' policy, which is interpreted as encouraging people, including volunteer firefighters, to stay home to protect their own properties when a bushfire threatens.

About one third of respondents indicated that volunteering with the fire service was not merely a low priority but 'just does not interest me' (Item 16), and 27% of respondents indicated that they had 'spare time [but] just prefer to do other things' (Item 24). The implication of these two items is that for about one third of the population in the region, fire agencies will face a difficult task trying to persuade them to become involved with the organisation.

Work, business or farm obligations

Almost half of the respondents (41%) endorsed 'I can't leave my work, business or farm to attend fires' as a 'Minor' or 'Major reason' for not volunteering (Item 5). This is 75% of respondents who were members of the labour force. The percentage of working

respondents endorsing this reason varied with their employment arrangements: 82% of full-time employees, 72% respectively of part-time employees and business operators with employees, and 65% respectively of farmers and business owners without employees. These results are consistent with those in Table 21 and Table 24, from Study 10, which showed that volunteers who were farmers or self-employed reported attending much higher proportions of callouts that occurred during business hours (80%) than did volunteers who were employees (10%). The contrast between the results for employed and self-employed or farmers is much stronger for serving volunteers in Study 10 than for non-volunteers in Study 2. This suggests that in many regional communities the fire services may have already recruited most members of the workforce who are able to attend callouts during their work or business hours. However, there may be some benefit in the fire agencies investing more resources in educating employers, employees and the population at large about the benefit to the community of allowing employees who are emergency service volunteers to leave work or their business from time to time for emergency response.

Unwilling to commit

A similar proportion of respondents (42%) saw no need to formally join the fire service, endorsing the statement 'if there's a big enough fire, I'll be there to help anyway, so there's no need to join the [fire service]' (Item 4). People who hold this attitude of autonomy, or 'being there for the big one', leave others to fulfil the responsibility of maintaining a reliable local fire brigade 24-hours per day to respond to the less dramatic, 'everyday' fires and incidents. Questions arise as to the preparedness of such 'spontaneous volunteers' in terms of training, health, fitness and discipline if they do respond to a fire. Their lack of formal registration with a fire service, and questions of training and fitness, may compromise any insurance cover that would otherwise protect them. Their presence at large fires may be of value but it may also hinder properly organised firefighting operations. Fire services might consider changes to accommodate infrequent volunteers to ensure that they can contribute safely and effectively when they do respond.

Safety and income protection

Forty per cent of respondents cited concerns about safety as a barrier to joining (Item 7). Thirty-six per cent were concerned about the potential for loss of income if they were injured (Item 14). The fire service may benefit from publicising its safety culture, low injury statistics and volunteer compensation and income protection arrangements.

Not suited to the kinds of things firefighters do

Thirty-nine per cent of respondents indicated that they thought they were 'not suited for the kinds of things firefighters do' (Item 8). Many of these respondents may be influenced by media dramatisations of firefighting and unaware of the non-operational roles available in a fire agency. Publicity of the non-firefighting roles available may increase the levels of interest in volunteering among members of this group.

Would rather help by donating to the fire agency

Thirty-eight per cent of respondents indicated that they would rather help the fire service by making donations [in cash or kind] (Item 9) than by joining. This represents a substantial body of goodwill in the community and one that the fire service and brigades should actively

seek to harness. However, in small communities that are suffering an absolute shortage of able-bodied people for firefighting, perhaps people who would 'rather donate' could be encouraged to consider whether they, in fact, are also capable of volunteering. Recall from the discussion of social capital (p. 12) that Putnam regards volunteering as a more powerful form of social capital than donating money because it involves personal interactions (2000).

I'm too old to be fighting fires

About 37% of respondents endorsed 'I'm too old to be fighting fires' (Item 10). The graph in Figure 41 shows the age distribution of respondents endorsing this item. Relatively few respondents aged below 50 years endorse feeling too old to be fighting fires. The proportion increases with age reaching 16% in the 40-49 year age group. The majority of respondents aged less than 50 years endorse feeling too old as a minor reason for not volunteering. However, the proportion feeling too old jumps to about 40% of 50-59-year-olds, of whom half endorse it as a major reason. Among 60-69-year-olds, about 75% endorse feeling too old, of whom 80% endorse it as a major reason.

This finding suggests that most people judge themselves to be too old for firefighting at about retirement age. It is consistent with the findings in Table 17 which show that retirees are under-represented among volunteer firefighters relative to their proportion in the population. However, ABS data in Table 2 show that retirees in general volunteering tend to contribute many more hours per year than volunteers who are in the labour force. Assuming that people are accurate judges of their own limitations, most retirees may be unsuited to operational firefighting but may represent an underutilised resource in support roles.

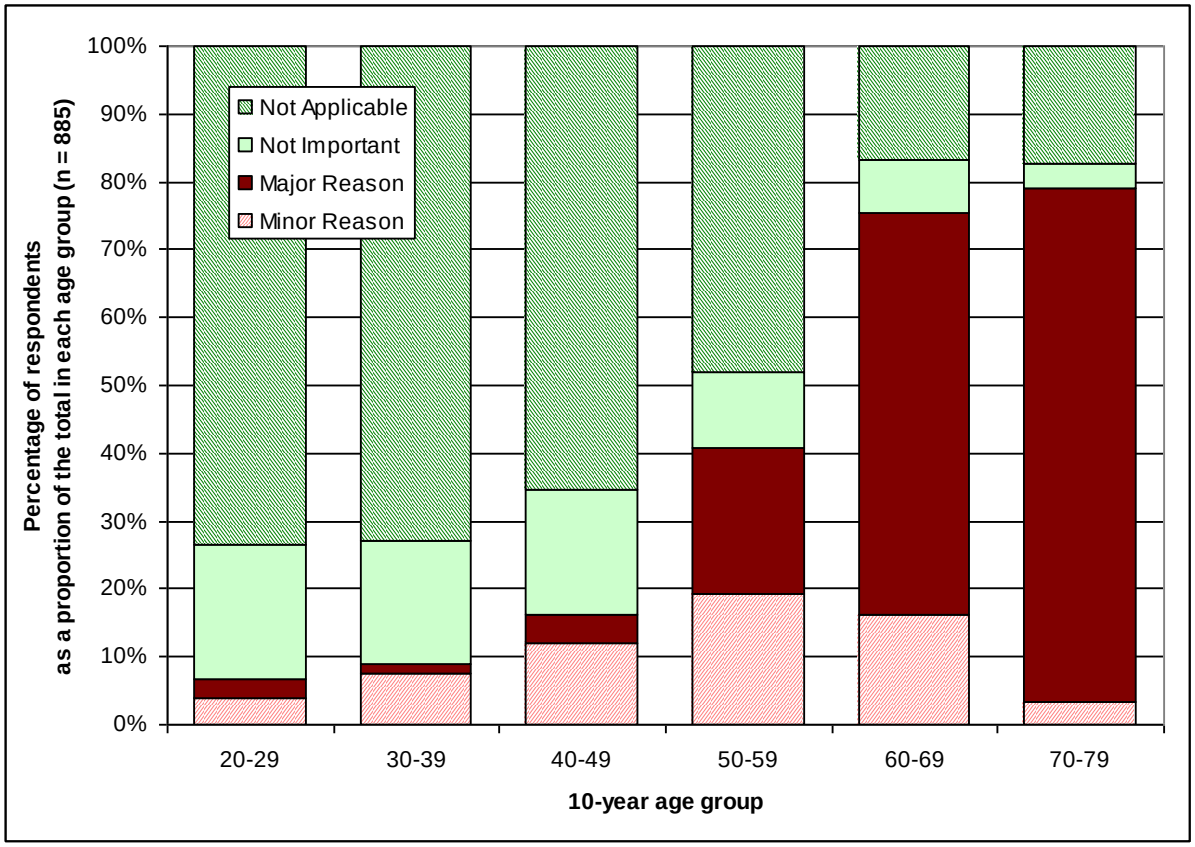

Figure 41 Respondents endorsing 'I'm too old to be fighting fires'

Poor health, poor fitness or disabilities

About one third of respondents (36%) endorsed that, 'poor health, poor fitness or other disabilities' prevented them from volunteering (Item 12). The graph in Figure 42 shows the age distribution of these respondents.

The proportion of respondents endorsing poor health as a 'Minor reason' remained steady at about 12% across all age groups. However, the proportion endorsing poor health as a 'Major reason' increased with age from about 5% of 20-29-year-olds to 57% of 70-79-year-olds.

Respondents appear to distinguish between natural decline in abilities due to ageing and reduced ability caused by illness or other causes of disability. While the age distribution of respondents reporting poor health, fitness or other disabilities as barriers is similar to that reporting old age as a barrier, further analysis shows that only 50% of those reporting that they are too old also report poor health, fitness or disabilities.

Again, members of this group may be able to contribute to the fire service in non-firefighting roles if they are aware of them. Further analysis is required as to the impacts of age and disability on non-firefighting roles.

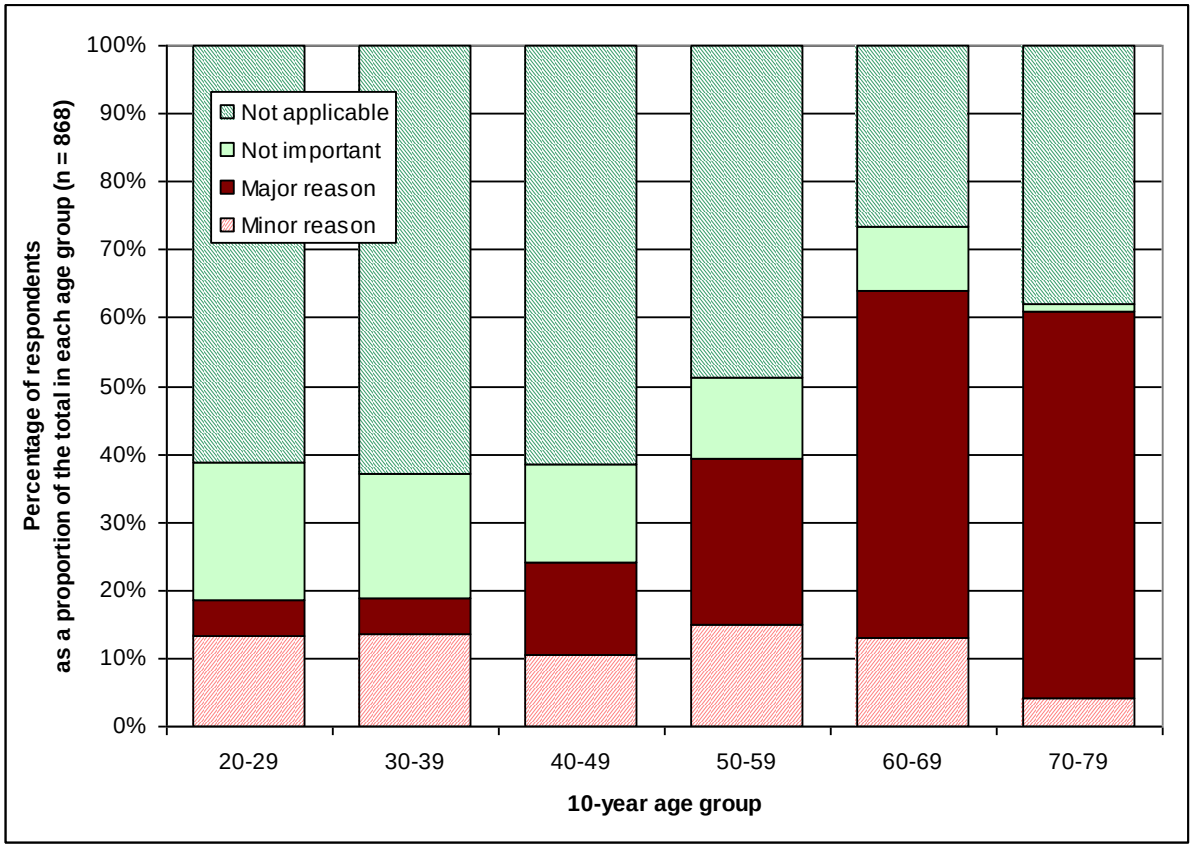

Figure 42 Age distribution of respondents endorsing 'poor health, fitness or disabilities'

Family duties

About one third of respondents (36%) endorsed 'I would not be able to leave my family duties to go to fires' (Item 13).

A higher proportion of women than of men endorsed family duties as a barrier. As shown in Table 63, 26% of women endorsed family duties as a 'Major reason' compared with 7% of men.

Table 63 Unable to leave my family duties by sex

		Percentage within gender		
		Male	Female	Total
I wouldn't be able to leave my family duties to go to fires	Major Reason	6.9	26.2	18.5
	Minor Reason	17.7	17.5	17.6
	Not Important	22.5	14.3	17.6
	Not Applicable	53.0	41.9	46.4
Total		100.0	100.0	100.0

Respondents were also asked to tick boxes to indicate which of a list of 16 roles, for example 'caring for children' or 'employed full-time' they performed in their daily lives. The cross tabulation (Table 64) of relevant roles by responses to 'I would not be able to leave my family duties to go to fires' improves our understanding of how selected family duties conflict with fire service volunteering.

Overall, 27.8% of respondents ticked to endorse 'Home duties' as one of their roles, however 44.5% of respondents who endorsed family duties as a 'Major reason' for not attending fires also ticked home duties. Therefore the term 'Home duties' describes an appreciable component of the term 'Family duties' as understood by the respondents.

Respondents who reported caring for children below primary-school age were more likely to endorse family duties as a 'Major reason' than respondents caring for primary- or secondary-school aged children. This suggests that fire agencies are more likely to have difficulty retaining volunteers during the early years of parenting, but likely to have increasing success at recruiting parents as their youngest child progresses through secondary school and becomes more independent.

Respondents were also asked whether they had a role caring for a sick or disabled person, full-time or part-time. Overall, about 2.1% of respondents endorsed performing a caring role on a part-time basis and 1.9% on a full-time basis. The results show that, of respondents endorsing family duties as a 'Major reason' for not going to fires, 5.2% had endorsed being a full-time carer, compared with only 1.3% who endorsed being a part-time carer. In summary, most full-time carers would find it very hard to volunteer for operational duties whereas part-time carers would find it less difficult to do so.

Table 64 Unable to leave family duties to go to fires by nature of duties

		Percentage that ticked[49] role category					
		Home duties	Care for children:			Carer for sick or disabled person:	
			Below primary school age	Of primary school age	Of secondary school age	Full time	Part time
I would not be able to leave my family duties to go to fires	Major reason	44.5	29.7	25.2	9.0	5.2	1.3
	Minor reason	33.8	13.5	16.9	10.8	0.7	2.7
	Not important	19.0	4.1	4.1	6.8	0.7	2.7
	Not applicable	22.2	3.4	3.6	4.6	1.5	2.1
	Total	27.8	10.1	10.0	6.9	1.9	2.1

The age distribution of respondents endorsing being unable to leave family duties to go to fires is shown in Figure 43. In contrast to the two preceding age-dependant items (old age and poor health or fitness), family duties were endorsed as a barrier most strongly by younger respondents aged 20-49 years. About half the respondents aged 20-49 years endorsed this item, compared with about 20% of respondents aged 50 years or older. For both the 20-29-year-old and 30-39-year-old age groups, 34% endorsed it as a 'Major reason'. A higher proportion of 30-39-year-olds, endorsed it as a 'Minor reason' as the proportion of very young, highly dependant children decreases.

The fire services may do well to encourage communities to develop mutual support arrangements for families to help release people from their family care responsibilities, particularly parenting. They may also benefit from reviewing the scheduling of brigade activities such as training and meetings to better accommodate people with competing demands of family responsibility.

[49] For each role respondents can either tick the box or not, so the percentage ticked + the percentage unticked for any role will total to 100%. As such, only the percentage or respondents who ticked each role are needed in the table.

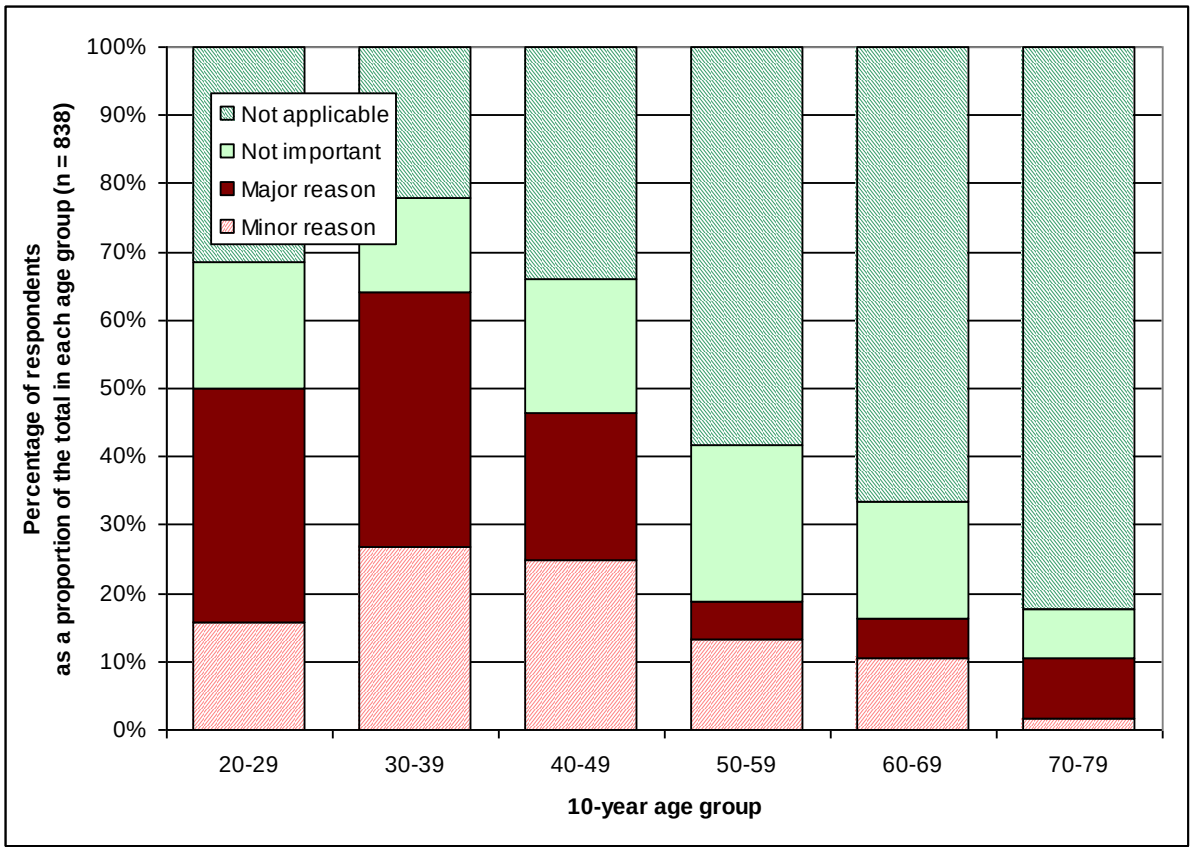

Figure 43 Age of respondents unable to 'leave my family duties to attend fires'

Didn't know the fire service needed volunteers

About one third of respondents indicated that they did not know the fire service needed more volunteers (Item 15). This is a sizeable proportion of the population and suggests that more could be done to communicate the need for volunteers to the community. The survey was conducted in a predominantly rural region where many brigades were reporting difficulties in maintaining adequate numbers of volunteers.

Would not find fighting fires enjoyable

Similarly, about one third of respondents indicated that they would not find fighting fires enjoyable (Item 11). Again, opportunities for participating in non-firefighting roles could be publicised to attract some members of this group. Anecdotal evidence suggests that people living in rural areas regard firefighting as a chore, whilst firefighters from urban areas are more likely to report that firefighting is personally rewarding and are sometimes derided as 'hobby firefighters'. However, cross tabulation of the responses to this item by place of residence ('town or village', 'lifestyle block < 20 Ha' or 'farm or rural property of 20 ha or larger') showed that town dwellers were more likely to report feeling that they would not enjoy firefighting . About 25% of respondents from towns, villages or lifestyle blocks endorsed not enjoying firefighting as a 'Major reason' compared with 16% of respondents living on farms larger than 20 hectares.

Legal liability

Thirty-two per cent of respondents indicated that they were concerned about the possibility of being sued in the course of fire service activities (Item 17). This is a sizeable proportion of

the community and the fire service would do well to address the concerns of potential recruits about their legal protections. The fire service might consider informing the community about the true nature of the liabilities of its volunteers and publicising whatever legal protections it affords to them. Such information might also be considered in material supplied to people when they inquire about joining, and in induction information for new recruits.

Too upsetting, distressing or frightening

Thirty-one per cent of respondents believed that they would find fire service activities too upsetting, distressing, or frightening (Item 18). This contrasts with the findings from the survey of serving volunteers in Study 10 in which just 7% of respondents endorsed 'I'm finding some incidents too distressing to attend'. This dimension of sensitivity–resilience appears to be an important point of differentiation between those who volunteer as firefighters and those who do not.

An appreciable gender difference was evident as this item was endorsed by 17% of male respondents compared with 40% of females. Interestingly, it was most strongly endorsed by younger respondents and the proportion endorsing it decreased markedly from the 50-59 year age group. It is possible that people who have little knowledge of firefighting may have unwarranted fears about the dangers. Fire services may benefit from reassuring the general community about any safety provisions they have in place. Community members who cannot be adequately reassured may still be comfortable volunteering in specialist, non-operational roles, and some may discover that they do not find operational activities as distressing as they had feared.

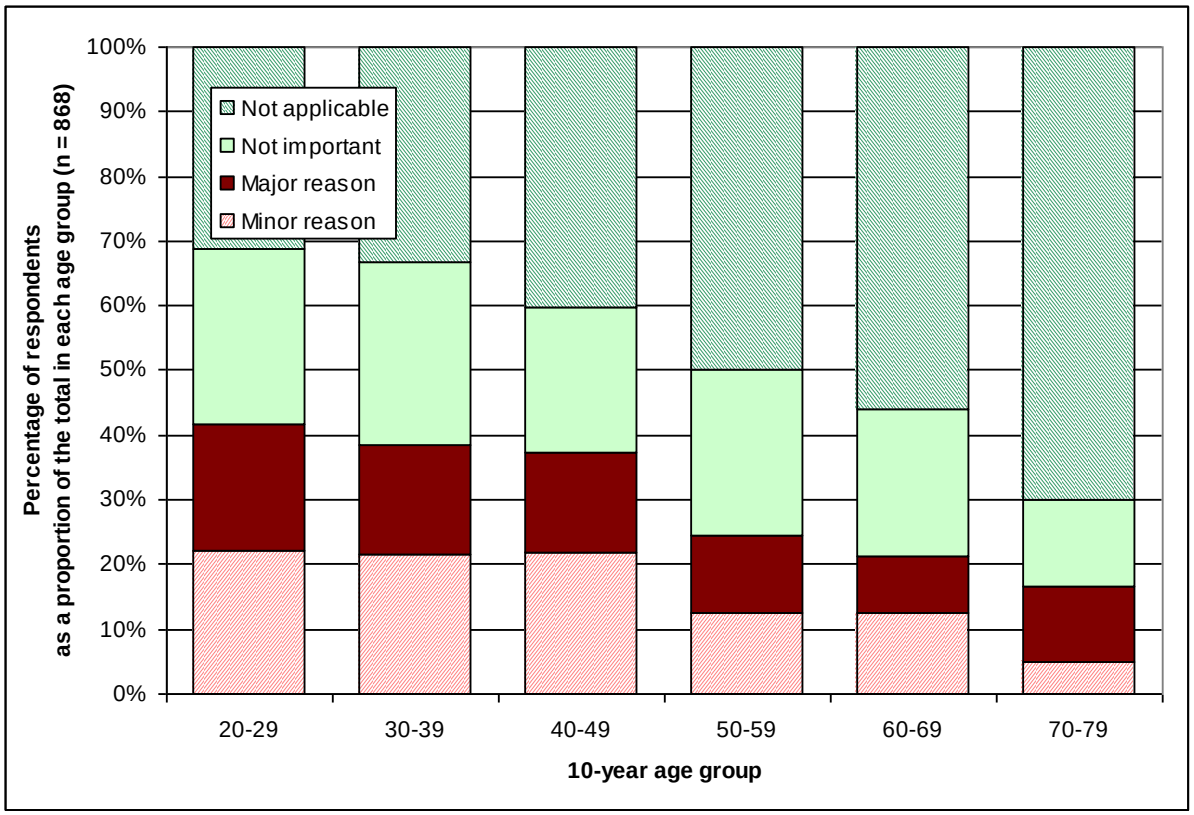

Figure 44 Age of respondents who 'would find it too upsetting, distressing or frightening'

Too bureaucratic

Thirty per cent of respondents reported that they thought the fire service had 'become too bureaucratic' (Item 19). A number of respondents also commented to this effect in the free text sections of the questionnaire. It is noteworthy that this perception exists among so many people who have never been members of the fire service. Interestingly, this view is held even more strongly among serving volunteers. In Study 10, the perceived bureaucratic nature of the fire service was the highest-ranked factor nominated as limiting greater participation in the fire service, endorsed by 62% of respondents.

In Study 2 this perception was endorsed as a 'Major reason' for not volunteering by twice the proportion of men than of women, as shown in Table 65.

Table 65 Sex by 'the [fire service] has become too bureaucratic

		Percentage within gender		
		Male	Female	Total
The [fire service] has become too bureaucratic	Major Reason	22.0	10.1	14.9
	Minor Reason	16.3	13.3	14.5
	Not Important	19.9	27.5	24.4
	Not Applicable	41.9	49.1	46.2
Total		100.0	100.0	100.0

It was also a view held by a higher proportion of people living on farms than people in towns, villages or lifestyle blocks, as shown in Table 66.

Table 66 Residential setting by 'the [fire service] has become too bureaucratic'

		Percentage within residential setting		
		In a town or village	On acreage less than 20 ha	A farm or rural property of 20 ha or more
The [fire service] has become too bureaucratic	Major Reason	11.2	11.6	23.5
	Minor Reason	12.5	21.7	16.5
	Not Important	27.0	14.5	21.8
	Not Applicable	49.3	52.2	38.3
Total		100.0	100.0	100.0

The proportion of respondents endorsing this view increased moderately with increasing age, as shown in Figure 45. Interestingly, the proportion of respondents endorsing this item as 'Not applicable' increased with age, while those endorsing it as 'Not important' decreased considerably.

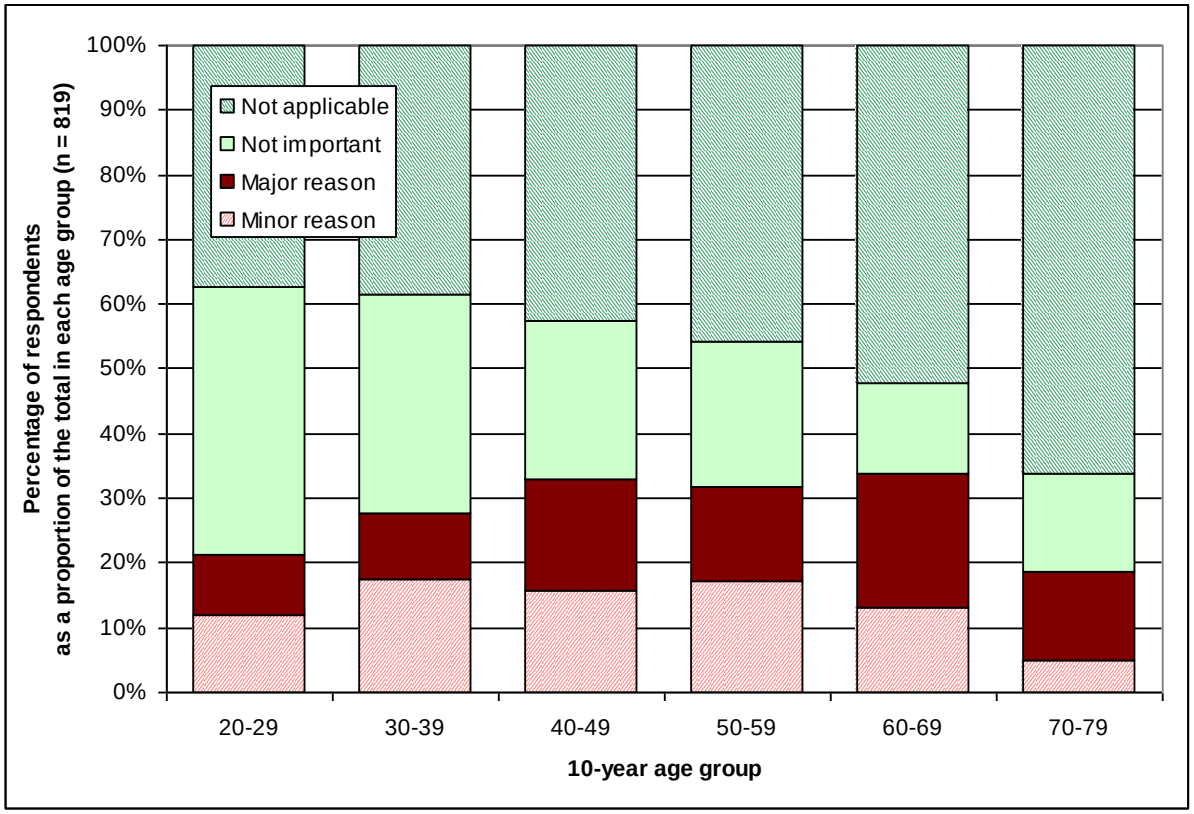

Figure 45 Age of respondents by 'the [fire service] has become too bureaucratic'

Don't know how to join

Twenty-eight per cent of respondents reported that they did not know 'how to become a volunteer' with the fire service. This represents a sizeable proportion of the population who may be potential volunteers but who are overlooked because they do not know how to apply to join. There may be a need to improve the message in fire service volunteerism publicity, to clearly set out the pathways for applying to volunteer.

Financial hardship

Twenty-seven per cent of respondents reported that 'things are too tough for me financially' to volunteer (Item 22). Given the impact of the drought and other financial stresses on rural communities, it is surprising that this barrier was not more highly ranked. The fire service needs to be mindful of any financial costs, direct or indirect, entailed in volunteering as a firefighter. The risk of loss of income, through injury, may also be a concern for people who are financially vulnerable. The service may benefit from publicising ways in which it defrays some of those costs and protects volunteers from risks, for example by providing safety equipment and income protection insurance.

Employer would not be happy

About one quarter of respondents reported believing that their 'employer wouldn't be happy about [them] attending fires' (Item 23). There may be a number of reasons why an employer might not be happy allowing employees to attend fires. Employers may lose the services of employees for short periods if they attend incidents during work hours, unless the employees make up for any lost time by working additional hours. Employers may continue to pay employees wages while they are absent attending incidents, which is a cost to the employer. Absences may occur at times that are inconvenient for employers, and may occur randomly and without warning. More recently, anecdotal evidence and news stories suggest that some employers have become concerned that employees who attended incidents, even outside work hours, may come to work affected by fatigue or other factors that could affect safety or efficiency in the workplace (Daily Telegraph, 2005; Lewocki, 2005). Employers in the transport industry, and anecdotally in the mining industry, have been identified as having such concerns. Refer to the *Volunteering and work or business* section on page 64 for more information on the attitudes of employers.

Child-minding

One quarter of respondents (26%) endorsed not having 'anyone to mind the children' (Item 25); however, this modest percentage belies the true impact of the child-minding problem. As might be anticipated, women are more likely to be concerned about child-minding (35%) than men (13%). The age distributions of males and females endorsing this item in Figure 46 shows that it was endorsed by a large proportion of respondents aged up to 49 years. The age distribution peaks at the 35–39-year age group, which is consistent with age-specific trends in fertility.

Figure 47 shows that 30–34-years was the peak age group for women giving birth when Study 2 was conducted in 2005 (Australian Bureau of Statistics, 2008a). Women report that parenting places the greatest restrictions on participation in other activities when the youngest child is under 5 years of age.

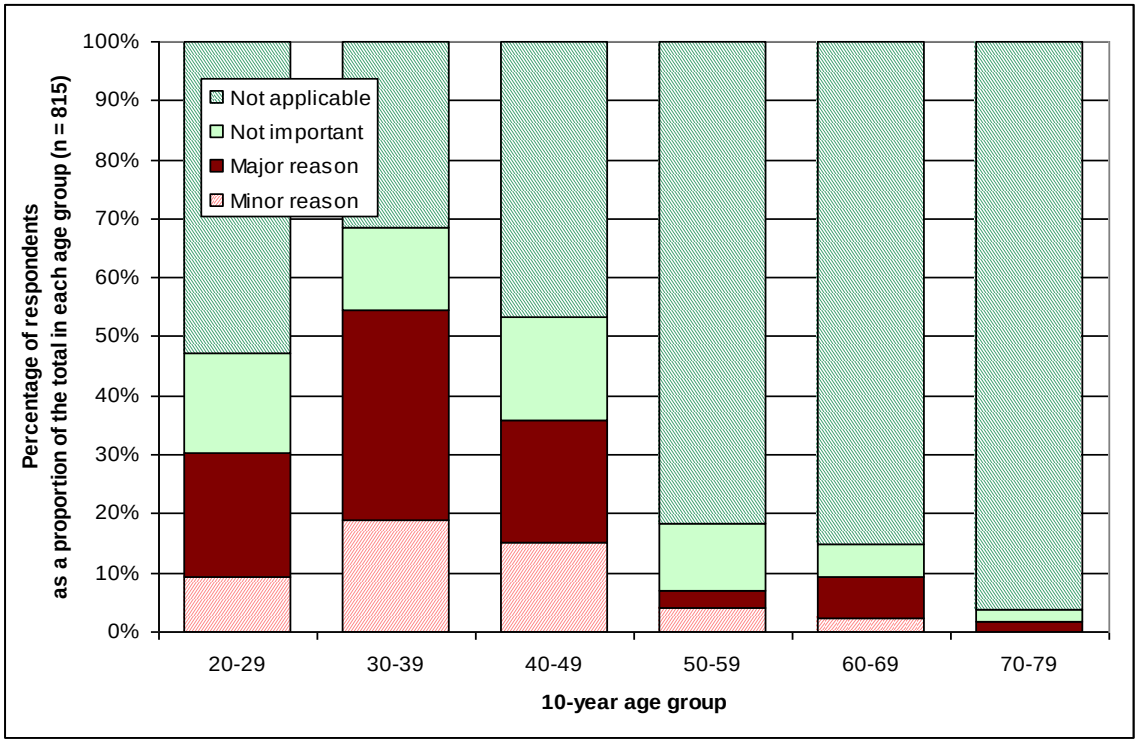

Figure 46 Age distribution for 'I don't have anyone to mind the children' response by gender

Any initiatives the fire services can take to facilitate safe child-minding might improve the number of female volunteers available for firefighting roles. This may also significantly ease daytime crewing problems on weekdays.

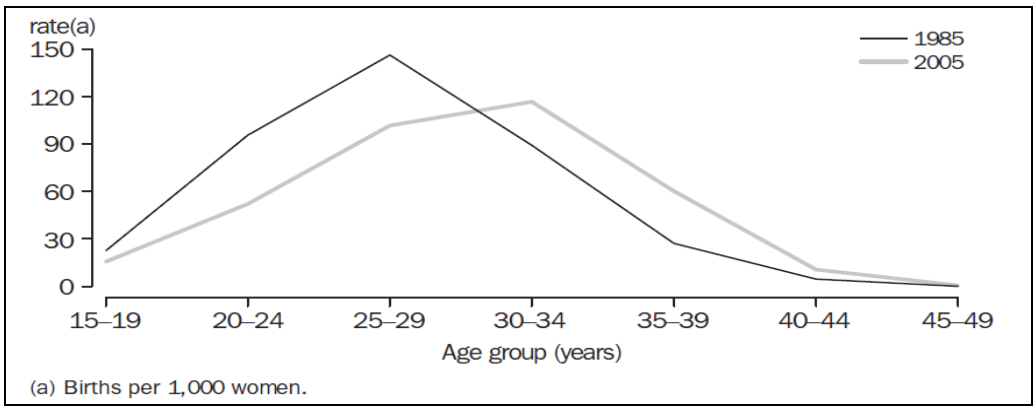

Figure 47 Fertility rates by age
Source: (Australian Bureau of Statistics, 2008a) *2008 Year book Australia* (No. 1301.0). Canberra, Australian Capital Territory:

The ABS fertility data in
Figure 47 also show that the peak age of fertility increased by about 5 years between 1985 and 2005 and spread laterally meaning that women are spreading child bearing over a longer age-range. This will have a flow-on effect as the birth of a child can limit its parents' availability to volunteer until it reaches an age of relative independence, sometime during secondary school. During period 1985-2005, women increasingly tended to defer childbirth, potentially leaving young women free to volunteer as firefighters to a greater age. However, the trend for increasing age of childbirth also means that women are not free from parenting to volunteer as firefighters until they reach a greater age. Other influences on fertility rates such as the long-term decline in fertility rates among Australian-born women, and the counteracting impact of the Australian Government's so-called Baby Bonus Scheme, can have important implications for volunteer recruitment and retention. Fire agencies can monitor such trends to forecast and plan for trends in volunteer workforce availability.

The fire brigade should not be made up of volunteers

About one quarter of respondents endorsed the view that 'the fire brigade should be paid, not made up of volunteers' (Item 26). To the extent that there are sound economic or even community-building arguments for persisting with volunteer fire brigades, the fire services may find that more effective communication of those arguments help their cause, both for recruitment and to foster support for volunteers from other members of the community.

My family would not be happy about me joining

Twenty-three per cent of respondents endorsed 'My family would not be happy about me joining' (Item 27). A higher proportion of respondents endorsed this item as a 'Minor reason' (15%) compared with 'Major reason' (7%) than was the case for most other barrier items. 'Women endorsed this item more strongly (26%) than did men (17%). Figure 48 shows those respondents of parenting age (20-49 years), peaking at 30-39 years, endorsed

this item more strongly than older respondents. Further discussion can be found in the *Volunteering and family* section in this report (p.88).

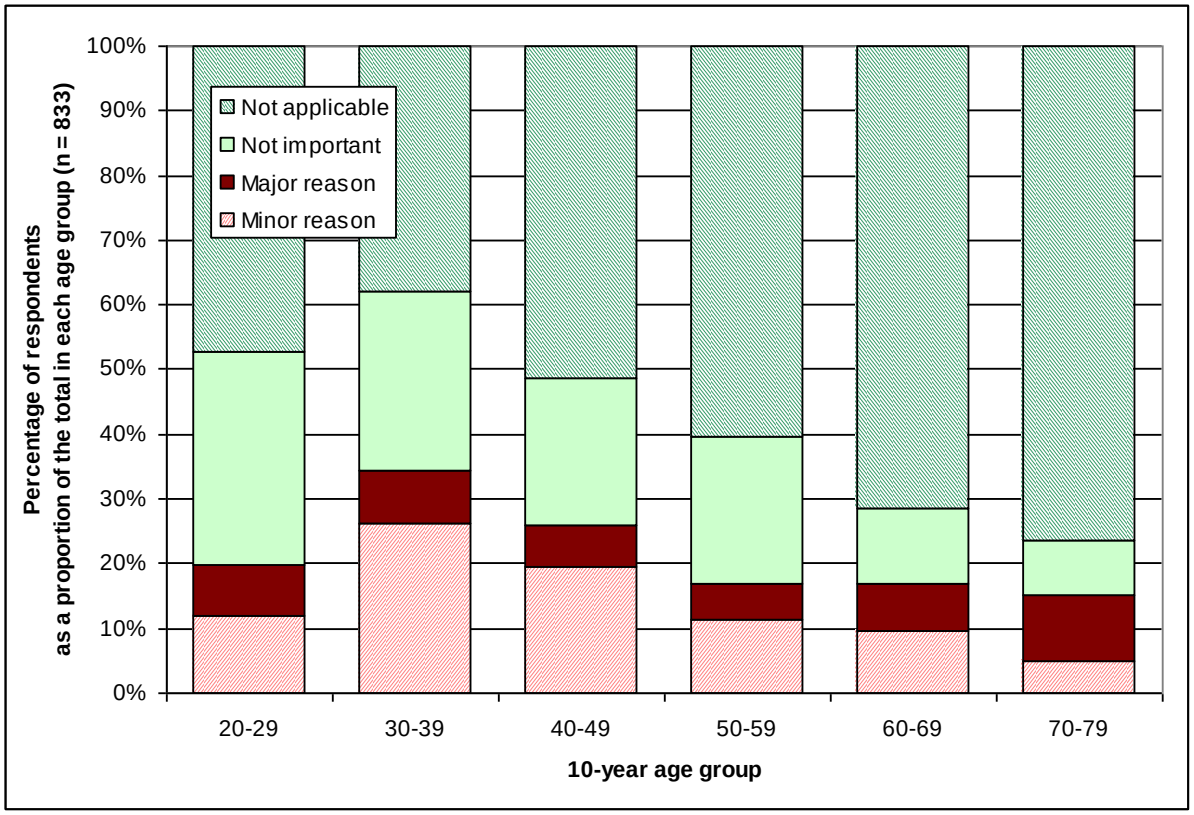

Figure 48 'My family would not be happy about me joining' by age of respondent

Government or council do not support the fire service, so why should I?

About one fifth of the respondents endorsed the assertion that 'the fire service is not sufficiently supported by the government/council, so I'm not prepared to give up my time' (Item 28). There were no appreciable differences among respondents based on gender or age, but this item was more strongly endorsed as a 'Major' or 'Minor reason' by town or village dwellers (24%) than those living on farms (18%) or lifestyle blocks of less than 20 ha (15%). It is a matter of concern that a significant percentage of the population, who have never been members of the fire service, perceive that state and/or local government are not doing their share to support the organisation. It may be useful to conduct further analysis or research into the specific issues that lead to this negative perception.

The local brigade has too much internal politics

About one fifth of the respondents endorsed Item 29 that they were discouraged from joining because they believed there was too much internal politics in their local brigade. No appreciable differences were found in the rate of endorsement among gender or age groups; however respondents living on acreage blocks were more likely to endorse this item (29%) than either town or village dwellers or farm dwellers (20%).

The finding that one fifth of community members who have never been members of a fire brigade perceive brigades to be unpleasant groups to join, suggests that brigades have at least a perceived, if not a real, problem of internal politics. Note the discussion of

organisational climate in the *Recruitment of volunteers* section on page 123. A similar proportion of respondents to the exit survey, Study 11, endorsed leaving because of a poor volunteering experience, and many wrote of a poor climate within brigades or the fire service.

I do not want to take a job away from a paid firefighter

About one fifth of respondents reported that they did not want to take a job away from a paid firefighter (Item 30). There were no appreciable differences in respondents endorsing this item based on gender, however the proportion of respondents endorsing this as a 'Minor reason' declined with age from 16% among 20-29-year-olds, to 7% among 70-79-year-olds. This item is similar to Item 26, the belief that firefighters should be paid and not volunteers, endorsed by marginally more respondents (25%). Perhaps the case for relying on volunteers could be better articulated to the wider community.

I feel I would not fit in

One fifth of the respondents endorsed Item 31 'I feel I would not fit in with members of the local brigade'. No appreciable differences were found based on gender or age, however a higher proportion of respondents who lived in a town or village (23%) endorsed this item than those living on a farm (18%) or on lifestyle blocks (13%). The higher proportion of town or village dwellers who feel they would not fit in warrants further investigation as towns and villages offer concentrations of potential volunteers who could strengthen brigade memberships in nearby rural communities.

Overall, this finding suggests that a significant proportion of people who have never belonged to a volunteer fire brigade hold the perception that brigades are made up of a limited range of people who would not welcome people like the respondents. It begs the question: how did people, who have never been brigade members, acquire their perceptions about the attitudes or behaviour of current members? Respondents' perceptions may have been formed by portrayals of volunteer firefighters in the entertainment or news media. Such perceptions may also have been passed on through informal community networks of friends or relatives. In fact, dissatisfaction with brigade life was endorsed in Study 11 as a major, avoidable cause of volunteer resignations. Respondents most commonly identified the causes of dissatisfaction as conflict, bullying, harassment, discrimination, exclusion and favouritism.

Study 10 identified a lack of ethnic diversity among serving volunteers relative to the population. This may partly reflect the tendency of immigrants to settle in capital city areas where volunteer brigades are less common. However, Study 10 also revealed that diversity of membership was the lowest-ranked of a set of 16 values rated by serving volunteers.

It may be possible to improve recruitment by taking steps to make brigades more friendly places for a wider range of people. One approach to enhancing inclusiveness is to ensure a high standard of brigade leadership. For example good leaders, both volunteer and career staff would help ensure that brigades were administered fairly and openly. They would model inclusive behaviour in treating all brigade members equally and respectfully. They would actively encourage and support recruits from minority groupings, and assertively discourage fire agency personnel from behaving disrespectfully or inequitably.

Fire agencies may need to work at cultivating community perceptions that brigades, if not currently diverse in membership, are at least welcoming of a wide range of volunteers. This message can be conveyed to the community both through formal publicity and ad hoc portrayals in the news and entertainment media. Current and ex-volunteers need to be conscious of the image of brigade life they convey to friends and relatives. Brigades may need to reach out to groupings in the community that are under-represented among volunteer ranks, to explain the roles available and reassure members that they will be welcomed as volunteers.

I work too far from the fire station

One fifth of respondents believed that they 'work too far from the fire station to respond in time' (Item 32). Obviously, this item is only relevant to the ~60% of the population who are who are currently in paid work (Australian Bureau of Statistics, 2008e).

Respondents were asked to estimate how many minutes it would take them to travel from work to their nearest volunteer fire station. The results, in Figure 49, show that 40% of respondents estimate working within 5 minutes, 65% within 10 minutes and 86% within 30 minutes of a fire station. As this survey was conducted among rural communities, the results suggest that about on third of people living in rural communities work within a travel time of less than 5 minutes from a fire station, which is adequate for them to turn out. The number of people working within 5 minutes of a fire station is likely to be higher in a more densely populated regional cities or suburban areas.

While some workers such as long-distance truck drivers may be too mobile to turn out during working hours, for others, there may be value in considering creative solutions. Practical approaches, such as allowing volunteers to turn out with other brigades that are close to their place of work, may be worth exploring.

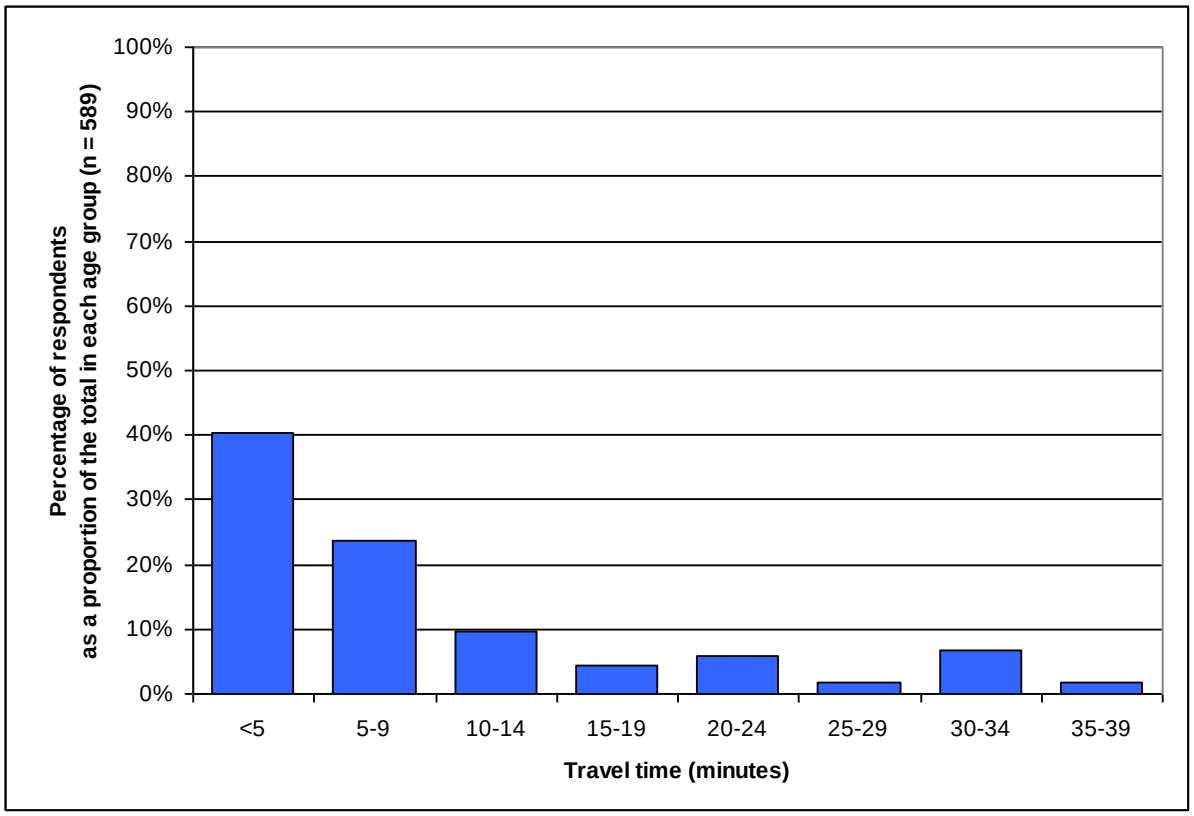

Figure 49 Respondents' estimated travel time from work to their local fire station

Figure 50 shows the relationship between respondents' estimated travel time from work to their local volunteer fire station and endorsing that they 'work too from the station to respond in time'. The proportion of respondents endorsing this item becomes appreciable as their travel time exceeds 10 minutes, rising to 50% of respondents who live more than 30 minutes away. The results suggest that respondents, despite never having been volunteer firefighters, appear to have a realistic understanding about how close they need to work to the fire station to be able to turn out with the brigade.

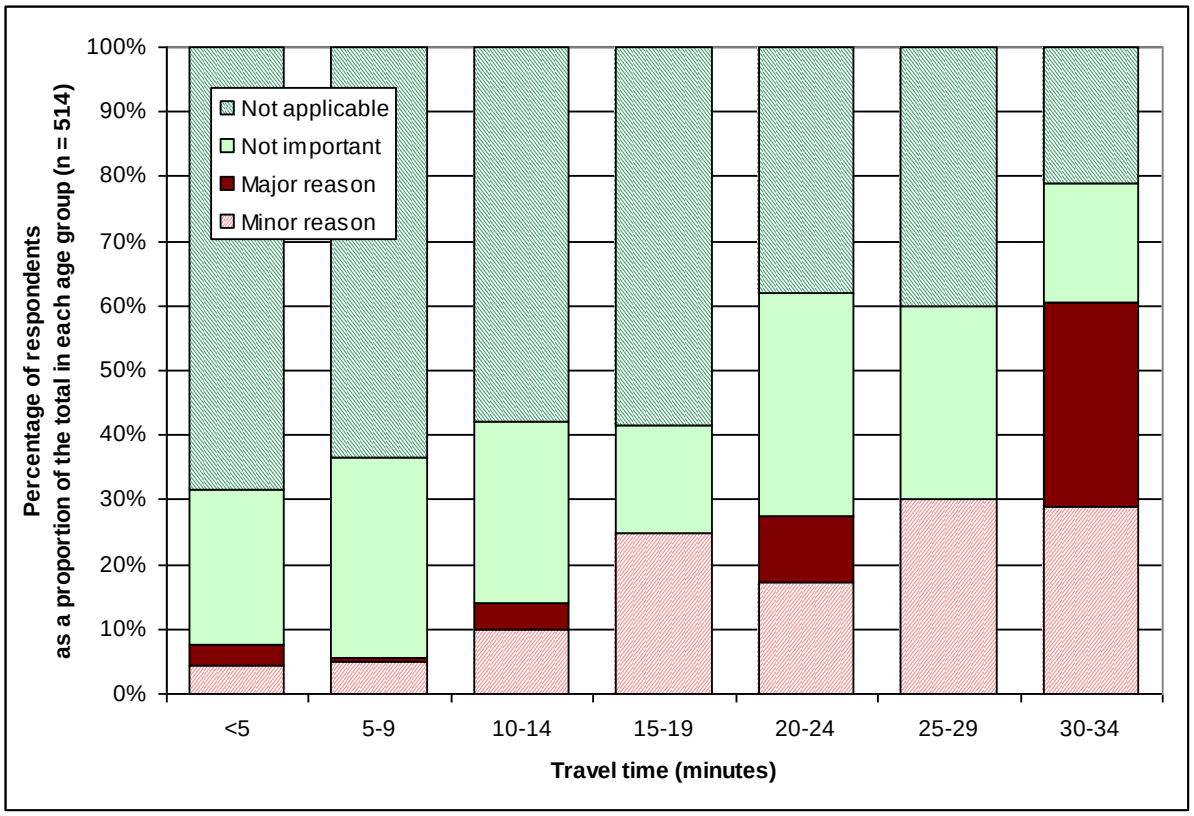

Figure 50 Travel time from work to fire station by 'work too far away to respond in time'

I did not realise the local brigade was made up of volunteers

Eighteen per cent of respondents 'didn't realise that their local brigade was made up of volunteers' (Item 33). For respondents living in larger rural towns that have a paid or retained brigade in the urban area, they may be correct. However, it is also likely that people who have moved into rural areas from a metropolitan area may be unaware of the volunteer nature of rural brigades. Again, however, the fire service may do well to promote the volunteer nature of the organisation to the wider community.

Concern regarding out-of-pocket expenses

Eighteen per cent of respondents reported that they were 'concerned about personal costs like petrol when [they] drive to training or callouts' (Item 34). No appreciable differences were found among the proportion of respondents endorsing this item based on gender or age. The survey was conducted in 2005 and therefore pre-dated rapid rises in the cost of petrol in 2006 and 2008. It is useful to note that this relatively tangible barrier is one of the lower-ranked issues identified by respondents who had never been volunteer firefighters and suggests that expenses are one item that are not a major issue in recruitment.

However, expenses appear to become an issue once people have joined a brigade. In Study 10, a survey of volunteers of all lengths of service, 40% of respondents endorsed out-of-pocket expenses as 'Greatly' or 'Moderately limiting' their participation with the fire service. Similarly, in Study 3c about one quarter of new recruits surveyed 3 years after joining endorsed out-of-pocket expenses as 'Somewhat' or 'Very limiting' of their participation in the fire service. Fire agencies may need to explore ways of offsetting or compensating

volunteers for necessary out-of-pocket expenses in the future, particularly if fuel costs rise at a rate faster than the Consumer Price Index.

We do not need a local fire brigade

Seventeen per cent of the respondents indicated they thought there was no need for a local fire brigade (Item 35). This is surprising finding for any community, particularly one in a fire-prone environment like regional Australia. It may reflect a number of factors including: that the dwindling population of some of the communities surveyed reduces the viability of having a local brigade, or that improvements in roads and firefighting vehicles enable a brigade from a larger community nearby to adequately service the respondent's community.

I live too far from the fire station

Sixteen per cent of respondents reported that they thought they lived 'too far from the fire station to respond in time' (Item 36).

Respondents were asked to estimate how many minutes it would take them to travel from home to their nearest volunteer fire station. The results, in Figure 51, show that 38% of respondents estimate living within 5 minutes, 65% within 10 minutes and 93% within 30 minutes of a fire station. As this survey was conducted among rural communities, the results suggest that about on third of people living in rural communities live within an adequate travel time of less than 5 minutes from a fire station. The number of people living within 5 minutes of a fire station is likely to be higher in a more densely populated regional cities or suburban areas.

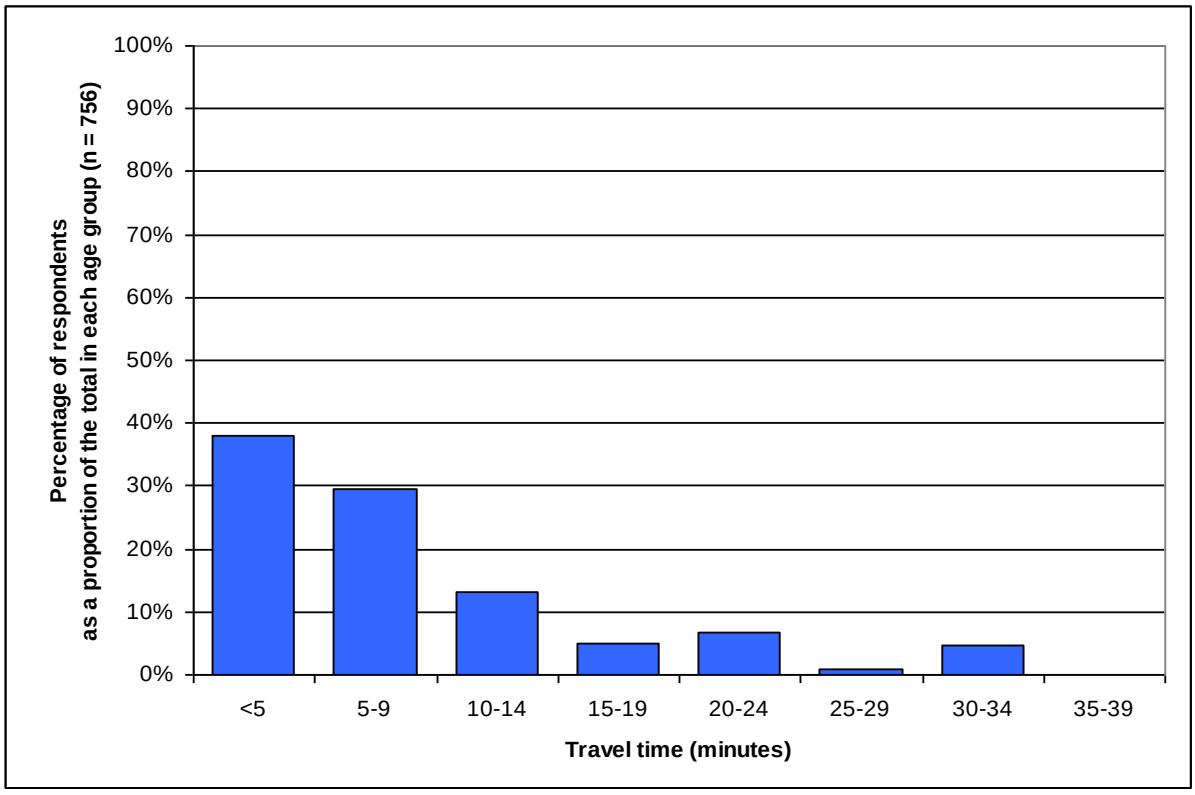

Figure 51 Respondents' estimated travel time from home to their nearest fire station

Figure 52 shows the relationship between respondents endorsing that they live too from the station to respond in time and their estimated travel time from home to the nearest volunteer-based fire station. The proportion of respondents endorsing that they live too far from the fire station becomes appreciable as their travel time exceeds 10 minutes, rising to 50% of respondents who live more than 25 minutes travel-time away[50]. The results suggest that respondents, despite never having been volunteer firefighters, appear to have a realistic understanding about how close they need to live to the fire station to be able to turn-out with the brigade.

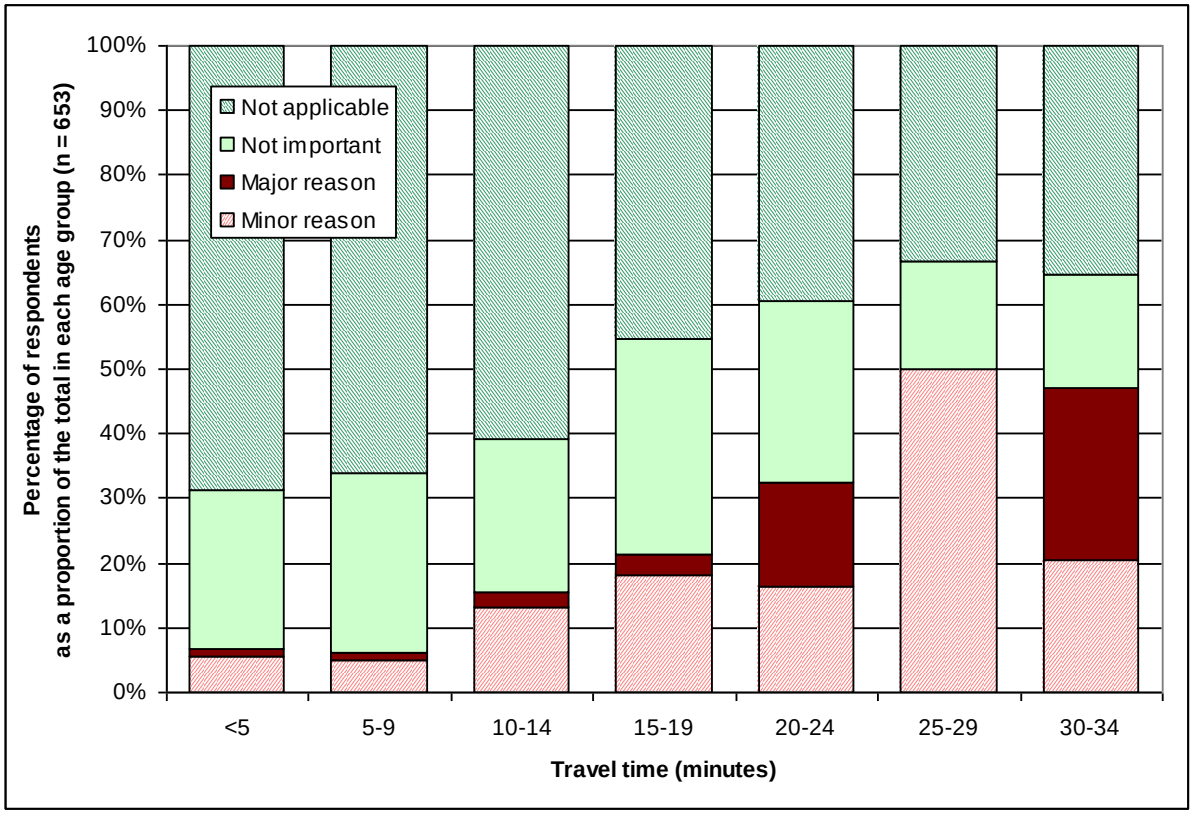

Figure 52 Travel time from home to fire station by 'live too far to respond in time'

No transport to get the fire station

Only 11% of respondents indicated that they 'don't have any transport to get to the fire station' (Item 37). This practical, logistical barrier to volunteering with the fire service was the lowest ranked of the 37 barriers suggested in the questionnaire.

WHAT WOULD MAKE IT EASIER TO JOIN?

(Studies 2 and 3a)

In Study 2, we asked respondents what the fire service or the local brigade could do to make it easier for them to become a volunteer. They were given a table listing nine suggested

[50] The absence of respondents endorsing 'Major reason' in the 25-29 minute category is an artefact of the unusually low count of respondents for that travel-time category. Only 6 respondents endorsed the travel time category of 25-29 minutes, considerably fewer than for all other travel time categories in the graph. The next lowest number of respondents in a travel-time category was 35 in the 30-34 minute category.

initiatives and asked to indicate how helpful each one would be to them. The response choices were: 'Very helpful', 'Somewhat helpful', 'Not helpful', or 'Not applicable'. As with the *Barriers to joining* section above, in order to present the results in the clearest possible way, responses where items have been identified as 'Very helpful' or 'Somewhat helpful' have been combined.

Eight hundred and ten of the 1,046 respondents who had never been volunteer firefighters provided valid responses to these questionnaire items. Table 67 shows the percentage of respondents endorsing each item as 'Very' or 'Somewhat helpful'.

Table 67 Factors that would make it easier to volunteer

No.	Factors that would make it easier to volunteer with the fire service	% identifying item as 'Very or Somewhat helpful'
1	Provide information sessions about volunteering with the fire service	61
2	Help me to develop skills that would be useful in other parts of my life (4WD driving, chainsaw use, leadership, computers, first aid)	57
3	Publicise intake dates for new volunteers	56
4	Help me get qualifications that would help my career (workplace trainer certificate, heavy vehicle licence, first aid certificate)	52
5	Help me to get started by introducing me to other brigade members and showing me how things work around the brigade	47
6	Invite me personally to volunteer	38
7	Make it easier for friends or family members to also become involved with the fire service	32
8	Assist with childcare during fire service activities	31
9	Recognise my past firefighting knowledge instead of making me retrain under the new system	16

Provide information sessions

The most commonly endorsed need was for information sessions about volunteering with the fire service. The questionnaire did not seek further detail directly, but people could be expected to want to know more about many of the issues that were identified among the barriers discussed in the previous section, such as time commitments expected for training and turnouts, how frequently they are expected to turn-out, safety measures, compensation for injury, and protection from legal liability. In fact, prospective volunteers could expect the fire service to address a wide range of questions that they, having no experience of firefighting, may not have thought of. It is false economy to recruit volunteers without fully informing them of both the advantages and disadvantages of joining. This simply contributes to higher turnover and a higher workload in training recruits.

An important theme, which emerged when analysing barriers to joining, was that people outside the fire services have little knowledge about the organisation. For example, many did not realise that their local brigade was made up of volunteers (18%), did not know how

to join (28%), did not know the brigade needed more volunteers (33%), or did not know what legal and income protection the fire service provided to its volunteers (32 and 36% respectively).

There is a strong case here for the fire services and brigades to better communicate what they do and many aspects of fire service volunteering to the wider community.

Help me to develop useful skills

Over half the respondents (57%) thought it would make it easier for them to volunteer if the fire service helped them to develop skills that would be useful to them in other areas of their life, such as off-road driving, chainsaw use, leadership skills, computer use and first aid (Item 2). While there may be a risk that some individuals will try to exploit such assistance without giving adequately in return, the world of business thrives on arrangements of mutual benefit, and reciprocity is one of the fundamentals of social capital. Note the findings relating to age and motivations to volunteer in the *Retention of volunteers* section of this report on page 97. Younger volunteers, aged 18–35, may be particularly responsive to opportunities to develop skills that would be useful in other aspects of their lives.

Publicise intake dates

A similar proportion of the respondents (56%) indicated that it would be helpful if the fire services and brigades publicised intake dates for new volunteers (Item 3). There are really two components to this item. First, establishing set intake dates gives people a specific timetable to focus their thinking about volunteering with the fire service and to reorganise other parts of their lives accordingly. Set intake dates may help propel them to make a decision and take the necessary action. Secondly, if set intake dates are established, they need to be publicised effectively.

Help me to get career-relevant qualifications

About half of the respondents (52%) thought it would be helpful if their volunteering with the fire service helped them to get qualifications that would be advantageous in their career, such as a heavy vehicle licence, workplace trainer's certificate, or a first aid qualification. As with item 2, there was a strong response to this item and it seems reasonable that, where the fire services can identify areas of personal development that would be of mutual benefit to both volunteers and the service, they should consider pursuing those opportunities.

Orientation program for new members

Just under half of the respondents (47%) thought it would be helpful if someone were to assist them get started by introducing them to brigade members and showing them how things work around the brigade (Item 5). Clearly, a good deal of the population find the prospect of joining a fire brigade a little daunting. The critical purpose of fire brigades and their disciplined character probably make them more intimidating to join than, for example, the local tennis club. The fire services and brigades might consider formal orientation sessions for new members, if not a buddy or mentoring system extending over the first weeks or months after a new member joins.

Invite me personally to volunteer

Just over one third of respondents (38%) felt that it would be helpful if someone were to invite them to volunteer in person (Item 6). This is consistent with the findings in Study 3a (see Table 68), where the most frequently reported prompt for joining among recruits, surveyed 6 months after joining, was that someone had approached them personally.

Make it easier for friends or family to become involved

Similarly, about one third of respondents (32%) indicated that making it easier for friends or family to become involved would help them to join (Item 7). About 40% of serving volunteers report that the obligations of family and parenting limit their participation in the fire service (Table 12, Item 9). Fire services and brigades might explore ways of involving families in brigade activities. Some examples already used by fire services include junior brigades, cadet programs, running competitions and brigade auxiliaries. Fire services might consider broadening the role of brigades to encompass activities such as community education, assisting other organisations with fund-raising or installing smoke alarms for elderly residents. Such activities can involve personnel who are not suited to operational firefighting. These activities all enhance the public profile of brigades and build linkages and mutual support in the community. They can help make brigades more inclusive of a broader cross-section of the community and allow more interaction with family and friends during brigade activities.

Assist with childcare

About one third of respondents (31%) reported that some form of assistance with childcare would help them to join the fire service (Item 8). This is consistent with the 26% of respondents who reported that having nobody to 'mind the children' was a barrier to them joining (Table 62 and Figure 46). While fire services or brigades may find it challenging to become involved in facilitating childcare arrangements for volunteers, it may free parents to respond to incidents during business hours. Fire services may not wish to become directly involved in childcare, but assist by informing the community that volunteers could benefit from support from family or friends in minding the children.

Recognition of prior learning

A relatively small proportion of respondents (16%) reported that it would be helpful if the fire service recognised their past firefighting knowledge instead of making them re-train under new systems (Item 9). There is anecdotal evidence that people with longstanding firefighting experience feel offended and disenfranchised by requirements to undergo formal accreditation under recent training and certification initiatives. The proportion of respondents endorsing this item (16%) is relatively low because this analysis excluded present or past fire service volunteers. Respondents who endorsed this item are likely to be serving or former career firefighters or forestry workers who have relevant training or experience. We understand that there are many people in rural communities who have been active in firefighting without necessarily being formally registered members of brigades.

Reasons for joining given by recent recruits

Respondents to Study 3a, new recruits surveyed 6 months after joining, were asked what prompted them to volunteer with the fire service. The results, in Table 68, show that the

two leading reasons for joining were: being approached personally and general brigade publicity (as distinct from advertising). Having a friend join was equally important for women, but less so for men. Advertising was about half as important as the preceding reasons. Brigade displays were nominated by about 10% of respondents, although these may be infrequent. A fire service website was nominated by about 5% of respondents

There were few differences between the items endorsed by men and women, but women appear to be more likely than men to be prompted by a recent emergency involving the fire service, or by having a friend or relative join.

Table 68 The main prompts for joining the fire service (Study 3a)

	Percentage within gender	
	Male	Female
Approached personally	36	32
General fire service publicity	30	32
Friend or relative joined	25	31
A recent fire or other incident involving the fire service	20	32
Advertising for fire service volunteers	16	15
Brigade display	9	10
The fire service website	6	5

Websites

Although the fire service website ranked lowest among this cohort of recruits in Study 3a, (Acker, 2004) suggests that younger people (aged under 25 years) are increasingly likely to use web-based materials to make decisions about life activity choices, especially those related to work and career.

CFA has confirmed the value of websites for volunteer recruitment. It receives inquiries from prospective volunteers at its state headquarters and forwards them on to the appropriate brigades for follow-up. In 2006, CFA identified the desirability of recruiting younger volunteers, ideally targeting people aged less than 45 years. Following the above findings by Acker, CFA updated the Volunteer Recruitment section of its external website, enhancing it with the addition of an on-line form for people wanting to inquire about becoming CFA volunteers. CFA then monitored the results through its 2006 Corporate Volunteer Recruitment Campaign from 1 October to 12 November 2006. It reported (Table 69) that people using the inquiry service found out about CFA volunteering primarily through newspapers (39%), particularly local papers (31%), but also the CFA website (20%) and a friend or relative (15%).

Table 69 How inquirers found out about CFA volunteering

Interest gained through…	No. of enquiries
Local paper	98
CFA website	63
Other papers	27
Friend or relative	49
New to area	13
Other	43
TV advertisement	9
Unknown	18
Total	320

Once implemented, CFA's on-line inquiry form became the most popular means of lodging an inquiry through the headquarters inquiry service, accounting for 55% of inquiries received (Table 70).

Table 70 Mode of inquiry

Enquiry received via	No. of enquiries
On-line form	175
1800 phone number	128
Email	8
Switchboard	7
In person	2
Total	320

The on-line form also tended to attract younger inquirers than the toll-free inquiry number, as is evident in Figure 53.

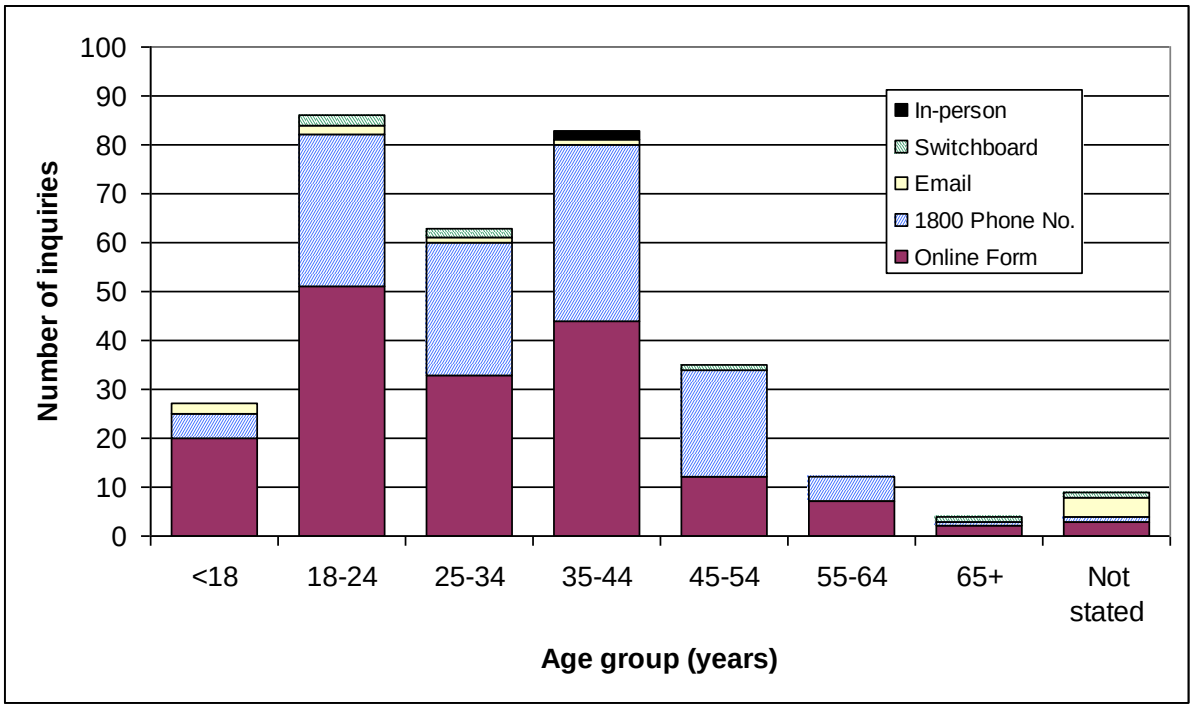

Figure 53 Number of inquiries by age and inquiry type

AGENCY RESPONSES TO RESEARCH FINDINGS

Over the past six years, fire agencies have implemented numerous volunteer recruitment and retention initiatives, many based on the results presented in this report. As the primary aim of the report is to integrate findings across specific studies, these agency initiatives are not listed within the body of this report, but are included for the interest of the reader in Appendix C.

MAJOR ISSUES EMERGING ACROSS STUDIES

The Volunteerism Project has identified a great many factors that inhibit or enhance fire service volunteerism, as summarised in the previous sections of this integrative report. Fire agencies have been successful in arresting the decline in volunteer numbers by taking a number of initiatives, many of which were based on findings of the Bushfire CRC Volunteerism Project (as detailed in Appendix C). However, although the population continues to rise, volunteer numbers are not yet showing clear signs of increasing. Moreover, there are grounds for anticipating an increased demand for services in most regions, driven by climate change and population movements, and a further decline in volunteer numbers in the most vulnerable regions.

In this section of the Report, a summary is provided of those issues that emerge most strongly on taking an overview perspective of all the findings.

CONTINUING NEGATIVE IMPACT OF ECONOMIC CHANGES

Many people volunteer with the fire services as soon as they are old enough (usually 16 years of age). However, joining rates decline dramatically as people reach the ages of 18-21 years when they must consider higher education, work, family, and the freedom afforded by a drivers licence. The exodus of young adults from regional areas to capital cities and other growth centres has had the effect of increasing the age profile of regional Australia and hence the human-resource pool for volunteer fire agencies. It has left volunteer fire brigades with declining numbers and an age profile that is undesirably high for both the health and well-being of the volunteers and the capabilities of the fire service. Although these trends appear to have stabilised over recent years, governments are currently renewing their efforts to establish high levels of participation in vocational and higher education, particularly among economically disadvantaged groups in regional and remote Australia and this can be expected to place further pressure on volunteer availability in regional areas.

Compounding the difficulties presented to fire agencies by the exodus from rural regions to large cities and towns is a parallel counter-urbanisation, involving predominantly middle-aged and economically disadvantaged people moving from capital cities either to regional areas within commuting distance of the capital, or to areas with high lifestyle amenity and/or cheaper housing.

Therefore a significant downward pressure on volunteer firefighter numbers, and upward pressure on their age distribution, should be anticipated by fire agencies and governments in planning to meet future demands and to provide a surge capacity for more frequent large and protracted fires. Fire agencies would benefit from developing a better understanding and confirmation of this apparent relationship to assist with workforce planning in the future.

A more productive recruitment strategy for rural and peri-urban areas may be to target people aged 40-45 years. People in this age group are more likely to remain in the area. If they have children, they are likely to become increasingly available for volunteering once the youngest child has started secondary school.

CONFLICT BETWEEN VOLUNTEERING AND WORK OR BUSINESS

About 84% of volunteer firefighters are members of the labour force. The 65% of volunteers who are employees report responding to a low proportion of turnouts that occur during their working hours. Self-employed volunteers appear to shoulder most of the responsibility for turnouts during business hours, although they constitute only 20% of fire service volunteers. Self-employed volunteers are already overrepresented in the fire service compared to their proportion of the adult population (7%, see Table 17), but increasing the proportion of self-employed volunteers will help strengthen business-hours response rates.

Although most employers report that they are happy for employees to turn out during business hours, this is not the perception of volunteers who are employees. Employee-volunteers cite a wide range of practical considerations that prevent them from responding to working-hour turnouts including: that there is nobody to take their place, or that they are responsible for vulnerable people, particularly volunteers employed in the health and education industries. Many employees report that their employer maintains the minimum possible workforce at their workplace and as a result, they generally cannot be spared during work hours. Infrequent responses for strike teams on hot days can be tolerated in some workplaces, but prolonged commitments to so-called campaign fires are more problematic.

The result is that a disproportionate share of the burden of providing a fire service during business hours is carried by minorities of: (a) volunteers who are self-employed, and (b) employers of volunteers, willing to spare their employees and absorb the disruption and cost. It is unclear to what extent these employers and self-employed volunteers accept this burden either willingly, such as for personal satisfaction, or reluctantly to fill an unmet community need. To the extent that they are reluctantly filling an unmet need, there appears to be an inequitable shifting of cost from the community. Fire agencies and governments need to examine ways of ensuring that the cost burden of providing a fire service during business hours does not fall to a harmful extent on a conscientious minority of employers and self-employed volunteers.

THE NEED FOR INCREASED SUPPORT FOR BRIGADE LEADERS AND VOLUNTEER MANAGERS

While the main reasons volunteers give for resigning from fire services are utilitarian: leaving the area, age or ill health, about 25% of those who leave do so for reasons of dissatisfaction with the volunteering experience. They report problems with bullying, harassment, discrimination or excessively authoritarian brigade leadership. Some brigades have been characterised as ‘old men’s drinking clubs’, and there are reports of territorial rivalry between neighbouring brigades, and bitter feuds within brigades.

These dysfunctional behaviours are symptomatic of poor brigade leadership and a lack of adequate oversight by fire agency management of those brigades in which they occur. Current brigade leaders report that they often received little preparation for the role from their predecessors or the fire agencies. Brigade leaders also worry about the process of appointing leaders solely or largely on the basis of elections without adequate requirements for proficiency.

There was evidence that some fire agency managers are not well regarded. A high proportion of respondents complained that some managers were either incompetent, slow to get things done, or failed to consult brigades over matters that affected them. Middle managers are at the interface between volunteer brigades and the publicly funded umbrella fire agencies. They often have to manage differences in priorities between volunteer and fire agencies. While volunteers are often conscious of the impost on their time, the fire agencies are concerned about accountability for service levels and the use of public funds. It is essential that middle managers are adequately trained to manage volunteers and have sufficient resources to fulfil the demands of their role efficiently.

Training brigade leaders and staff who manage volunteers are powerful interventions that fire agencies can implement to improve the volunteering experience for a wider range of people. Well-run, happy brigades are much more likely to exhibit high levels of participation and retention, and be more attractive to outsiders to join.

THE NEED TO EXPAND UNDERSTANDING OF MOTIVATIONS TO VOLUNTEER

Both serving and prospective recruits report their primary motivation for volunteering as a firefighter is to do something for the community and/or to make a difference. These altruistic motives are at odds with the reality of reports of dysfunctional behaviour among volunteers and the observation that many volunteers are more willing to undertake fun and easy tasks rather than boring or difficult tasks, regardless of necessity. It suggests that at least one of the primary motivations for volunteering has not been adequately captured in the studies we have undertaken to date. The literature on human motivation has long made the distinction between extrinsic versus intrinsic motivation. According to Omodei and Wearing (1990), extrinsic motivation occurs when an activity is undertaken in order to meet an explicit (and therefore easily identified) need. Intrinsic motivation, on the other hand, occurs when an activity is undertaken for the experiences embedded in the activity itself. Such experiences most typically include: excitement, involvement, and a sense of personal agency, potency or efficacy. As such, intrinsic motivation is often implicit, such that the individual cannot articulate why they like something, they just do. It is not surprising, therefore, that such implicit motivations are often overlooked in self-report studies such as those undertaken in the present project. This creates a challenge initially for the researcher, and subsequently for the fire agency, who wishes to identify, and appeal to, intrinsic motivations. We therefore suggest that a primary motivation to volunteer may well be an intrinsic motivation, particularly in light of the fact that firefighting creates an opportunity for an individual to exercise agency in the face of one of the greatest forces of nature (i.e. wildfire).

Another possible source of confusion in interpreting volunteer self-reports of their primary motivation being to do something for the community, is the confounding of two quite different underlying motivations, namely altruism and self-enhancement.

In addition to providing fire agencies with an opportunity to appeal to the strongest motivations, a better understanding of intrinsic motivations, altruism, and self-enhancement may also increase understanding of the origins of some of the more dysfunctional aspects of volunteer behaviour including, but not limited to, bullying, discrimination and risk-taking.

HOST COMMUNITY MISUNDERSTANINGS ABOUT VOLUNTEERING

The data obtained from members of rural communities who are not, and have never been, volunteers reveal a surprisingly poor level of knowledge of the volunteer fire services in general, and what it means to be a brigade member in particular. The fact that such poor knowledge applies even to their local brigade poses a significant challenge to recruitment. Furthermore, as our research to date on communities has focused on rural communities, it is prudent to assume that knowledge is even weaker with regard to urban fringe and suburban areas.

Although this is a most unfortunate, and perhaps unexpected, major issue, strategies to address such community misunderstanding are perhaps relatively straightforward. The many specific community misunderstandings identified in the present Integrative Report provide a strong basis for the development by fire agencies of community education programs.

IMPLICATIONS FOR FURTHER RESEARCH

The Bushfire CRC Volunteerism Project has attempted to identify and measure many of the factors that influence recruitment, retention and levels of participation of volunteer firefighters in Australasia. In integrating the results from all of the Project's 28 studies, the following have emerged as particularly pressing issues for further research. It should be noted that data available during the early years of the Volunteerism Project on volunteer numbers and capabilities were somewhat limited. Recent improvements in fire agency records and databases allow a more detailed and accurate exploration of firefighter numbers, volunteers' capabilities, levels of participation and trends in these factors over time. Future research could well take advantage of this improved information on fire service volunteers.

It should also be noted that there is considerable scope for secondary analysis of the research databases compiled during the current project.

POPULATION SUBGROUPS NOT ABLE TO BE INCLUDED IN THE PRESENT PROJECT

The scope of the present project did not allow for the explicit investigation of issues relating to youth (under 18 years) and to culturally and linguistically diverse groups, including Indigenous Australians. Nevertheless, the information we did obtain during our research indicates that these specific population subgroups represent a potentially untapped volunteer workforce resource and, as such, warrant targeted research.

CADETS AND VOLUNTEERS AGED UNDER 18

Data from adult respondents in Study 10 indicate that many of them joined the fire service as soon as they became eligible, upon reaching the age of 16 years. Many had also joined junior or cadet programs for those under 16. It is unclear to what extent people who join prior to the age of 18 continue with the fire services through the ages when they become highly mobile (18–29 years). Evidence suggests that a very small percentage of volunteers who leave the fire service re-join. Considerable benefits may be realised by research identifying ways of ensuring that former junior or cadet firefighters who leave during the years of high mobility rejoin when they return to an area serviced by volunteer firefighters.

CULTURALLY DIVERSE GROUPS

There is body of literature that suggests that fire services will be more successful in engaging communities to 'take ownership' of fire safety if the cultural make-up of firefighters reflects that of the community they serve. Culturally diverse groups, such as immigrants and Indigenous Australians appear to be under-represented in the volunteer fire services.

With respect to overseas immigrants, whereas many immigrants in the decades following World War II settled in rural areas, recent cohorts have a strong tendency to settle in capital cities. Fire agencies that service and recruit from the outer suburbs of major cities may have available untapped resources of potential volunteers among immigrant populations. Therefore fire agencies may benefit from research identifying the barriers and incentives affecting recruitment from such immigrant groups.

With respect to Indigenous Australians, surprisingly few responded to the Project's surveys. It is unclear whether they are proportionately included among volunteer ranks. Higher proportions of Indigenous Australians live in regional and remote areas and they are also comparatively young (median age of 21 years compared with 46 years for the total population). Therefore, fire agencies may benefit from research identifying the barriers and incentives affecting recruitment from Indigenous Australians.

LEADERSHIP AND RETENTION OF VOLUNTEERS

Dissatisfaction with the volunteering experience is a significant contributor to approximately one quarter of volunteer resignations. Serving and former volunteers report significant levels of conflict, factionalism, exclusion, discrimination and bullying. There are complaints of autocratic leadership, favouritism and incompetence from some brigade leaders and fire agency staff. There was anecdotal evidence of strained relationships between volunteers and some career staff.

Good leadership and management would help to prevent behavioural problems among volunteers and reduce turnover of membership. However, focus groups indicated that potential leaders are often deterred by the workload, while poor quality candidates with sufficient political acumen could influence brigade members so as to win elections. Further research is required to identify means of ensuring a high quality of brigade leadership, supported by quality district managers and career firefighters.

THREATS TO FUTURE VOLUNTEER NUMBERS

Given the potentially serious implications for future volunteer numbers of the impacts of both past and future economic trends and environmental concerns, there is a pressing need for further research. To better assist fire agencies with workforce planning for the future, such research would need to investigate not only the likely trends in volunteer capacity but also the mechanisms underlying such trends. In particular, attention needs to be given to obtaining a better understanding of the impact of on-going liberal economic reform, including rising tertiary education participation rates, which are likely to place further pressure on regional Australia, exacerbating depopulation and the ageing of remote rural populations. Such pressures are likely to be compounded by major environmental initiatives including the reduction of water allocations for irrigation in the Murray-Darling basin and the introduction of some form of carbon pricing affecting fuel prices.

HEALTH RISKS AND FITNESS FOR DUTY OF OLDER VOLUNTEERS

It has been determined that the age profile of volunteers is high compared with the general workforce, and increasing. In the US, overexertion by firefighters aged over 40 years is the leading cause of on-duty firefighter deaths. Further research is required to understand, and manage, the rising age-profile of Australian volunteer firefighters for possible health risks to themselves and any compromises to the effectiveness of the fire service.

RECRUITING YOUNGER VOLUNTEERS

There is evidence that several economic trends, particularly casualisation of the workforce and increased participation in education, are making it increasingly difficult for young adults to volunteer as firefighters. Further research is required to understand the impact of these trends so as to guide policy to enable more young adults to volunteer.

VOLUNTEERS FOR NON-OPERATIONAL AND INCIDENT-MANAGEMENT ROLES

Fire agencies have mixed success at recruiting volunteers who are interested in support roles such as staging-area management and catering; or in key operational roles in incident-management teams. With the increasing likelihood of multiple large fires occurring under extreme fire weather conditions, there is a pressing need for research into the recruitment of surge volunteers to take such key roles at infrequent but major fires.

SUPPORT FOR EMPLOYERS AND SELF-EMPLOYED VOLUNTEERS

The research suggests that the volunteer fire services rely heavily on the generosity of a small proportion of employers of volunteers and self-employed volunteers to maintain the capacity to respond to incidents during business hours. Further research is required into options for ensuring that this minority of employers and self-employed volunteers are not unfairly disadvantaged or exploited.

THE UNDERLYING MOTIVATIONS OF VOLUNTEERS

Further research is needed to understand the true motivations of volunteer firefighters to ensure that the needs of the fire services are able to be met. In particular, motivations associated with altruism, self-enhancement, and a sense of personal agency, potency or self-efficacy need to be differentiated and explored in depth. Self-oriented motivations are likely contributors to bullying, discrimination and unsafe behaviours, which in turn contribute to dissatisfaction for other volunteers and excessive membership turnover. The self-report surveys and other methodologies used in this Project have limitations in distinguishing altruistic motivations from self-oriented motivations.

THE PERCEIVED BUREAUCRATIC NATURE OF THE FIRE AGENCIES

The most strongly endorsed obstacle to volunteering was the perceived bureaucratic nature of the fire agencies. The term ‘bureaucratic’ can encompass a wide range of managerial and administrative attributes, real or perceived. Further research is recommended to conduct a detailed examination of what volunteers find so frustrating and identify ways of minimizing the burden on volunteers while meeting the responsibilities of the fire agencies.

THE LINKS BETWEEN BRIGADES AND THEIR HOST COMMUNITIES

The community survey in the present project revealed a surprising absence of understanding of fire services in general and what it means to be a brigade member in particular. It is as yet unclear the extent to which such misunderstandings might also occur in urban fringe and outer suburban areas. However, as it is quite possible that such misunderstandings are even greater in these communities, there is a pressing need to investigate the extent of such misunderstandings in all communities. In order to inform the development of adequate community education programs, research is first needed to identify the nature of the links between brigades and their host communities and how these might be enhanced.

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APPENDIX A—THE STUDIES (METHODOLOGIES AND SAMPLES)

This appendix lists the studies undertaken during the course of the Volunteerism Project and referenced by number throughout this integrative report. They are not listed in any particular order.

Where reports are listed, copies may be obtained from the Bushfire CRC website

www.bushfirecrc.com

Study No. **Study Title and Description**

1. Estimates of the impact on volunteer numbers of introducing mandatory fitness standards

Concerns have been raised in general discussions of volunteer firefighter numbers that Occupational Health and Safety considerations might someday require volunteer fire agencies to introduce mandatory fitness standards for operational volunteers. There is presently no indication that such a development is imminent. However, given the intrinsically hazardous nature of firefighting and related emergency response activities, it is entirely possible that the findings from a coronial inquest or similar inquiry in the future could leave volunteer fire agencies with no alternative but to introduce mandatory fitness standards.

This issue was discussed in general terms in Report Number 3:2004: *Profiles of Australia's Volunteer Firefighters* (McLennan, 2004a). However, the likely impact on any particular fire agency has not been investigated previously. In 2005, staff in the human resources unit of one fire service (Agency B) asked the Bushfire CRC Volunteerism Project team to provide an estimate of the likely impact of mandatory fitness standards on operational volunteer numbers.

Currently, only one of Australia's eight volunteer fire agencies has mandatory fitness standards for its operational volunteer firefighters, the ACT Emergency Services Authority (ACT ESA). Volunteers' age distribution information from that agency was used to generate estimates of the likely impact on operational volunteer firefighter numbers in other states of introducing a mandatory fitness standard equivalent to that of the ACT ESA.

- We obtained the age distributions of ACT ESA female and male volunteer operational firefighters.
- We then calculated the numbers of operational volunteers required in the client service in each age and sex category to match the ACT ESA age and gender distributions, retaining the same overall total numbers as at present.

- Finally, we compared the current operational volunteer age and gender distributions in the client service with what would be required to match the ACT ESA volunteers' age distributions, and estimated the expected shortfalls and forced retirements.

2. Community survey of knowledge of rural fire services and potential to volunteer

The Bushfire CRC Volunteerism team collaborated with a fire service to conduct a survey of communities in inland regional Australia.

The survey aimed to investigate:

- The knowledge and understanding in the community about the fire service and local brigades;
- Community views about the fire service and local brigades; and
- Factors that influence community members' choices with regard to volunteering with the fire service.

The survey was organised through the collaborating fire service's regional headquarters. A questionnaire was designed by the Volunteerism Project team in close consultation with fire service's Volunteer Relations Department and Region management. The study focused on identifying ways of increasing the recruitment of new fire service volunteers.

Region management selected communities to survey, including some in which there were known to be problems with volunteer recruitment or retention in the local brigades. The study surveyed 29 communities to (a) give a comprehensive geographical coverage of the region, and (b) ensure adequate numbers of respondents for analysis. Questionnaires were bulk mailed to all non-business addresses and boxes in the postcode areas for the selected communities.

The analyses used in this report were confined to the 1,046 respondents who had never volunteered with the fire service. Based on data from the 2001 census at the postcode area level, it was estimated that the adult population of the surveyed communities was approximately 20,000 people (Australian Bureau of Statistics, 2002). Based on data supplied by the fire service's regional headquarters, there were approximately 2,500 current members in brigades in the survey area. From this, we estimate that the sample rate was about 6% of adult community members who were not current volunteers with the fire services in the surveyed area.

It is worth noting that it appears that a high proportion of male adults in the survey area were volunteers with the fire service at the time of the survey. Overall, the 2,500 fire service volunteers constitute about 12.5% of adults in the survey area. At the time, about 85% of the fire service volunteers in that state were male. The resulting estimate that there are 2,125 (85% of 2,500) male volunteers, this constitutes approximately 21% of the adult male population in the survey area. Offering some support for this conclusion, researchers received written comments

from respondents stating that 'everyone in this area who can volunteer with the fire service is already doing so'.

3. Survey of new volunteers at 6, 12 and 36 months after joining (3a, 3b and 3c)

This study was a longitudinal study designed to monitor the experiences of new fire service volunteers during their first 3 years of membership. The study comprised a series of three surveys of all volunteers who joined the fire service during the 12-month period April 2005 to March 2006, at: (a)6 months; (b)12 months; and (c) 36 months after joining.

The reason for focusing on new volunteers was to better understand their motivations for having joined and the reasons leading a high proportion of volunteers to leave during their first few years of membership so as identify ways of reducing resignation rates. Volunteers who leave within 3 years represent an appreciable loss to fire services in terms of recruitment, training, and personal protective equipment costs in relation to their contribution to the community-protection goals of the organisation.

The studies, and the proposed questionnaires, were discussed widely with stakeholders within the fire service, including the volunteer associations—whose representatives made valued suggestions to improve the original draft of the survey questionnaire.

The response rates obtained were very satisfactory given that there were no incentives, no emotive issues were at stake, and that general community has become quite resistant to unsolicited mail, telephone, fax and email surveys. Recent surveys of their volunteer memberships by other fire agencies have rarely obtained response rates approaching 25%.

For the 6-month survey (Study 3a), the fire service posted questionnaires to 3,088 volunteers and 1,361 complete questionnaires were returned, giving an excellent response rate of 44%.

For the 12-month survey (Study 3b), the fire service posted questionnaires to 2,447 volunteers and 514 complete questionnaires were returned, giving a response rate of 21%.

For the 3-year survey (Study 3c), the fire service posted questionnaires to 2,144 volunteers and 346 complete questionnaires were returned, giving a response rate of 16%.

The response rates for Study 3 declined over the course of the three surveys (see Table 71), possibly owing to 'questionnaire fatigue' in the study population, and possibly owing to delays in information about resignations reaching those responsible for mailing out each round of questionnaires.

Table 71 Profiles of respondents to Study 3

Study		3a		3b		3c	
		6 months		12 months		3 years	
Response rate (%)		44		21		16	
Age (years)	*Median*	40		38		46	
Gender		Percentage of respondents					
	Male	69		67		64	
	Female	31		33		36	
		Male	*Female*	*Male*	*Female*	*Male*	*Female*
Marital status							
	Single, never married	31	32	23	31	18	22
	Married or de facto	61	58	71	54	77	71
	Divorced or widowed	8	10	6	15	5	7
Work role status[51]							
	Full-time employee	42	32	43	26	44	36
	Business or farm owner with employees	5	5	8	7	9	8
	Business or farm owner without employees	20	18	23	16	23	14
	Student	17	24	11	19	4	7
	Home duties	16	43	29	50	4	28
	Retired	6	4	6	1	17	11

4. Survey of fire service women volunteers

In 2005, the Board of one fire service accepted a proposal that a survey of women volunteers in that service be carried out jointly by the state's emergency services department and the Bushfire CRC Volunteerism Project team.

It was decided to conduct a mail survey of all women volunteer members of the fire service. A four-page questionnaire was developed based on a literature review conducted by Beatson (Beatson & McLennan, 2005) and many of the items used were adapted from those proposed in her report. Several draft versions were circulated to staff of the emergency services department and volunteers from the fire service for comment and revision. Several representatives of a women's group attached to the fire service were invited to comment on the proposed survey and these comments were taken into consideration in preparing the questionnaire. The questionnaire was mailed out by staff of the emergency services department using the fire service's volunteer membership database. Respondents were asked to return the questionnaire anonymously to the Volunteerism Project team at La Trobe University for data entry and analysis. Table 72 outlines the mail-out and returns for the survey.

[51] (1) Respondents were allowed to endorse multiple categories of work role status; (2) response options for work role status did not correspond fully across surveys (i.e. 6-month and 12-month surveys had separate response categories corresponding to farming and childcare that were not included in the 3-year survey).

Table 72 Study 4 (women's survey) mail-out and sample details

	Operational role	Auxiliary role
Number of surveys mailed out	1,150	1,800
Number of returns	442	301
Return rate	38%	17%

Based on feedback comments to staff of the emergency services department from some volunteers, it appears that the lower return rate from women auxiliary volunteers arose primarily because the content of the questionnaire was seen by many of them as being much more relevant to volunteers in operational roles.

The return rate for women operational volunteers was high, and the return rate for women auxiliary volunteers was lower than desirable, but acceptable.

5. Survey of fire service women volunteers

The Volunteerism team were approached by a volunteer-based fire service to collaborate on a mail survey of all women volunteer members of that service. A four-page questionnaire was used, based on the questionnaire used in Study 4, but with minor adaptations for the fire service requesting the study.

The survey was mailed out in early 2006 by the fire service using its volunteer membership data base. Respondents were asked to return the completed questionnaire directly to the Volunteerism Project team at La Trobe University using a supplied, reply-paid envelope.

Table 73 Details of survey mail out and returns

Number of surveys mailed out	56
Number of returns	31
Return rate	55%

6. Recruitment and Retention of Volunteer Firefighters: Rural Fire Services' Issues and Initiatives

Report 1:2004 (McLennan, 2004c)

This study is based upon ground-work conducted at the start of the Project involving:

- Interviews and discussions with rural fire services staff in human resources and volunteer management and support roles.
- Discussions and email contacts with a small number of volunteer firefighters and with career firefighters involved in training and supervising volunteers.
- A briefing and discussion meeting with Chief Officers of rural fire services.
- Reviewing reports and other documents produced by fire services concerning volunteer recruitment and retention.

The main purpose of the report was to bring together in a single document: (a) a summary of the most important issues associated with recruiting and retaining volunteers as these are presently understood within the various fire services, and (b) a summary of the ways in which fire services are presently responding to these issues with new initiatives.

7. Survey of retained firefighters

A fire service that engages retained firefighters (RFFs) approached the Volunteerism Project Team to collaborate on a survey of its retained firefighters. Within this fire service, retained firefighters are regarded as volunteers. Little is known about RFFs in terms of the relationship between employment and fire service 'volunteering' workload. There have been anecdotal and media reports that some employers of RFFs disapprove of their employees engaging in firefighting activities.

The aim of the study was twofold: (a) to establish a profile of the RFFs; and (b) to obtain information on how RFFs managed the dual demands of work-related activities and RFF firefighting duties.

A total of 3,177 surveys were mailed to RFFs by the fire service. Participants were asked to return completed questionnaires directly to the Volunteerism team at La Trobe using the reply-paid envelopes supplied. A total of 1,015 responses were received at La Trobe University, representing a response rate of 32%, a figure which is consistent with surveys of volunteers in other volunteer-based fire agencies.

8. Survey of employers of fire service volunteers

This study was a mail survey of employers across one state, undertaken in mid-2006. The survey was a collaborative endeavour involving the Bushfire CRC Volunteerism Project team and a volunteer fire service. The aim was to find out the views employers had about employees volunteering with the fire service, and the experiences of employers. The survey was intended to assist the fire service to formulate strategies to encourage employers to support their employees who are fire service volunteers.

This survey proceeded in two phases. In the first phase, the fire service's district offices prepared a list of 61 employers of existing volunteers to participate in the survey. Questionnaires were posted to the employers and 29 responses received. In the second phase, seeking a larger sample size, questionnaires were mailed to 9,955 non-residential (business, government or non-profit institution) postal addresses in 80 communities throughout the state using Australia Post's unaddressed bulk mail service. This is 3.5% of the 290,470 non-private postal addresses listed by Australia Post (for the state used in this project) in 2005. A total of 384 valid responses were received back, giving a raw sample rate of 3.8%. However, this understates the percentage of employers sampled, because only 42% of businesses are employing businesses (Australian Bureau of Statistics, 2007d). As such, the sample rate calculated as the proportion of employing businesses was, in fact, $3.8 \times (1/42) = 9.1\%$.

9. Survey of new volunteers after six months: July 2005 to June 2006 entry cohort

As part of an organisational response to widely discussed threats to future volunteer firefighter numbers, this fire service indicated a concern to minimise the resignation rate of its volunteers. In order to inform the development of strategies and procedures to implement this, the service's Volunteer and Youth Services Branch and the Bushfire CRC Volunteerism Project team undertook a joint research study investigating the experiences of new volunteers after 6 months of membership.

A total of 1,678 survey questionnaires were mailed to all volunteers who joined this fire service during the 12-month period July 2005 to June 2006, 6 months after they joined. Of the 1,612 surveys delivered, 336 were returned by reply-paid mail to the Bushfire CRC Volunteerism Project team at La Trobe University. This represents an overall response rate of 21%, which is comparable with recent surveys of emergency services volunteers in other states. Of the total mailed out, 66 questionnaires were returned to the fire service as 'not known at this address'.

There were, apparently, considerable differences in survey response rates among the various services in this emergency services agency. Response rates are shown in Table 74 below; these rates should be regarded as approximate because there is some doubt about the precise numbers of questionnaires mailed to volunteers in some services.

Table 74 Responses from fire service agencies in Study 9

Service	Corrected mail out[52]	Responses	Response rate (%)
Fire and Rescue Brigades	138	46	33
SES	197	60	30
Bushfire Brigades	1,200	206	17
Volunteer Emergency Services	70	10	14
Volunteer Fire Service	Not known	14	Not known
Marine Rescue	Not known	0	–

10. Survey of volunteer firefighters

This survey was implemented in two formats: (1) as a paper-based questionnaire, and (2) as an equivalent on-line questionnaire accessible through the fire agency's volunteer intranet.

The paper questionnaire was distributed as a 3-page lift-out in the agency's magazine, which has a circulation of 33,000. About 23,000 copies were mailed out to members of the service and the remaining 10,000 were distributed to the agency's district offices. Respondents aged under 18 years were instructed to obtain

[52] Taking into account the 66 questionnaires not delivered.

the consent of a parent or guardian. A covering page incorporating the consent form and reply-paid envelope was provided with each questionnaire.

The on-line questionnaire was facilitated through an on-line survey-hosting company. The web link to the on-line questionnaire was publicised in the agency's magazine and on their website. Respondents accessed it via a link that was only accessible to registered users of the agency's intranet, thereby providing reasonable assurance that the respondents were legitimate fire service volunteers. The system provided various safeguards to discourage respondents from completing the questionnaire more than once.

The survey was timed to take place outside the wildfire season to minimise the risk of firefighting duties competing with volunteers' time to participate. It was publicised to volunteers through various channels of communication and a closing date was included in the publicity. Respondents were asked to return completed hardcopy questionnaires to the Bushfire CRC Volunteerism Project office at La Trobe University within a 2-month period. The on-line questionnaire was made accessible for that period.

At the end of the survey period, 1,058 responses (66.7% of total responses) had been received from the on-line survey and 531 paper questionnaires. The total of 1,589 responses represents approximately 2% of the volunteers registered in the fire service's membership database as of September 2007. This compares poorly with the response rates achieved in other surveys conducted recently by the Project, even surveys of the general public. It may be that including the paper questionnaire within the magazine reduced its impact, and thus response rate. While this is a disappointing response rate, the total number of responses is more than adequate to undertake useful analyses.

The agency's membership database records that approximately 80% of volunteers are male and 20% are female. The survey sample is slightly biased, with 85% of respondents being male.

The bar chart in Figure 54 shows the age distribution of respondents to the volunteer survey alongside the age distribution of volunteers reported from the agency's membership database at the time of the study.

Generally, the age distribution of the survey sample resembles the age distribution reported in the membership database, but marginally biased towards younger ages. However, we note that 21% of records in the membership database do not report a valid age, so this database does not provide a complete measure of the age distribution of the volunteer population.

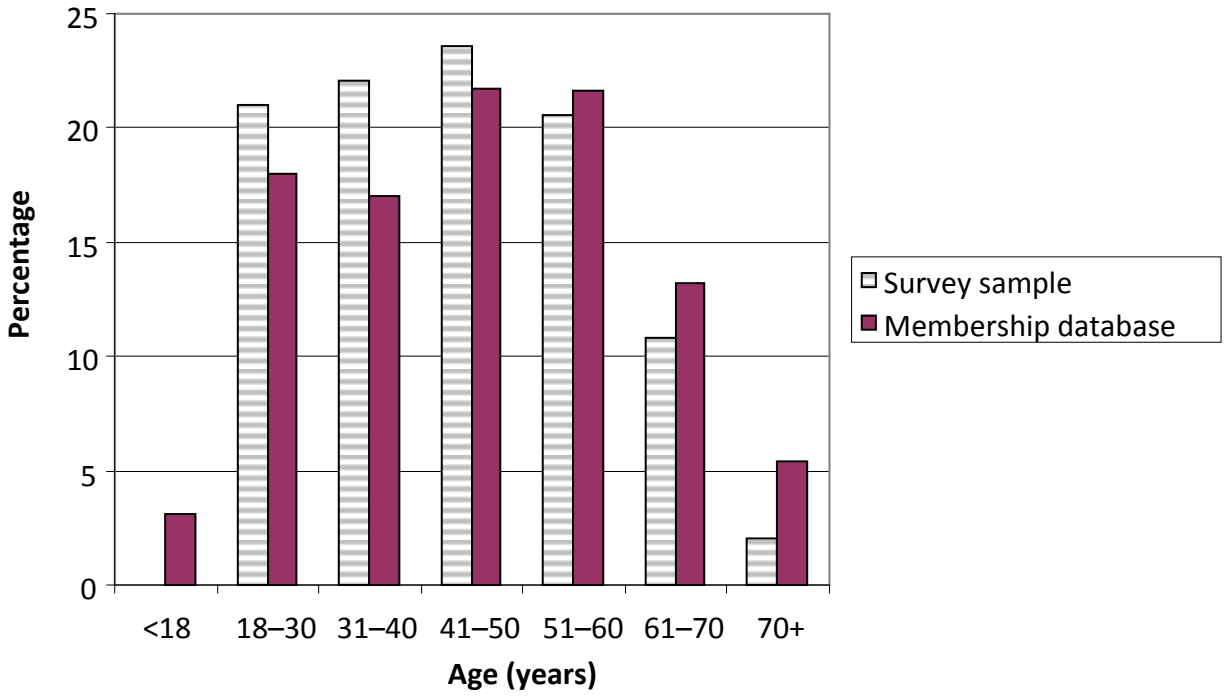

Figure 54 Age distribution, comparing survey sample and membership database

Despite the low response rate, comparisons with the agency's membership database on the basis of gender and age suggest that the makeup of the sample is reasonably representative of the overall volunteer membership.

11. Analysis of exit survey returns

A consulting group was asked by one of the fire agencies to develop a survey questionnaire to be mailed to fire service volunteers from that state who had resigned. The agency mailed the surveys out monthly to all former volunteers who resigned during a 2-year period. At the end of the mail-out period, staff from the overarching emergency services department requested assistance from the Bushfire CRC Volunteerism Project team in analysing returns from surveys.

Staff from the emergency services department entered the questionnaire data from the returns into an *Excel* file and sent a copy to the Bushfire CRC Volunteerism Project team. We analysed the data using *SPSS* statistical software. Some aspects of the original questionnaire design made analysis and interpretation difficult. Table 75 provides statistics about the sample and returns.

Table 75 Responses to the exit survey in Study 11

Number of surveys mailed out December 2005 to 2007	2,438
Number of surveys returned 'Not at this address'	310
Number of surveys completed and returned	(First year) 205 (Second year) 394
Return rate corrected for incorrect addresses 400/(2,438 – 310) x 100	(First year) 21% (Second year) 19%

12. Survey of volunteer fire wardens

Fire wardens are volunteers who have responsibility for administering burning-off permits among the rural population throughout their state. Their fire service was concerned that this group of volunteers was ageing and that there might be difficulties finding successors, or maintaining the wealth of experience that many of them have accumulated over many years. This study was implemented as a paper-based questionnaire, which was posted to fire wardens by their fire service. The questionnaire was anonymous and questionnaires were to be returned directly to the Volunteerism team at La Trobe University in Melbourne.

The fire service posted the questionnaire to 2,600 fire wardens over a 2-week period and respondents were asked to return them within 4 weeks. We received 562 useable responses to the survey, giving a sampling rate of 22%, which was satisfactory for our purposes. A spreadsheet listing demographic data (but no identifying data) for current fire wardens was supplied to us by the fire service in May 2008. That spreadsheet listed data for 2,200 fire wardens, excluding about 215 chief fire wardens and 185 deputy fire wardens. The survey sample and spreadsheet data generally correspond well, suggesting that the survey sample is highly representative of the population of fire wardens.

13. New members survey

This survey was implemented as a 4-page paper-based questionnaire that was posted to new volunteers by the Volunteer Management Branch of the state's emergency services department. Responses to the questionnaire were anonymous and questionnaires were to be returned directly to La Trobe University in Melbourne in reply-paid envelopes.

The emergency services department posted the questionnaire to all new volunteers (*n* = 1,106) who had joined the fire service during 2006. The questionnaire was posted midway through 2007 and 221 responses (20%) were returned during the following five months. The response rate is consistent with the response rates achieved in other surveys in the volunteer fire sector, including those of new volunteer surveys conducted with other fire agencies.

14. Regional communications survey

Fire service volunteers report that one of the main factors limiting their participation with the organisation is frustration caused by the perceived bureaucratic nature of the fire agencies (see Table 12). This survey was designed to identify administrative and communication blockages among regional and district staff.

Regional management of a fire agency initiated a region-wide survey of personnel to identify ways of enhancing administrative communication. The survey was implemented as a 4-page questionnaire designed by regional managers with assistance from the Volunteerism Project team. Region management distributed the 4-page questionnaire as email attachments to all fire service staff in the region (*n* = 172). Responses were anonymous and respondents were asked to print, complete and return the questionnaires to the regional headquarters for data entry. Thirty-three useable questionnaires were returned to the region, giving a response rate of 19%. Regional staff then entered the survey responses into a Microsoft Access database and forwarded the database to the Bushfire CRC researchers at La Trobe for analysis with *SPSS*.

15. Interviews with managers on volunteer leadership development needs

Interviews were conducted with senior and middle managers of a fire agency to obtain their views on the leadership development needs of brigades. Three structured interview guides were prepared (CEO or Deputy CEO; Regional Chief or Deputy; District Officer). Copies of the interview guides were sent to participants several days before the interviews in order to provide an opportunity for reflection prior to being interviewed. All interviews were audio recorded and subsequently summarised.

Findings from the 12 interviews were organised following the topic headings listed in the interview guides. As agreed with participants, no information linking individuals to responses was reported.

16. Focus groups with volunteers on brigade leadership development needs

Focus groups were organised, with the assistance of regional staff, to obtain the views of volunteers on the leadership development needs of brigades. Regional staff of the participating agency mailed an information sheet to a selection of brigades located near each regional headquarters. Brigades were invited to nominate up to two representatives to participate in focus group discussions concerning leadership in brigades.

Four focus group meetings were held, each lasting approximately 1½ hours. There were 23 participants in all, groups ranged in size from 4 to 8, and 15 different brigades were represented. Audio recordings were made of all four sessions. The recordings were transcribed and the text analysed and grouped according to topics. The grouped statements were inspected for common themes, and the themes were summarised.

The seven major topics listed in the Focus Group Guide were:

A. Features of a good brigade
B. Features of a poor brigade
C. Characteristics of a good leader
D. Characteristics of a poor leader
E. Must-have brigade leadership skills
F. Training in brigade leadership
G. Career staff and brigade climate and leadership.

17. Survey of volunteers on the leadership needs of the fire services

This study was the survey of the volunteer membership of a fire service. The Volunteerism Project Team and fire service staff designed a questionnaire with reference to results of focus groups about leadership needs in Studies 15 and 16. The resulting 4-page, paper-based questionnaire was posted to volunteers by the fire service. Responses to the questionnaire were anonymous and respondents posted the completed questionnaires directly to La Trobe University in Melbourne by reply-paid envelope.

The fire service posted the questionnaires to 4,238 volunteers registered with the fire service in 2008. Overall, 43 questionnaires were returned as incorrectly addressed. We received 923 responses (22%) between December 2008 and February 2009. This response rate is consistent with that achieved in other surveys in the volunteer fire sector.

18. Focus groups with brigade chiefs on brigade leadership development needs

Focus groups were organised with brigade chiefs to obtain their views on the findings of the volunteer survey in Study 17. The fire service worked through its regional offices to invite participants for five focus groups, to be held at regional headquarters. Each session involved between 10 and 15 brigade chiefs and group officers.

The focus group sessions were preceded by a brief explanation to the participants and reassurance that no identifying data would be included in our report back to the fire service. Participants were then shown an introductory PowerPoint presentation outlining evidence of the benefits of good leadership for the recruitment and retention of volunteers, and were asked to comment on key findings from the volunteer survey in Study 17, presented to them in PowerPoint slides.

The recordings were transcribed and analysed to discern broad themes raised by the participants. A report was prepared using the 10 key findings from the volunteer leadership survey in Study 17 as major topic headings. The themes identified from participants' responses in the focus groups were described and organised into subheadings. Quotations from the participants supported the descriptive text by conveying some of the emotion accompanying their thoughts.

19. Interviews with senior fire agency staff

At the beginning of the Project, senior agency staff members were interviewed using semi-structured interviews to obtain a national fire agency perspective on: (a) the adequacy of the volunteer workforce in relation to community protection needs; (b) issues threatening the adequacy of the volunteer workforce; and (c) reasons for these threats.

The interviews were conducted in six state and the ACT volunteer-based fire agencies. Most interviews were with agency CEOs, others were with deputies; some were joint interviews involving the CEO, a deputy, and the human resources director or similar functionary.

20. Agencies Volunteer Database Systems
Report 2:2004 (McLennan, 2004d)

Organisations like rural fire services need to know about their volunteer recruitment–attrition balance in order to operate with a degree of certainty about human capital aspects of their response capability. Reliable data on annual attrition rates provide a good indicator of the stability of the volunteer workforce.

This report describes the data collection and management systems used by agencies to administer their volunteer workforces. It was compiled using information provided by the seven rural fire services participating in the Bushfire CRC Volunteerism Project.

The purpose of the report was to provide a basis for agencies to evaluate the adequacy of their systems to support effective strategic planning and policy development in relation to future volunteer numbers.

The demographic information collected by agencies from their new volunteers was summarised and differences among fire services in the information collected were noted. The capabilities of the different agency systems to generate information potentially relevant to strategic planning and policy development needs were summarised.

A concluding discussion noted several important issues to be considered in determining whether or not changes to a volunteer data collection and information-generating system were necessary.

21. Profiles of Australia's Volunteer Firefighters
Report 3:2004 (McLennan, 2004a)

To obtain a demographic profile of Australia's volunteer firefighter workforce, a questionnaire was prepared and sent to each state and the ACT volunteer-based fire agencies asking about: total number of volunteers; number of active firefighters;

number of males and females; age distribution; length of service distribution; and number of resignations in the previous 12 months.

Unfortunately, only three of the seven agencies could provide all the requested information. The limited data suggested a total volunteer workforce of about 220,000 volunteers, mostly males (83%), with a median age of about 48 years.

22. Volunteer Service Recognition and Award Schemes

Occasional Report 2004:2 (McLennan & Bertoldi, 2004, 2005)

A study was conducted to compare Australian volunteer-based agencies' volunteer length-of-service and other recognition award schemes.

A questionnaire was sent to each of the seven participating agencies asking for details of all the length-of-service and other recognition awards available for their volunteers, excluding national recognition awards.

It was found that there was great variation among the agencies in the number and variety of length-of-service recognition awards. It was concluded that some agencies could usefully review their volunteer recognition schemes as a contribution to improving retention of their volunteers

23. Resignation–replacement Costs (Direct Expenditure Estimates)

Occasional Report 2004:3 (McLennan, 2004b)

This study aimed to estimate the direct annual monetary costs to agencies of replacing the ~8% of volunteer firefighters who resign each year nationally.

A questionnaire was sent to each of the seven participating agencies asking them to estimate the annual costs associated with: (a) advertising and recruitment; (b)registration and administration; (c) providing personal protective clothing and footwear; (d) providing other clothing; and (e) providing initial training, to new volunteers.

A major source of difference among agencies in average expenditure per new volunteer was in the cost of Personal Protective Clothing (PPC) provided by agencies to their volunteers. It was estimated that the total annual direct expenditure by the seven participating agencies for recruiting new volunteers in 2004 was of the order of $12.5 million.

24. Literature Review

Report 4:2004 (McLennan, Acker, Beatson, Birch, & Jamieson, 2004)

At the beginning of the Project, a literature review was carried out to find out what research had been published to date concerning trends and emerging issues related

to: (a) volunteering generally, both in Australia and overseas; and (b) emergency services volunteering and fire service volunteering in particular.

In the period April–October 2004, a comprehensive search was undertaken for published research related to volunteer recruitment and retention issues. The search incorporated scholarly databases; emergency services agency reports; reports from non-profit and third sector organizations, general internet searches, and inspection of the tables of contents of relevant journals and books.

There was a considerable literature on general volunteering, mostly about the welfare, and sport and recreation sectors. There was very little research concerned directly with emergency services volunteering. A series of papers by sociologist K. B. Perkins examining aspects of volunteer fire brigades in the USA was a valuable exception. The material on general volunteering in OECD countries suggested that demographic changes such as ageing and work-related mobility, and economic changes such as reduced income security, were likely to impact negatively on emergency services volunteering. Several discussion papers reported indicators of potential problems for Australian emergency services volunteer numbers in the near future associated with structural changes in the nature of employment. Changes in work patterns and economic circumstances seemed likely to make many employers of volunteers increasingly reluctant to release staff to attend incidents. Increased casualisation of the workforce was also likely to present challenges to rural fire services. There were expressions of concern about under-recruitment of women and people from non Anglo-Australian cultural backgrounds. Finally, several commentators expressed concerns about the viability of volunteer-based emergency services in their present form 10–20 years in the future. They predicted great difficulty in recruiting adequate numbers of fit volunteers in the age range 20–35 years in the face of an upward shift in the age distribution of the population (McLennan & Birch, 2005).

25. The Economic Contribution of Volunteer Firefighters to the Australian Economy Brief Report 1:2006 (McLennan & Birch, 2006)

This study aimed to compare the contribution of Australia's 220,000 volunteer firefighters to the economy with that of other volunteers.

It had been estimated that each CFA volunteer firefighter contributed about $9,500 to the economy annually (McLennan & Birch, 2005). Extrapolating from this suggested that Australia's volunteer firefighters probably contributed between $1.5 and $2 billion to the Australian economy annually. These figures indicated that Australia's 220,000 volunteer firefighters (3.5% of all Australian volunteers) contributed between $1.5 and $2 billion (10–14%) of the total of $14.6 billion contributed by all volunteers to the Australian economy. That is, the average annual economic contribution of a volunteer firefighter is about three to four times the average annual economic contribution of a volunteer from the Third Sector of the economy as a whole.

26. Literature Review on the Impact on Families of Volunteers

(Cowlishaw & McLennan, 2006)

The current research provides evidence linking conflicts between volunteering and family to negative outcomes for volunteers and organisations, and suggests strategies for helping to reduce such conflicts. McLennan et al. (2008) reported reasons why volunteers were likely to resign from volunteer-based fire agencies and noted the importance of conflicts between firefighting and volunteers' family and work commitments. The scant research available on the impacts of volunteer work on families was reviewed by Cowlishaw et al. (2008), who reported indirect evidence suggesting time- and strain-based conflicts between emergency service volunteering and family needs. Given the lack of direct research available, the aims of the project were to: (1) explore the nature of conflicts between volunteer emergency service work and family; (2) examine the consequences of these conflicts for volunteers and their partners; and thus (3) provide data necessary for emergency service agencies to develop strategies to minimise negative impacts of volunteer work on families.

27. Interviews with supervisors of volunteers

As an exploratory stage of research into the impact of volunteering on volunteers' families, semi-structured interviews were conducted with 20 managers of Victorian volunteer firefighters. The interview protocol asked about managers' perceptions of the general pressures impacting on volunteers, and those aspects of the volunteer firefighter role that posed difficulties for families. Interviews were analysed using the data analysis software package *NVivo7*.

The results of the interviews provided an organisational perspective on volunteer work–family interactions. Specific impacts on family life included:

1. Additional demands (household and farm management) placed on family members;
2. Unpredictable interruptions to family life from emergency callouts;
3. A general lack of time with family;
4. Changes in volunteers' behaviour at home associated with attending distressing emergency incidents;
5. Partners' anxiety about safety; and
6. Financial pressures from lost income.

Furthermore, there was evidence of a more general tendency of volunteers to prioritise fire brigade demands ahead of family responsibilities, which appeared to account for many of these more specific conflicts.

28. Survey of couples containing an emergency services volunteer

This survey used self-report data collected from couples in which one partner was an emergency service volunteer. Invitations to participate were made to couples through stories in the general media and advertisements placed in the internal publications of cooperating emergency service agencies across Australia. Responses were obtained from 113 couples in which one partner was a volunteer firefighter (89%), ambulance officer (7%) or emergency rescue volunteer (4%). These participating couples provided data on volunteer work–family conflict (WFC), as well as likely antecedents (e.g. post-traumatic stress symptoms) and outcomes (e.g. volunteer burnout) of such WFC.

First, partners provided reports on the most common sources of conflict between emergency service volunteering and family life.

Second, data were analysed using Structural Equation Modelling to evaluate theoretical models accounting for likely antecedents and outcomes associated with such volunteer WFC.

The research suggests potential strategies for agencies to minimise conflicts between volunteer demands and family needs. More detailed discussion of recommendations for agencies can be found in (Cowlishaw, Evans, & McLennan, 2008; Cowlishaw, McLennan, et al., 2008); and (Cowlishaw, Birch, McLennan, & Hayes, 2010; Cowlishaw, Evans, & McLennan, 2010a, 2010b)

APPENDIX B—ACT ESA FITNESS FOR DUTY STANDARDS

Extracts from the ACT Bushfire and Emergency Services Minute, August 8th, 2004.[53]

SUBJECT: Bushfire and Emergency Services Fitness for duty standards

FITNESS CATEGORIES

The following four levels of physical fitness are those agreed between the USA and Australia prior to Australian and New Zealand bushfire fighters being deployed to the USA to assist with wildfire operations. These fitness categories have also been established as the National Forest Industry Standard for bushfire and emergency condition operations. It is considered that these fitness categories also meet the ACT Bushfire and Emergency Services requirements.

The fitness categories are:

Arduous: Duties involving field work that requires physical performance calling for above average endurance and conditioning. These duties may include an occasional demand for strenuous activities in emergencies under adverse environmental conditions and over extended periods of time. Requirements include walking, climbing, jumping, twisting, bending and lifting more than 22 kg. The pace of work is set by the emergency situation.

Moderate: Duties involving field work that requires complete control of all physical faculties and may include walking over irregular ground, standing for long periods of time, lifting 11 to 20 kg., climbing, bending, twisting and reaching. Occasional demands may be required for moderately strenuous activities in emergencies over long periods of time. Individuals set their own pace.

Light: Duties mainly involve office type work with occasional field activity characterised by light physical exertion requiring basic good health. Activities may include climbing stairs, standing, operating a vehicle and long hours of work, as well as some bending or light lifting. Individuals almost always can govern the extent and pace of their physical activity.

None: Duties are normally performed in a controlled environment and individuals are not required to do any field activities.

[53] David Tunbridge, ACT Bushfire and Emergency Services (Personal communication to Jim McLennan, July 2005)

The tests

Fitness requirement	Test	Description
Arduous	Pack test	4.8-km hike with 20.4 kg pack in 45 minutes
Moderate	Field test	3.2-km hike with 11.3 kg pack in 30 minutes
Light	Walk test	1.6-km walk in 16 minutes
None	None	–

Fitness criteria for each function

Function classification	ICS[54] Incident Type	Fitness level: A = Arduous; M = Moderate; L = Light
Remote Area Bushfire fighting Team Member	1 2 3	A A A
Land Search ACT ES Team Member	1 2 3	A A A
General Bushfire fighting	1 2 3	M M M
General ACT ES Member	1 2 3	M M M
Incident Controller	1 2 3	M M L
Operations Officer	1 2 3	N/A M L
Sector Commander	1 2 3	N/A M M

[54] Incident Control System, the operating system of the Australian Inter-service Incident Management System (AIIMS)

APPENDIX C—AGENCY INITIATIVES RELATING TO THE RESEARCH FINDINGS

This section lists the major issues identified by the individual Volunteerism Project studies, and initiatives taken by fire agencies to address those issues. The information in this section was collated in mid-2009 by Linda Brownstein, and may omit some findings and initiatives that have taken place since.

The listing is organised into themes and specific issues, with initiatives taken by each of the six state volunteer-based fire agencies in Australia. The index on the next page lists the themes and issues and provides a page reference to a table of agency initiatives taken in response to each theme.

Agencies involved
CFS—South Australian Country Fire Service
CFA—Victorian Country Fire Authority
EMQ—Emergency Management Queensland
NSW RFS—New South Wales Rural Fire Service
QFRS—Queensland Fire and Rescue Service—Rural Fire Service
TFS—Tasmanian Fire Service
FESA—Fire and Emergency Service Authority of Western Australia

INDEX TO AGENCY INITIATIVES CORRESPONDING TO THE RESEARCH FINDINGS

Current situation

Membership Profiles

An ageing population of predominantly male members with declining numbers over the past 30 years.
Low numbers of volunteers in remote rural communities and new housing developments on urban/rural fringes.
Most fire services report crewing difficulties with some urban–rural interface brigades during weekday business hours.

RFS (NSW)	TFS (Tas)	SAFECOM (SA)	CFA (Vic)	QFRS (Qld)	FESA (WA)
• Targeted recruitment workshops • Development of flexible membership strategies	• Development of evidence-based recruitment toolkit for brigades to use • Development of Junior and Cadet toolkit • Shift in policy to try to deliver more services to brigades	• Have developed targeted recruiting strategies • New initiatives include 'Gateways to Communities' Project • Developed Daytime Recruitment Workshop	• Local initiatives in various places such as group training nights to support smaller brigades. 'The Hub' initiative	• In response to Queensland Government 'Towards Q2' Target (increase by 50% the proportion of Queenslanders involved in their community as volunteers) QFRS in conjunction with EMQ has developed a Volunteer Recruitment and Retention Strategic Plan 2009–13 • QFRS has outlined 33 different strategies in the document	• Youth Development – FESA has an extensive Youth Development Program involving more than 2,000 young people and 200 adult volunteer instructors. They are part of either a WA Emergency Services Cadet Unit attached to a secondary school (currently 44 units in WA – both Metropolitan and Regional locations), or linked directly to one of 80 volunteer Brigades, Groups or Units. There is a more recent growing trend of juniors and Cadets 'graduating' to adult volunteering roles when they reach the appropriate age. These programs are becoming more recognised as a valuable pool of future volunteer recruits and a pathway to senior

RFS (NSW)	TFS (Tas)	SAFECOM (SA)	CFA (Vic)	QFRS (Qld)	FESA (WA)
					volunteering. FESA provides $50,000 per year for distribution under a grants scheme to those Youth Programs that are attached to FESA's Volunteer Brigades, Groups and Units • The Volunteer & Youth Services Branch is in the early stages of piloting a program with a Kimberley Regional Director in Kununurra and the Manager for Indigenous Strategy and Policy to attract Indigenous volunteers in remote communities • Lancelin, north of Perth has volunteers who are crayfish workers and are unavailable during the day. The FESA Recruitment Action Handbook will assist to provide support in developing a recruitment strategy for particular groups to fulfil their daytime response needs and reduce the current risk of limited daytime resources

Women's experiences

Most women quite positive about their experiences during training and brigade social environment.
Some women not satisfied with the opportunities for advancement and leadership.
About two-thirds women satisfied with the opportunities for learning new skills and for personal growth and development.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Flexible membership to recognise women's issues and contributions		• Mentoring for Succession Planning pilot program is planned and will include a component for women			• FESA's volunteer recruitment resources (DVD, brochures, volunteer website) offer opportunities to people from all walks of life, so that minority groups such as women, CALD communities and Indigenous groups, are all included in recruitment strategies

Diversity

A majority of fire services report under-representation of women in operational roles.
There appears to have been almost no recruitment of volunteers from non-English speaking backgrounds.
It is unclear whether Indigenous volunteers are proportionally represented in volunteer ranks.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Flexible membership being developed • Targeted research	• Development of evidence-based recruitment toolkit for brigades to use • Development of Junior and Cadet toolkit	• Targeted recruiting strategies at the local level • 'Gateways to Communities' Project	• 19% of CFA volunteers are women – increasing every quarter • New recruitment advertising depicts women in a range of roles gaining a variety of skills • Discussion group with Region 13 Culturally And Linguistically Diverse (CALD) CFA volunteer members held with HR HQ • CALD research done: purpose to identify the barriers that preclude CALD members from joining.	• Recruitment material specifically targeting women • Provision of female PPE • Offering more non-operational roles, Community educator Volunteer and Operational Support roles	• FESA's volunteer recruitment resources (DVD, brochures, volunteer website) provide and market opportunities to people from all walks of life, including minority groups such as women, CALD communities and Indigenous groups, who are all encouraged to volunteer • FESA's targeted recruitment strategies also address this issue

Retention

Turnover patterns

Turnover rate of approximately 8% per annum.
There are indications that those aged 35–44 years left at a higher rate than those 18–34 and 45+ years.
Reasons for resignation according to age: 16–34, moving; 35–44, work or family; 45+ years, age or health concerns.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Exit questionnaires to gain an understanding of triggers	• Age distribution of TFS volunteers closely matches that of the Tasmanian population except for over 65 years (which should be expected)		• Recruitment & Retention Guide to address leaving		• FESA has an exit interview process in place, which is under-utilised but we continue to encourage our Brigades, Groups and Units to support the process • FESA has lodged a grant application this year to undertake research into volunteer retention. One of the objectives is to anticipate why volunteers leave, in order to formulate appropriate strategies

Benefits from being a volunteer

Contributing to community protection;
Learning and applying new skills;
Feeling a valued member of the community;
Enhanced social networks.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Realising benefits • Promoting benefits through presentations		• SES have recently launched its 'Flood Safe' Program	• Development of new recruitment posters outlining roles and 'what you get out of joining CFA'	• The benefits as outlined have been clearly articulated in the new volunteer recruitment kit	• FESA's recruitment brochures include benefits gained by individuals through their involvement in emergency services volunteering

Reasons for staying

Being included in brigade activities;
Good leadership by officers;
Harmonious relationships within the brigade; and between the brigade and other agencies;
Brigades are generally quite welcoming of new members, but the welcoming process is passive rather than active;
Recognition.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Access to more training • Recognition certificates • Promotion of life membership	• Developing new initiatives to improve leadership development including research with Bushfire CRC • Improving grievance procedures	• Volunteer Support and Strategy facilitate the Working in Harmony Program • Volunteer Strategy and Support partner with CFS regions to provide Managing Groups and Brigades Training	• Recruitment and Retention Guide	• Provision of leadership training to officers • Code of conduct developed and circulated.	• FESA Reward and Recognition Program – FESA has a staff position within the Volunteer and Youth Services Branch that focuses solely on Reward and Recognition, which is considered an important factor in retaining valuable volunteers by rewarding them for their years of service as well as recognising and acknowledging their outstanding contributions

Reasons for leaving

Leaving the area;
Time demands (work, family, personal);
Brigade issues (lack of recognition and opportunity, conflict);
Training requirements (time, access);
Being a reluctant volunteer in the first place;
Delays in results following assessments;
Age or health concerns;
Poor brigade leadership or management;
Concern over impact of training and reporting requirements on the commitment of older, long-serving volunteers (especially rural);
Risk of being sued;
Risk of injury or death and risk of loss of income due to injury.;
Level of knowledge of what fire service does to mitigate such risks is generally poor.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Surveys and exit questionnaires • Exit questionaries – constantly reviewed and acted on	• Poor brigade leadership or management • Improving grievance procedures	• Managing Groups and Brigades Training • Currently considering a referral service: when a volunteer leaves the service, they are provided with the details of their nearest brigade or unit and invited to contact them • Need to develop a public relations or communication strategy with SAFECOM Public Affairs	• Recruitment and Retention Guide will cover a range of practical ideas and programs to improve retention	• Coverage is available; however not well understood. Feedback is that many people believe they are only covered if injured on the fire ground. Trying to provide more information on the coverage that is provided to volunteers through every possible forum	• FESA has an exit interview process in place. This is currently being under-utilised but volunteer services are encouraged to support the process and benefit from the information collected • FESA has applied for a grant this year to undertake research into volunteer retention, which will include reason why volunteers leave

Time commitment

Mean of 34 and a median of 24 hours per month (high compared with ABS estimates for emergency services volunteers: mean of 11 and of median of 5 hours per month).

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Brigade classifications • Standards of fire cover		• CFS looking at different membership types aligned to different levels and requirements of training		• Ensuring training is targeted to their role and where possible offer flexible delivery options • Reduce wherever possible the administrative overhead	• Our targeted recruitment strategies seek to engage volunteers for specific roles, taking into account their availability. Not all roles require the same amount of time and training

Employment

The self-employed, people doing home duties, those who work on a family property or are part-time are more often able to attend callouts during business hours.
Employees have greater difficulty take time off to attend callouts.
A substantial percentage of employers support employees who volunteer with the fire service.
Employers are unlikely to suffer negative impacts from releasing employees to volunteer.
Low rate of abuse of release arrangements.
Range of ideas about how to support employers.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Employer guide developed • Recognition certificate stickers • Promotion via Bushfire Bulletin		• Volunteer and Employer Recognition and Support Program	• Employer Recognition Program – in planning stages • Employer information brochure – in planning stage • Local Region initiatives – media articles, certificates to thank local employers	• Introduction of payroll tax exemptions for employers of volunteers • Government employees – 5 days per year to attend emergencies as an SES or RFS volunteer • Q2 Strategy – Introduce employer recognition program	• FESA's Volunteer Employer Recognition – A formal Volunteer Employer Recognition Program (VERP) has been developed and was launched in August 2008. This program recognises the contributions made by employers of emergency services volunteers including self-employed volunteers and will strengthen employer support of volunteering, leading to greater volunteer participation

Recruitment

Community awareness

Lack of knowledge or understanding in the community of fire service operations, what volunteers do, structure and function of fire service

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Community service announcement • Better access to online information	• New recruitment material based on evidence	• Currently discussing a more coordinated approach to PR with SAFECOM Public Affairs • Working more closely with CFS Community Education section	• Community marquee display initiative	Information provided to new people in rural interface zone areas on role of brigade, how to join etc.	• Recruitment Display Material – FESA collaborated with the WA Local Government Association and other emergency services agencies to create a number of volunteer recruitment display boards and banners. These have been distributed to five locations (metropolitan and regional) and are available for free use by volunteers, both as a recruitment tool and a resource to inform the public about volunteering, at various displays and events

1800 phone numbers

The effectiveness of the 1800 phone number recruitment inquiry service may warrant investigation.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Use of 1800 number now reflecting volunteer interest • 1800 targeted as contact		• Have done analysis of this number in the past and the gap appears between referral from us and acceptance from the brigade or unit (currently reviewing our referral service)	• 1800 procedures improved and put into place. Consistency in procedures and enquiries referred to brigade contact		• 1800 Volunteer Recruitment Information Line – A dedicated telephone line was set up in 2005. There have been hundreds of genuinely interested people lodging enquiries each year, resulting in new volunteer members state-wide

Websites

Websites are well used but range of satisfaction with the websites, some very high.
Interestingly, a FESA study showed 18- to 34-year-olds were much less likely to endorse the website as an important prompt, compared with older volunteers. This finding is quite contradictory to what is known about marketing preferences.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Interest in place of MyRFS volunteer website 10,000 users registered		• Volunteer Strategy and Support at around 60% of our referrals from the website – for both CFS and SES	• Improved and more information about CFA • Online enquiry form developed.	• Development of the Volunteer Portal • Updating website	• FESA's Volunteer Website – FESA created a volunteer website, which was launched in November 2007. The service provides both current and prospective volunteers easy and immediate access to a wide range of emergency services volunteer-related resources. The link to this website is available through www.fesa.wa.gov.au

Reasons and motivations for joining

Self-interested motives (learn new skills, face new challenges, camaraderie and social contact, career enhancement);
Community and property protection motives (local brigade or unit needed volunteers; enhance protection of own property; secure knowing someone is doing the job; family or friends are volunteers);
Community contribution motivations (contribute to the community; protect the community).

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Standard process in place • Interview process in place • Recruitment strategy in progress		• Recruitment Program • Use this information to assist brigades and units to craft a purposeful recruitment campaign particular to their needs	• Development of Community Recruitment Marquee • Development of recruitment posters focusing on key motivators for joining.	• Ensure training qualifications are available that are useful outside fire service • Developed new recruitment kit incorporating research about motivations	• Volunteer Recruitment Resources – FESA's Volunteer and Youth Services Branch has designed, produced and distributed a range of volunteer recruitment brochures, banners, bumper stickers, business cards, posters, postcards and other related products aimed directly at volunteer recruitment. The brochures specifically outline the benefits to individuals who join emergency services volunteering, in addition to other details

Age differences in motivation

18–34-year-olds are somewhat more to be attracted by the personal benefits of fire service volunteering: career enhancement, skills development, the challenge, and opportunities for friendship and camaraderie.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Flexible membership		• As above	• Youth Forum conducted • Facebook group set up	• Developed new recruitment kit incorporating research about motivations • Ensured that there is a clearly defined career pathway from volunteer to paid employment • Developed new recruitment kit incorporating research about motivations	• As above, volunteer recruitment brochures outline the benefits to individuals who join our volunteer ranks

Prompts for joining

A recent fire or other emergency involving the agency (including news accounts);
General publicity about fire agency and volunteers;
Being approached personally by a current volunteer member;
Having a friend join (more important for women).

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Capturing motivation • Easier access to membership		• As above, and also when reviewing our Recruitment Program and developing new recruitment strategies	• CFA experienced over 1600 registered enquiries to join through 1800 phone number – this figure does not include local new member enquiries at Brigade or Region level	• Utilising the SES 1300 number for RFS volunteers • Project to improve the recruitment section of the website	• Volunteer recruitment enquiries on the 1800 line capture information such as what prompted individuals to make the enquiry • FESA evaluates this information to determine the most effective strategies for recruiting

Barriers to joining

Old age, illness or disability,
Lack of time due to family, work, leisure demands.
Lifecycle factors such as family and career obligations lead from the ages of about 35 to 45,
Not understanding or supporting the reasons for having a fire service,
First priority is to protect my own property,
Perceived bureaucracy,
Concern for own safety,
Fear of injury and resultant loss of income,
Worries about being sued,
Anxiety that they would find it too distressing,
Childcare,
Some employers reluctant to release employees,
Ignorance of the safeguards that agencies have in place to manage risks to volunteers—workers' compensation insurance, income protection insurance and protection against litigation.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Flexible membership • Joining booklet available to new recruits with all relevant information	• TFS appliances and equipment are being redesigned to improve access e.g. lower and lighter	• Encourage brigades or units to think about different jobs for older volunteers – including mentoring younger ones • Encourage the provision of family volunteering opportunities • CFS have a Farm Fire Unit Guidelines and training for farmers who really only want to protect their own property in the first instance	• Recruitment and Retention Guide will cover work–family–CFA balance. • Update of Welcome to CFA Induction Book	• Welcome kit provided to all new volunteers containing information on: • Support provided • Training available • Insurance cover • Protection from liability • Welfare services available • Code of Conduct • Harassment • Development of a volunteer Peer Support Network	• FESA's recruitment strategies embrace these factors and encourage people from all walks of life to join emergency services volunteering

				• Policy, brigade management and administrative processes provided in the Rural Fire Brigade Manual and on the volunteer portal	

Barriers for women

Perceptions and beliefs women do not belong,
Concerned they are not physically capable of meeting the job requirements,
Unaware of the range of roles,
Not knowing anyone in the brigade.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Flexibility in membership • Recognition of support roles	• TFS appliances and equipment are being redesigned to improve access e.g. lower and lighter	• Need to develop good PR strategies to assist in overcoming barriers for women	• Women's Forum – South West Area	• Queensland – 22% of volunteers are female and this percentage has been steadily growing for the past couple of years • Development of new non operational roles – Community Educator and Operational Support roles	• FESA's recruitment strategies embrace these factors and as mentioned previously, encourage people from all walks of life to join emergency services volunteering

Corporate issues

Recruitment costs

Recruitment has a range of costs including:
Advertising and recruitment;
Registration administration;
Providing personal protective clothing—source of difference across agencies is cost of PPC, particularly structural PPC;
Initial training;
Intangible costs of the time spent by individual brigade members supporting new volunteers.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
		• Volunteer Support Service currently developing a new recruitment strategy for implementation in 2010/2011 (dependent on budget)			• FESA has established a Volunteer & Youth Services Branch to provide strategic support to volunteer Brigades, Groups and Units with a focus on volunteer recruitment. The branch has produced a range of recruitment resources and strategies to assist Brigades, Groups and Units with their recruitment and retention

Information gathering and administration

Reports provide a range of advice and examples concerning the following issues:
Database processes and issues;
Questionnaires for women available as a resource;
Exit surveys or interviews—process and use.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Exit surveys in place • Biannual surveys • Online membership database up to date		• Currently reviewing the Exit Survey Program	• Tracking Survey initiative • New member registration form is being reviewed • Records Management System improvements for streamlining transferring members	• Significant effort in the past few years to ensure quality data available on volunteers. The past 12 months has been the first time we have been able to utilise the data to look at recruitment and retention rates, issues, etc. • Currently investigating the introduction of an exit interview process for volunteer.	• Enhancement to existing data information for individual volunteer access is planned • FESA is also seeking to improve current processes related to volunteer exit interviews

Economic contribution of volunteers

It is estimated that Australia's volunteer firefighters contribute up to $3 billion annually to the Australian economy, or about $14,000 per volunteer.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Questions asked of our members – money reimbursement not high on agenda				• Currently have no real way of measuring their contribution	

Enhancing leadership

Overall, there appear to be three pathways to improving the quality of volunteer brigade leadership:

1. Provide more extensive, effective, flexibly delivered training to volunteers in how to lead and manage other volunteers.
2. Develop and implement more effective systems of brigade governance and management.
3. Train and enable fire agency staff to more effectively: (a) model good leadership behaviour; (b) instruct volunteers in effective leadership, and (c) support brigade leaders.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Pursuing leadership training	• Currently establishing a volunteer leadership development program	• Volunteer Support Services provide Managing Groups and Brigades training • CFS provide Frontline Leadership course • CFS provide Tactical Command and Leadership training	• Reclassification of Brigades to improve quality and cater for the changing needs in brigade management structures and volunteering roles		• FESA currently provides leadership training for volunteers, in the form of Leadership Forums and accredited training through FESA's Training Academy

Succession planning

Important issue—some leaders are older.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Researching mentoring • Survey members in relation to mentoring		• Have submitted an application to the National Emergency Services Volunteers Forum to develop and implement a pilot Mentoring for Succession Planning project			• Later this year, FESA intends to commence research into volunteer retention and ultimately prepare a Volunteer Retention Handbook for use by Volunteer services • FESA is a current member of a National Reference Group to develop an Action Plan for the attraction, support and retention of emergency management volunteers. This includes an idea to improve volunteer leadership

Training

It would be easier to attend training if there were more flexible delivery options.
Support for training materials to be provided to the home.
CD, internet downloads and paper-based materials were supported at about the same level.
Support for computer formats lower among older respondents, but support for the paper-based format did not differ with age.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
Training services evolving – online, podcast, CD/DVD		• SAFECOM have submitted an application for funds for e-learning pilot project • CFS post their Basic Firefighter 1 course to every newly registered member	• Local initiatives in place in Regions	• Development and implementation of the new Volunteer Learning and Development Framework in 2008, which clearly links the training requirement to the skills and knowledge required to undertake specific roles in the brigade • Government Election Commitment funding in 2006 supported the development of an e-learning strategy. The first of the products are currently being rolled out with many additional products currently under development	• FESA's Training Academy provides some training to volunteers and is considering new options such as e-learning' possibilities
				• The development of the new volunteer portal, which will allow volunteers behind the departmental firewall, is due for release in May 2009. This will be the platform for the delivery of many of the new e-learning products	

Recognition

Ways of promoting volunteer recognition;
Service awards;
Process of recognition: (1) soliciting and listening to their opinions and views; (2) providing opportunities for their personal and professional development; (3) publicly recognising their contributions.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Standard certificates in place • Awards in place • Members surveys		• Service awards already in existence – both services reviewing award systems • Special events such as National Volunteer Week – VSS facilitating features on volunteers that are contributing over and above or in more unusual ways (both radio and print media)	• New Service Award Process • Local initiatives –media articles, certificates, formal and informal recognition events	• A Volunteer Charter was signed between the government and rural fire brigade volunteers in 2008 • Regular consultation occurs on a wide range of issues between the volunteer representative organisation and QFRS • A volunteer conference is run every 2 years, which is attended by staff and key volunteers from across the State	• FESA's Reward and Recognition Program – FESA has a staff position within the Volunteer and Youth Services Branch whose role is to focus solely on Reward and Recognition, which is considered an important factor in retaining valuable volunteers by rewarding them for their years of service as well as recognising and acknowledging their outstanding contributions

					• FESA's Volunteer Employer Recognition –A formal Volunteer Employer Recognition Program (VERP) was developed and launched in August 2008. This program recognises the contributions made by employers of emergency services volunteers including self-employed volunteers and will strengthen employer support of volunteering, leading to greater volunteer participation

Potential fitness requirements

Mandatory fitness standards would reduce number of volunteers available.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Not looking at this at this time • Fitness or medical for specialist tasks	• Not currently applied in TFS	• Look for different volunteering opportunities – volunteer fit for purpose – not always firefighting • Would reduce number of staff too!		• In many areas, older people are the only people available to volunteer • Require all new volunteers who want to be operational meet a minimum medical standard • Promotion of the QFRS Fit for Life' program to volunteers	• FESA's recruitment strategies identify that volunteers require a level of fitness required to undertake the task that they are engaged to perform. Many volunteering roles e.g. radio communications, catering and administration, do not require a high level of physical fitness and can be suitable for people with a physical disability or with a preference to undertake less physically demanding tasks

Future strategies

Cannot change economic or demographics but need to adapt by:

- Investing in recruiting and retaining from non-traditional sources;
- Investing more organisational resources in the management and support of volunteers;
- Addressing aspects of volunteer organisational life;
- Investing more resources in informing, supporting and assisting employers and families of volunteers.

RFS	TFS	SAFECOM	CFA	QFRS	FESA
• Research reflected in 2012 Strategic Plan		• Gateways to Communities Project		• This is a major resourcing issue that the organisation currently has no way of addressing and is less likely than ever to be addressed given the current economic situation • Currently 120 staff supporting 35,000 volunteers. This includes administrative staff	• FESA is in the final stages of producing and implementing a targeted Recruitment Action Handbook • Later this year, FESA intends to complement this handbook with a study of volunteer retention

Future research

Knowledge gaps;
Community perceptions;
Volunteers' beliefs and needs;
The needs of key volunteering third parties.

RFS	TFS	SAFECOM	CFA	QFRS	FESA

• Leadership, and
• Mentoring as part of retention
		• The differences in volunteer motivation between small and large communities (informs recruitment strategies)
		• Impact of large business or government pulling out of regional areas on the ability of a volunteer to respond (e.g. going from secure employment to contracting)
		• Impact of mining industry on volunteers availability, time pressures, type of volunteers (structured vs non structured)
		• Changing administrative requirements on volunteers – being expected to do things they did not sign up for
					• The Volunteer Recruitment Action Handbook.
					• FESA's future projects will focus on volunteer retention and specifically:
					  • Reward and recognition
					  • Volunteers' personal access to data
					  • Retention Handbook

APPENDIX D—OTHER REPORTS, PUBLICATIONS AND PRESENTATIONS OF THE PROJECT

The following is the list of Bushfire CRC Volunteerism Project outputs prepared to date (November 2010).

A. COMMONWEALTH AGREEMENT INITIAL 'DELIVERABLES' REPORTS

2004

1. Recruitment and retention of volunteers: Rural fire services' issues and initiatives.
2. Volunteer database collection and management for strategic planning and policy development: A comparison across fire services
3. Profiles of Australia's volunteer firefighters (Revised)
4. Volunteer recruitment and retention issues: A review of the literature

B. OCCASIONAL REPORTS

2004

1. Exit interviews and surveys for volunteers
2. Recognition and service awards for volunteer firefighters: A comparison across fire services (Revised)
3. Recruiting new rural fire service volunteers: Direct expenditure estimates

2005

1. Recruitment and retention of female volunteer firefighters
2. Brief report: Age and motivation to volunteer with CFA

2006

The relative contribution of volunteer firefighters to the Australian economy

2007

Annotated bibliography summarising material related to fire service volunteering by people from Non-English Speaking Backgrounds (NESB) and Cultural and Linguistically Diverse (CALD) backgrounds

2009

Retaining Australia's women volunteer firefighters: Multi-agency comparisons of research findings

C. AGENCY REPORTS

2005

1. Estimates of the likely impact on TFS operational volunteer firefighter numbers of introducing mandatory fitness standards
2. NSW Grain Belt community survey 2005: Evaluating the community's understanding of the NSW Rural Fire Service
3. Survey of new CFA volunteers at six months: April–September 2005 Entry Cohorts*
4. Survey of South Australian Country Fire Service women volunteers
5. Survey of ACT Rural Fire Service women volunteers

2006

1. Survey of new CFA Volunteers at 12 months: April–September 2005 Entry Cohorts*
2. Survey of NSW Fire Brigades retained firefighters
3. Survey of employers of NSW RFS volunteers

2007

1. AFAC Volunteer Management subgroup: Retaining fire service volunteers
2. AFAC Volunteer Management subgroup: Exit interviews and surveys for volunteers
3. FESA WA Survey of new volunteers after six months: July 2005 to June 2006 entry cohort

4. CFA New Volunteers Project: Survey of volunteers after 12 months, April to September 2005 entry cohorts
5. NSW RFS survey of volunteers 2007
6. NSW Fire Brigades survey of retained firefighters
7. CFA: Factors affecting retention of new volunteers after 12 months
8. Survey of NSW RFS volunteers: Strategic Plan 2008–2010

2008

1. Analysis of SA CFS exit survey returns
2. Report on survey of employers about employing people who are NSW RFS volunteers
3. Report: Survey of QFRS volunteer fire wardens*
4. Report on the SA CFS new members survey

2009

1. Report on the TFS Leadership Development Survey of TFS volunteers (submitted to TFS 21 April 2009)
2. Report on the NSW RFS Region East Communications survey of staff. (submitted to RFS 28 April 2009)
3. Documentation of the research databases generated by the project
4. Doctoral thesis: The impact of volunteering on the families of volunteer firefighters (accepted September 2009)
5. Report on the CFA New Members Survey (3 years after joining) (submitted to CFA 22 December 2009)

D. PUBLICATIONS

McLennan, J. (2005). Recruiting Australia's rural fire services volunteers: present and future challenges. *Australian Journal on Volunteering*, *10*(1), 52–55.

Beatson, R., & McLennan, J. (2005). Australia's women volunteer firefighters: A literature review and research agenda. *Australian Journal on Volunteering*, *10*(2), 18–27.

McLennan, J., & Birch, A. (2005). A potential crisis in wildfire emergency response capability? Australia's volunteer firefighters. *Environmental Hazards*, *6*(2), 101–108.

McLennan, J., & Bertoldi, M. (2005). Australian rural fire services' recognition and service awards for volunteers. *The Australian Journal of Emergency Management*, *20*(4), 17–21.

Cowlishaw, S. and McLennan, J. (2006). Impacts of fire service volunteering on the families of volunteers: a literature review and research agenda. *Papers from the Inaugural Volunteering Research Symposium* 7–8 March 2006, Melbourne, pp. 46–55, Supplement to *Australian Journal on Volunteering*, vol. *11*(2).

McLennan, J., Birch, A. and King, C. (2006). Holding on to what you have got: the CFA longitudinal study of new volunteers. *Papers from the Inaugural Volunteering Research Symposium* 7–8 March 2006, Melbourne, pp. 82–89, Supplement to *Australian Journal on Volunteering*, vol. *11*(2).

Birch, A, & McLennan, J. (2006). Age and motivation to volunteer. *Fire Australia*, Spring, 20–22.

McLennan, J., Birch, A., King, C. & O'Loghlin, F. (2007). Recruiting younger fire service volunteers. *Fire Note.* Bushfire Cooperative Research Centre: East Melbourne (www.bushfirecrc.com)

Birch, A. & McLennan, J. (2007). Attracting the younger firefighter. *Fire Australia*, Autumn, 34–35.

Birch, A. & McLennan, J. (2007). Who's interested? The NSW Grain Belt community survey about volunteering with the NSW Rural Fire Service. *Australian Journal on Volunteering*, *12*(1), 14–25.

McLennan, J., Birch, A., Beatson, R., & Cowlishaw, S. (2007). Volunteer firefighting: A job for a woman? *Proceedings of the 7th Australian Psychological Society Industrial/Organisational Psychology Conference,* Adelaide, June 2007, pp. 201–206.

McLennan, J., Birch, A., Beatson, R., & Cowlishaw, S. (2007). Recruiting and retaining Australia's women volunteer firefighters: Some research evidence. *Australian Journal on Volunteering*, *12*(2), 59–69.

McLennan, J., Birch, A., Cowlishaw, S., & Suss, J. (2008). Save that brigade! Recruiting and retaining fire service volunteers to protect your community. In J. Handmer & K. Haynes (Eds), *Community Bushfire Safety.* pp 158–168. Melbourne: CSIRO Publishing.

Cowlishaw, S., Evans, L., & McLennan, J. (2008). Families of volunteer firefighters. *Rural Society*, *18*, 7–15.

Cowlishaw, S., McLennan, J., & Evans, L. (2008). Volunteer firefighting and family life: An organisational perspective on conflict between volunteer and family roles. *Volunteering Australia, 13*, 21-31.

McLennan, J. & Birch, A. (2009). Age and motivations to become an Australian volunteer firefighter. *International Journal of Mass Emergencies and Disasters*, *27*(1), 53–65.

Cowlishaw, S., Evans, L., & McLennan, J. (2010). Balance between volunteer work and family roles: Testing a theoretical model of work-family conflict in the volunteer emergency services. *Australian Journal of Psychology 62*, 1-9.

Cowlishaw, S., Evans, L., & McLennan, J. (2010). Work-family conflict and crossover in a volunteer work context: Impacts of emergency service volunteering on family. *Work and Stress, 24*(4), 342-358.

Cowlishaw, S., Birch, A., McLennan, J. & Hayes, P. (2010). The linkages between volunteer work and family: Antecedents and outcomes of work–family conflict and facilitation in the volunteer emergency services. Manuscript submitted for publication.

E. CONFERENCE PRESENTATIONS

McLennan, J. (2004, October). *Changing times for volunteers*. Paper presented at the AFAC and Bushfire CRC Annual Conference, Perth.

McLennan, J. (2005, July). *The Australian volunteer scene*. Paper presented at the New Zealand Forests and Rural Fire Association Conference, Invercargill.

McLennan, J. (2005, October). *Factors affecting volunteer firefighter recruitment*. Paper presented at the AFAC and Bushfire CRC Conference, Auckland.

McLennan, J., Birch, A., & King, C. (2006, March). *Holding on to what you have got: The CFA longitudinal study of new volunteers.* Inaugural Volunteering Research Symposium, Volunteering Australia. Melbourne.

Birch, A., McLennan. J., Dillon, A., & Surrey, M. (2006, March). *Factors affecting the recruitment of fire service volunteers in a rural region.* Paper presented at the 11th National Conference on Volunteering, Volunteering Australia, Melbourne.

Cowlishaw, S., & McLennan, J. (2006, March). *Volunteer fire services and the families of volunteers*. Paper presented at the 11th National Conference on Volunteering, Volunteering Australia. Melbourne.

McLennan, J., Birch, A., & Palmer, A. (2006, June). *The South Australian Country Fire Service survey of women volunteers.* Paper presented at the 2nd Women in Firefighting Conference, Sydney.

McLennan, J., & Birch, A. (2006, August). *Volunteerism—Facing the Challenge*. Paper presented at the AFAC and Bushfire CRC Conference, Melbourne.

Cowlishaw, S., Evans, L., & McLennan, J. (2007, July). *Impacts of emergency services volunteering on volunteers' families.* Poster presented at the Australasian Natural Hazards Management Conference, Brisbane.

McLennan, J., Birch, A., Beatson, R., & Cowlishaw, S. (2007). *Volunteer firefighting: A suitable job for a woman?* Gender and Disasters Workshop, Australasian Natural Hazards Management Conference, Brisbane, 4 July.

Birch, A. & McLennan, J. (2007, September). *Tote that barge, lift that bale! How employers view employees who are NSW RFS volunteers.* Paper presented at the AFAC and Bushfire CRC Conference, Hobart.

Cowlishaw, S., & McLennan, J. (2007, September, March). *Volunteer fire services and the families of emergency services volunteers*. Paper presented at the AFAC and Bushfire CRC Conference, Hobart.

McLennan, J., Birch, A., Beatson, R., & Cowlishaw, S. (2007, November). *Volunteer firefighting: A suitable activity for a woman?* Paper presented at the Diversity in Emergency Services Conference, Melbourne.

Birch, A., Beatson, R., & McLennan, J. (2008) Thematic Session presented at the AFAC and Bushfire CRC Conference, Adelaide, comprising the following oral presentations and a panel discussion:

- Birch, A. *I Quit! Why volunteers leave and what can be done about it*
- Beatson, R. *Getting their measure: How fire agencies are encouraging women volunteers*
- McLennan, J., *Inspiring new volunteers*

Birch, A., Beatson, R., Cowlishaw, S., McLennan, J. & Hayes, P. (2009). *Great expectations: the role of brigade leadership in retaining volunteers*. Paper presented at the AFAC and Bushfire CRC Conference, Gold Coast.

F. AGENCY PRESENTATIONS

Program D 'Road show' presentations to the fire agencies held in Brisbane, Sydney, Canberra, Melbourne, Hobart, Adelaide & Perth, 2005–06.

NSW Rural Fire Services Association Annual Conference, Bathurst, October 2005. Presentation about the work of the Volunteerism Project, 17–19 June 2005.

NSW RFS, Region West Manager's Conference, Young, November 2005. Presentation on the findings in Report 1 on the Grain Belt Community Survey, 14th December 2005.

Queensland Fire & Rescue Service—Rural Operations. Recruitment, Retention, and Recognition of Volunteers Workshop. Brisbane, 1 June 2006.

South Australian Country Fire Service Volunteer Summit. Adelaide, 1–2 July 2006. Presentations on:

1. The potential availability of rural fire service volunteers in the community as identified by the NSW Grain Belt Community Survey;
2. The experiences of female volunteers in the South Australian Country Fire Service.

Tasmania Fire Service Biennial Conference. Launceston, 15–16 July 2006. Presentations on:

1. The potential availability of rural fire service volunteers in the community as identified by the NSW Grain Belt Community Survey;
2. The experiences of female volunteers in the South Australian Country Fire Service.

New Zealand Fire Service Headquarters (Wellington) and Regions (Arapawa, Transalpine, Bay Waikato, Auckland) workshop presentations on recent research in fire service volunteering. Wellington, Christchurch, Rotorua, Auckland, 23–27 October 2006.

CFA Operations Managers Pre-season Workshop. Presentation on recent research in fire service volunteering. Halls Gap, 30 October 2006.

Survey of employers of NSW RFS Volunteers. Presentation on the survey findings, NSW RFS Headquarters, Homebush Bay, 28 March 2007.

Presentation to the joint CFA Board and CFA Senior Managers Strategic Planning Workshop, Vermont, 25 November, 2007.

Briefing to the NSW RFS Consultative Executive Group on findings from the 2007 survey of RFS volunteers, Homebush Bay, 27 November 2007.

Birch, A. (2008). *Volunteers: why they stay and why they go*. Presentation to the CFS Chief Officer's Advisory Council.