December 2010

Matching Assistance to Firefighters Grants to the Reported Needs of the U.S. Fire Service

Second Analysis Report

Covering 2005-2008 Grants and 2005 Needs Assessment Survey Responses

NFPA®

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ACKNOWLEDGEMENTS

Executive Summary

A rough comparison was made between (a) needs reported in the second fire service needs assessment survey and (b) resources requested and granted to the same fire departments in 2005-2008 under the Assistance to Firefighters Grant program, a separately managed part of the Federal Emergency Management Agency (FEMA), which also includes the U.S. Fire Administration (USFA).

This study used the same methodology employed in the first matching study report, which compared needs reported in the first fire service needs assessment survey and resources requested and granted to the same fire departments in 2001-2004 under the Assistance to Firefighters Grant program.

The matching analysis was designed to see whether the grants were effectively targeting needs. The matching process is very rough and offers numerous opportunities to overstate or understate relevant needs, such as the following:

- A department could have received a certain type of award (e.g., training) and have reported needs of that type (e.g., need for technical rescue training) but have received the award for a different specific type of need (e.g., structural firefighting training) for which need had not been established.

- A department could have requested and received a grant for a need of a different type than any addressed by the needs assessment report. For example, all grants for facility modification were matched against a reported need for exhaust emission control, although there are many other possible legitimate needs for facility modification.

- A department might have enough of a resource to provide some level of resource (e.g., some training) to everyone but not enough to provide all needed resources (e.g., training on all essential skills). In the analysis, need is only defined as the ability to provide something to everyone.

- Some needs may have arisen after the survey report was submitted (e.g., need to train new hires or train on new responsibilities) or may have arisen as a result of the acquisition of other resources (e.g., need to train in use of newly acquired equipment).

- A department may have had far more critical needs than the one(s) addressed by its grant. This goes not to the legitimacy of the need but to the priority of the need.

For all these reasons and, no doubt, other reasons as well, this analysis can only be taken as a rough indicator of the match between needs and resources. **Taken by themselves,**

this matching study and its predecessor indicate very similar results, well within the limits of variability for the sample sizes and the rough design of the comparison.

Those results indicate that most grants were awarded for a kind of resource for which the receiving department had a related need. There is some evidence in the changes between the two studies of greater use of grants to replace existing resources with upgraded resources, a use which cannot be identified as a match in this matching protocol, instead of acquiring that type of resource for the first time, which appears to be more common in the earlier grants and in smaller communities in all grant years.

This type of rough analysis may have reached its limits as a guide or support to decision-making and evaluation of the grants program. More focused information will require some combination of pre- and post-grant evaluation studies and more detailed audits, either of which could be performed on a well-designed sample of grant recipients.

Here is an overview by type of need or resource of the results of the matching analysis, shown by percentage of grants to departments that matched needs reported by those departments and percentage of grant funds to departments that matched reported needs. When there were two or more questions related to needs in a category, the "overall" matching percentages give the percentage of departments receiving a grant for a type of resource that reported a need for some type of that same resource, though not necessarily the same type that they requested and received.

 Table ES. Percentage of 2005-2008 Grants and Grant Funds, by Type of Resource, Where Needs Assessment Survey Reported a Need for Some Type of Same Resource

Type of resource or need	Percentage of 2005-2008 grants to matched departments	Percentage of 2005-2008 grant funds to matched departments
Firefighting equipment	95%	90%
Personal protective equipment	50%	38%
Facility modification	65%	67%
Training	84%	76%
Wellness and fitness programs	56%	51%

The percentages reflect a well-run program, with the evidence being clearest for the types of resources that are best suited to the type of analysis used here.

➢ There were needs survey questions about firefighting equipment for a wide range of challenging types of incidents, and for most of them, if a department has enough equipment for the stated goal, there are no other requirements (e.g., no requirements to upgrade capability or for reserves).

➢ There were needs survey questions about five different types of training, which helps explain why those percentages were high, but there are even more different kinds of training needs, which may explain why the percentages were not even higher.

➢ There were needs survey questions about three kinds of personal protective equipment but no questions about how well the equipment complied with current standards on capabilities. If most departments have enough equipment for everyone but are spending grant funds on upgrading to current standards, then that would explain why the percentages were not higher.

➢ Considering that facility modification needs were only assessed with respect to the single issue of exhaust emission control and wellness/fitness program needs were only assessed with respect to the existence of a program, not the adequacy of its content, it is not surprising that those percentages are not higher, and it is impressive that those percentages are as high as they are.

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Introduction

A rough comparison was made between (a) needs reported in the second fire service needs assessment survey and (b) resources requested and granted to the same fire departments in 2005-2008 under the Assistance to Firefighters Grant program, a separately managed part of the Federal Emergency Management Agency (FEMA), which also includes the U.S. Fire Administration (USFA).

This study used the same methodology employed in the first matching study report, which compared needs reported in the first fire service needs assessment survey and resources requested and granted to the same fire departments in 2001-2004 under the Assistance to Firefighters Grant program.

The matching analysis was designed to see whether the grants were effectively targeting needs.

Matching process

The first step was matching the needs-assessment database with the grantee database to develop combined records for a group of fire departments on their needs, based on NFPA analysis of department responses to needs questions, and the types of needs for which they received grant funding. The matching of fire department identifiers was done by and under the auspices of staff of the U.S. Fire Administration. NFPA staff then completed the process of creating combined records.

This combined database was then slightly reduced to only those departments that reported their population coverage in their needs assessment response. That restriction permitted analysis of the database by community size.

The resulting database consisted of a list of fire departments for each year in 2005-2008, with each department in a given year (a) receiving a grant in one or more identified major categories, (b) reporting population protected, and (c) having identifiable answers to the 2005 fire service needs assessment survey.

The five major categories of need and resource were:
  ➢ firefighting equipment,
  ➢ personal protective equipment,
  ➢ facility modification,
  ➢ training, and
  ➢ wellness/fitness programs.

In this second matching study, there were 820 fire department matches for 2005 grants, 642 for 2006 grants, 657 for 2007 grants, and 714 for 2008 grants. This meant a combined total of 2,833 departments receiving grants, with some departments receiving grants in multiple years.

Compared to the 2,833 departments receiving grants in this study, the first matching study had a dataset of 10,157 departments receiving grants in 2001-2004, or roughly four times as many data points. This did not represent a large contraction in the grant program between these two periods of time but primarily represents the much smaller sample size in the second needs assessment survey. In addition, grants for vehicles, which constituted 8% of the 2001-2004 matched departments receiving grants in 2001-2004 and 20% of the grant funds for those departments, were excluded from the second matching study because of changes in the record-keeping and program rules in the grants program during this later period.

Roughly half the matched grants were multi-part (e.g., with a part for firefighting equipment and a part for training). These parts were treated as distinct grants for purposes of analysis, so that there were a total of 4,188 matched grants to departments in a form suitable for comparison to reported needs. These consisted of 1,749 matched departments receiving grants for firefighting equipment, 1,425 for personal protective equipment, 451 for facility modification, 376 for training, and 187 for wellness and fitness programs.

The comparison required a positive match. Therefore, if a fire department submitted a needs assessment response but left the question related to a particular need blank, that department was counted as not having reported that type of need.

Limits of this approach to grant-need matching

The matching process is very rough and offers numerous opportunities to overstate or understate relevant needs, such as the following:

- A department could have reported a need of the *general* type but requested a *specific* resource of that type that is designed for a different need. For example, a department might have reported a need for EMS training but have requested and received a grant for structural firefighting training while not having reported a need for that type of training. Because the matching process does not distinguish training by type, this would be a case of no-match being recorded as a match.

- A department could have requested and received a grant for a need of a different type than any addressed by the needs assessment report. For example, a department might have reported a need for vehicle firefighting training, which is not one of the types of training asked about in the survey. This would be a case of a potential match recorded as a no-match.

- A department's grant could have covered a different specific type or level of resource than what they reported having. For example, a department might have everyone trained in technical rescue – hence, no reported need at the threshold used for reporting – but not have everyone trained in technical rescue to the level required for a very challenging building-collapse situation, and that might have

been the training they sought in their grant application. This would also be a case of a match (they had a need that matched the resource they were given) recorded as a no-match.

- Age of equipment is used to define need in some of the matching described above, but old equipment does not necessarily need replacing, and some equipment may need replacing before it reaches the age used as the threshold. This could lead to both matches classified as no-match and no-matches classified as matches.

- Some needs may have arisen after the survey report was submitted (e.g., engines reached the 30-year threshold) or may have arisen as a result of the acquisition of other resources (e.g., training is needed in the use of equipment acquired in another part of the grant or through other means). These would be matches recorded as no-match.

- A department may have had far more critical needs than the one(s) addressed by its grant. For example, replacement of an old but serviceable engine might have been sought ahead of training and equipment that the department did not have at all. These are cases where a match is recorded as a match but that legitimate match is still a case of poor prioritization and possibly poor allocation of funds.

For all these reasons and, no doubt, other reasons as well, this analysis can only be taken as a rough indicator of the match between needs and resources. The analysis may be useful as a basis for directing priorities in a more substantial audit, but it should not be used by itself as a basis for drawing adverse conclusions.

Parts of needs assessment survey used to identify needs by category

Here are the questions and answers used to define needs for each category of grants:

Firefighting equipment (combined with grants labeled for "Equipment")

There were three distinguishable types of need in this category.

1. Equipment required by NFPA standards (specifically, portable radios):

Q27a. How many of your emergency responders on-duty on a single shift can be equipped with portable radios? Need exists if the answer is Most, Some, or None. Need has not been established if the answer is All or blank.

Other needs that were not included in this matching analysis but were addressed by needs assessment survey questions were that (a) not all radios were water-resistant and intrinsically safe in an explosive atmosphere, and (b) there were not reserve portable radios equal to at least 10% of in-service radios.

2. Equipment deemed necessary by the departments to respond to unusually challenging incidents that fell within their scope. These were the homeland-security related needs:

Q36a,c. With respect to technical rescue and EMS for a building with 50 occupants after a structural collapse: Is such an incident within your department's responsibility? If yes, how far would you have to go to obtain enough specialized equipment to handle this incident? Need exists if the answers are Yes to the first question and Regional, State, or National for the second question. Need has not been established if the answer is No or blank to the first question or "Local would be enough" or blank to the second question.

Q37a,c. With respect to hazmat and EMS for an incident involving chemical/biological agents and 10 injuries: Is such an incident within your department's responsibility? If yes, how far would you have to go to obtain enough specialized equipment to handle this incident? Need exists if the answers are Yes to the first question and Regional, State, or National for the second question. Need has not been established if the answer is No or blank to the first question or "Local would be enough" or blank to the second question.

Q38a,c. With respect to wildland/urban interface fire affecting 500 acres: Is such an incident within your department's responsibility? If yes, how far would you have to go to obtain enough specialized equipment to handle this incident? Need exists if the answers are Yes to the first question and Regional, State, or National for the second question. Need has not been established if the answer is No or blank to the first question or "Local would be enough" or blank to the second question.

Q39a,c. With respect to mitigation (confining, slowing, etc.) of a developing major flood: Is such an incident within your department's responsibility? If yes, how far would you have to go to obtain enough specialized equipment to handle this incident? Need exists if the answers are Yes to the first question and Regional, State, or National for the second question. Need has not been established if the answer is No or blank to the first question or "Local would be enough" or blank to the second question.

3. Equipment deemed useful but not required by any standard (specifically, thermal imaging cameras):

Q. 40. With respect to thermal imaging camera, do you have any now or plan to acquire any? Need exists if the answer is "Plan to have in 1 year," "Plan to have in 5 years," or "No plan to acquire." Need has not been established if the answer is "Now own" or blank.

Personal protective equipment

There were three questions regarding types of personal protective equipment required by NFPA standards:

Q28a. How many of your emergency responders on-duty on a single shift can be equipped with self-contained breathing apparatus (SCBA)? Need exists if the answer is Most, Some, or None. Need has not been established if the answer is All or blank.

Other needs that were not included in this matching analysis but were addressed by needs assessment survey questions were that any SCBA were 10 years old or older.

Q29. How many of your emergency responders on-duty on a single shift can be equipped with personal alert safety system (PASS) devices? Need exists if the answer is Most, Some, or None. Need has not been established if the answer is All or blank.

Q30a. How many of your emergency responders on-duty on a single shift can be equipped with personal protective clothing? Need exists if the answer is Most, Some, or None. Need has not been established if the answer is All or blank.

Other needs that were not included in this matching analysis but were addressed by needs assessment survey questions were that (a) any clothing is at least 10 years old, or (b) there were not reserve clothing to equip 10% of emergency responders.

Facility modification

Of the many possible reasons for facility modification, only one was clearly addressed by a question in the needs assessment survey:

Q23a, d. Number of fire stations and number of fire stations equipped for exhaust emission control. Need exists if the second number is smaller than the first number. Need has not been established if the second number is equal to the first number or if either number has been left blank.

Wellness and fitness

There was an umbrella question about the existence of wellness/fitness programs:

Q18. Does your department have a program to maintain basic firefighter fitness and health (e.g., as required in NFPA 1500)? Need exists if the answer is No. Need has not been established if the answer is Yes or blank.

Training (combined with grants for "EMS training")

For five different types of emergency response roles, there were questions about whether the department performed such a role, and if yes, whether the firefighters who perform that role had received formal training:

Q13a,b. With respect to structural firefighting: Is this a role your department performs? If yes, how many of your personnel who perform this duty have received formal training (not just on-the-job)? Need exists if the answers are Yes to the first question and Most,

Some, or None for the second question. Need has not been established if the answer is No or blank to the first question or All or blank to the second question.

Other needs that were not included in this matching analysis but were addressed by needs assessment survey questions were some levels of personnel certification.

Q14a,b. With respect to emergency medical service (EMS): Is this a role your department performs? If yes, how many of your personnel who perform this duty have received formal training (not just on-the-job)? Need exists if the answers are Yes to the first question and Most, Some, or None for the second question. Need has not been established if the answer is No or blank to the first question or All or blank to the second question.

Other needs that were not included in this matching analysis but were addressed by needs assessment survey questions were some levels of personnel certification.

Q15a,b. With respect to hazardous materials response (Hazmat): Is this a role your department performs? If yes, how many of your personnel who perform this duty have received formal training (not just on-the-job)? Need exists if the answers are Yes to the first question and Most, Some, or None for the second question. Need has not been established if the answer is No or blank to the first question or All or blank to the second question.

Other needs that were not included in this matching analysis but were addressed by needs assessment survey questions were some levels of personnel certification.

Q16a,b. With respect to wildland firefighting: Is this a role your department performs? If yes, how many of your personnel who perform this duty have received formal training (not just on-the-job)? Need exists if the answers are Yes to the first question and Most, Some, or None for the second question. Need has not been established if the answer is No or blank to the first question or All or blank to the second question.

Q17a,b. With respect to technical rescue: Is this a role your department performs? If yes, how many of your personnel who perform this duty have received formal training (not just on-the-job)? Need exists if the answers are Yes to the first question and Most, Some, or None for the second question.

Analysis Results by Type of Resource or Need

For the departments where we were able to match a response to the 2005 needs assessment survey with an awarded grant in 2005-2008, the grants and grant funds were distributed as follows across the five major categories of need and resource:

Table A. Percentage of 2005-2008 Grants and Grant Funds to Matched Departments, by Type of Resource or Need

Type of resource or need	Percentage of 2005-2008 grants to matched departments	Percentage of 2005-2008 grant funds to matched departments
Firefighting equipment	42%	36%
Personal protective equipment	34%	38%
Facility modification	11%	13%
Training	9%	7%
Wellness and fitness programs	4%	6%

Tables 1-8 provide the same percentages for communities of a particular size range, from the largest cities (500,000 or more population) to rural communities (less than 2,500 population).

For each of the five major categories of resource covered by the grant program, the following sections provide the percentage match of need to type of resource received via grant, giving percentage of departments and percentage of grant funds to departments. That is, the first percentage shown is calculated as follows:

(number of departments with grant for that type of resource
AND established need for that type of resource)
(number of departments in the matched dataset with grant for that type of resource)

And the second percentage shown is calculated as follows:

(total funds granted for that type of resource to departments with
established need for that type of resource)
(total funds granted for that type of resource to departments in the matched dataset)

Three of the five categories of resources had more than one survey question that could be used to define need. There were six questions used for firefighting equipment, three questions for personal protective equipment, and five questions used for training. In these three sections, matching percentages are provided for overall matching – that is, how many departments showed need on any one of the questions – and for matching on each question individually.

The analysis also compares results of this second matching study to the corresponding results of the first matching study, which compared 2001-2004 grants to answers on the 2001 fire service needs assessment survey.

Firefighting equipment

Overall, there was a 95% match for percent of grants and a 90% match for percent of grant funds to some type of firefighting equipment need. (See Tables 1 and 2.) The six types of need had overall match percentages (of grants) in the range of 22-69%, which means that many departments receiving grants for firefighting equipment had needs for some types of equipment but not others.

While very high, the match percentages were slightly lower than in the first matching study, where there was a 98% match for awards and a 97% match for award funds to some type of firefighting equipment need for this category. Matching percentages were actually higher for four of the six types of need but were lower for portable radios and thermal imaging cameras.

The most dramatic shift in need matching was for thermal imaging cameras, where the matching percentage dropped from 64% in the first matching study to 22% in this second study. Thermal imaging cameras are not required by any standard but have been one of the most popular technology enhancements for fire departments over the past decade. Between the first and second needs assessment surveys, the percentage of departments with at least one thermal imaging camera rose from 24% to 55%. If grants in 2001-2004 were for a department's first thermal imaging camera, while grants in 2005-2008 were more often for a second such camera, that would explain the sharp drop in matching percentage calculated as was done here. In such circumstances, however, both grants could easily represent legitimate responses to needs.

In a similar spirit, the second needs assessment showed the need for portable radios to equip everyone on a shift down by 9 percentage points (from 45% to 36%) compared to the first survey. If grants in 2001-2004 were for purchase of enough radios to equip everyone, while grants in 2005-2008 were more often for the purchase of better radios (e.g., water-resistant or intrinsically safe in an explosive atmosphere) or reserve radios, then that would explain the drop in matching percentage calculated as was done here, but both grants would be legitimate responses to needs.

Personal protective equipment

Overall, there was a 50% match for percent of grants and a 38% match for percent of grant funds to some type of personal protective equipment need. (See Tables 3 and 4.) These percentages were down from 68% and 53% in the first matching study. The needs checked were self-contained breathing apparatus (SCBA), personal alert safety system (PASS) devices, and personal protective clothing.

Matching varied substantially by size of community, as did this category's share of grants. For communities of 500,000 or more population, only 16% of awards were for this category and no awards showed matching with a reported need. Conversely, for rural communities (less than 2,500 population protected), 59% of awards were for personal protective equipment and 86% of grant awards were to departments reporting a need for at least one of the three types of personal protective equipment.

While we cannot know what details lie underneath the coded responses, it is possible to construct a speculative narrative that would fit with these statistics. Suppose that smaller communities were less likely in 2005 to have sufficient personal protective equipment and so spent more of their 2005-2008 grant money to obtain adequate quantities of such equipment. Suppose that larger communities were more likely in 2005 to have sufficient personal protective equipment – enough to equip everyone on a shift – and so used more of their grant money for other types of needs (which would explain the much larger percentage of grant funds going to personal protective equipment). Suppose the larger communities also, for the same reasons, used their personal protective equipment grant funds, when they received them, more on other types of personal protective equipment than the three types included in the survey, on replacement equipment that performs better and is more in compliance with NFPA standards, or on a reserve in compliance with NFPA standards. Under these circumstances, the grants could all be for legitimate needs, but there would be fewer such grants for larger communities, and many or most of the grants for larger communities would be for personal protective equipment needs and upgrades not captured by the specific needs question used in this analysis.

Facility modification

Overall, there was a 65% match for percent of grants and a 67% match for percent of grant funds to the only type of need included in the survey for this category, namely, exhaust emission control. (See Tables 5 and 6.) These percentages were slightly down from the 73% and 70% match percentages in the first matching study, but the differences are not significant given the rough nature of the calculation.

There are known to be other well-established facility design needs related to firefighter safety and health (which were the only modifications these grants were intended to address), such as safety of passage between floors (replacing the old slide poles). Therefore, the calculated match percentage is actually a pretty high match percentage for only one type of need.

Training

Overall, there was an 84% match for percent of grants and a 76% match for percent of grant funds to some type of training need. (See Tables 7 and 8.) These percentages were

lower than the 88% and 80% calculated in the first matching study, but the differences are too small to be considered significant.

Matching rates for particular types of training ranged from 27% for EMS training to 28% for structural firefighting training, 44% for hazmat response training, 48% for wildland firefighting training and 55% for technical rescue training.

A department that had provided any formal training to all involved personnel would not be counted as having a training need but would very likely have such needs, whether it be for the training of new hires, refresher training, or training on new requirements or on previously uncovered elements of training necessary for firefighting effectiveness. Hazmat, wildland firefighting, and technical rescue training are all types of training where many departments might be new to the role or were still working to provide all involved personnel with some basic training. Structural firefighting and EMS roles, by contrast, were of long standing in most departments. Training needs for these roles were much less likely to be starting from scratch – the only kind of need captured by this analysis – and much more likely to be filling in additional levels or aspects of training.

Wellness and fitness programs

Overall, there was a 56% match for awards and a 51% match for award funds to the need defined by not having any program of this type. (See Tables 9 and 10.) As with the questions on training, there is a major difference between providing *any* program and providing a complete program with all necessary elements.

Summary of analysis results

Here is an overview by type of need or resource of the results of the matching analysis, shown by percentage of grants to departments that matched needs reported by those departments and percentage of grant funds to departments that matched reported needs. When there were two or more questions related to needs in a category, the "overall" matching percentages give the percentage of departments receiving a grant for a type of resource that reported a need for some type of that same resource, though not necessarily the same type that they requested and received.

Table B. Percentage of 2005-2008 Grants and Grant Funds, by Type of Resource, Where Needs Assessment Survey Reported a Need for Some Type of Same Resource

Type of resource or need	Percentage of 2005-2008 grants to matched departments	Percentage of 2005-2008 grant funds to matched departments
Firefighting equipment	95%	90%
Personal protective equipment	50%	38%
Facility modification	65%	67%
Training	84%	76%
Wellness and fitness programs	56%	51%

The percentages reflect a well-run program, with the evidence being clearest for the types of resources that are best suited to the type of analysis used here.

➢ There were needs survey questions about firefighting equipment for a wide range of challenging types of incidents, and for most of them, if a department has enough equipment for the stated goal, there are no other requirements (e.g., no requirements to upgrade capability or for reserves).

➢ There were needs survey questions about five different types of training, which helps explain why those percentages were high, but there are even more different kinds of training needs, which may explain why the percentages were not even higher.

➢ There were needs survey questions about three kinds of personal protective equipment but no questions about how well the equipment complied with current standards on capabilities. If most departments have enough equipment for everyone but are spending grant funds on upgrading to current standards, then that would explain why the percentages were not higher.

➢ Considering that facility modification needs were only assessed with respect to the single issue of exhaust emission control and wellness/fitness program needs were only assessed with respect to the existence of a program, not the adequacy of its content, it is not surprising that those percentages are not higher, and it is impressive that those percentages are as high as they are.

Table 1
Reported Fire Department Needs vs. Awarded Grants – Firefighting Equipment

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grants	Need = Any of the six needs shown to the right	Need = lack of Portable radios for all on shift Q27a	Structural collapse Q36a,c	Chemical/ biological agent attack Q37a,c	Wildland/ urban interface fire Q38a,c	Mitigate developing flood Q39a,c	Need = lack of Thermal imaging camera Q40
				Need = lack of local specialized equipment to respond to defined unusually challenging incidents				
500,000 or more	32%	52%	14%	24%	19%	43%	14%	5%
250,000 to 499,999	46%	92%	38%	50%	25%	58%	71%	0%
100,000 to 249,999	37%	89%	31%	68%	42%	46%	46%	3%
50,000 to 99,999	36%	94%	29%	77%	64%	31%	43%	1%
25,000 to 49,999	42%	92%	36%	81%	76%	44%	51%	2%
10,000 to 24,999	41%	94%	41%	77%	71%	48%	46%	12%
5,000 to 9,999	43%	98%	57%	71%	70%	55%	46%	20%
2,500 to 4,999	45%	97%	70%	64%	65%	57%	41%	35%
Under 2,500	43%	97%	77%	49%	52%	57%	39%	59%
Total	42%	95%	52%	69%	65%	51%	44%	22%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Firefighting Equipment," "EMS Equipment," and "Equipment", and matching to USFA/NFPA Needs Assessment survey responses

Table 1
Reported Fire Department Needs vs. Awarded Grants – Firefighting Equipment (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grants	Need = Any of the six needs shown to the right	Need = lack of Portable radios for all on shift Q27a	Structural collapse Q36a,c	Chemical/ biological agent attack Q37a,c	Wildland/ urban interface fire Q38a,c	Mitigate developing flood Q39a,c	Need = lack of Thermal imaging camera Q40
				Need = lack of local specialized equipment to respond to defined unusually challenging incidents				
500,000 or more	32%	94%	56%	38%	16%	44%	44%	9%
250,000 to 499,999	28%	100%	50%	47%	33%	43%	30%	23%
100,000 to 249,999	39%	97%	54%	66%	40%	43%	57%	19%
50,000 to 99,999	33%	96%	50%	64%	63%	38%	45%	25%
25,000 to 49,999	33%	94%	50%	67%	60%	35%	45%	34%
10,000 to 24,999	33%	96%	54%	63%	63%	42%	39%	45%
5,000 to 9,999	35%	98%	73%	55%	56%	53%	42%	63%
2,500 to 4,999	37%	99%	78%	52%	53%	47%	37%	80%
Under 2,500	34%	100%	85%	39%	42%	49%	32%	90%
Total	34%	98%	70%	53%	53%	46%	38%	64%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Firefighting Equipment," "EMS Equipment," and "Equipment", and matching to USFA/NFPA Needs Assessment survey responses.

Table 2
Reported Fire Department Needs vs. Grant Amounts – Firefighting Equipment

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grant funds	Need = Any of the six needs shown to the right	Need = lack of Portable radios for all on shift Q27a	Need = lack of local specialized equipment to respond to defined unusually challenging incidents				Need = lack of Thermal imaging camera Q40
				Structural collapse Q36a,c	Chemical/ biological agent attack Q37a,c	Wildland/ urban interface fire Q38a,c	Mitigate developing flood Q39a,c	
500,000 or more	32%	52%	14%	24%	19%	43%	14%	5%
250,000 to 499,999	46%	92%	38%	50%	25%	58%	71%	0%
100,000 to 249,999	37%	89%	31%	68%	42%	46%	46%	3%
50,000 to 99,999	36%	94%	29%	77%	64%	31%	43%	1%
25,000 to 49,999	42%	92%	36%	81%	76%	44%	51%	2%
10,000 to 24,999	41%	94%	41%	77%	71%	48%	46%	12%
5,000 to 9,999	43%	98%	57%	71%	70%	55%	46%	20%
2,500 to 4,999	45%	97%	70%	64%	65%	57%	41%	35%
Under 2,500	43%	97%	77%	49%	52%	57%	39%	59%
Total	42%	95%	52%	69%	65%	51%	44%	22%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses.

Table 2
Reported Fire Department Needs vs. Grant Amounts – Firefighting Equipment (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

| Community size | Percent of grant funds | Need = Any of the six needs shown to the right | Need = lack of Portable radios for all on shift Q27a | Need = lack of local specialized equipment to respond to defined unusually challenging incidents | | | | Need = lack of Thermal imaging camera Q40 |
				Structural collapse Q36a,c	Chemical/ biological agent attack Q37a,c	Wildland/ urban interface fire Q38a,c	Mitigate developing flood Q39a,c	
500,000 or more	36%	47%	3%	11%	8%	35%	22%	9%
250,000 to 499,999	44%	92%	36%	44%	17%	46%	75%	0%
100,000 to 249,999	44%	94%	31%	52%	54%	54%	33%	1%
50,000 to 99,999	31%	94%	30%	80%	61%	28%	36%	0%
25,000 to 49,999	36%	91%	29%	80%	74%	50%	51%	2%
10,000 to 24,999	32%	96%	34%	81%	72%	49%	47%	10%
5,000 to 9,999	36%	98%	55%	77%	75%	54%	57%	19%
2,500 to 4,999	34%	98%	72%	64%	64%	59%	41%	35%
Under 2,500	32%	98%	78%	52%	57%	65%	39%	58%
Total	36%	90%	38%	62%	56%	48%	43%	12%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Firefighting Equipment," "EMS Equipment," and "Equipment", and matching to USFA/NFPA Needs Assessment survey responses.

Table 3
Reported Fire Department Needs vs. Awarded Grants – Personal Protective Equipment

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grants	Need = Any of the three needs shown to the right	Need = lack of SCBA for all on shift Q28a	Need = lack of PASS devices for all on shift Q29	Need = lack of Personal protective clothing for all Q30a
500,000 or more	21%	0%	0%	0%	0%
250,000 to 499,999	29%	7%	7%	7%	0%
100,000 to 249,999	24%	17%	4%	7%	7%
50,000 to 99,999	29%	9%	0%	6%	3%
25,000 to 49,999	28%	16%	10%	10%	3%
10,000 to 24,999	31%	30%	24%	20%	5%
5,000 to 9,999	36%	53%	46%	36%	5%
2,500 to 4,999	40%	78%	69%	56%	9%
Under 2,500	42%	86%	79%	66%	15%
Total	34%	50%	43%	35%	7%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses.

Table 3
Reported Fire Department Needs vs. Awarded Grants – Personal Protective Equipment (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grants	Need = Any of the three needs shown to the right	Need = lack of SCBA for all on shift Q28a	Need = lack of PASS devices for all on shift Q29	Need = lack of Personal protective clothing for all Q30a
500,000 or more	28%	4%	4%	4%	0%
250,000 to 499,999	27%	10%	0%	3%	7%
100,000 to 249,999	20%	7%	6%	4%	3%
50,000 to 99,999	29%	7%	4%	6%	1%
25,000 to 49,999	29%	22%	16%	15%	3%
10,000 to 24,999	34%	40%	32%	29%	4%
5,000 to 9,999	39%	70%	62%	53%	11%
2,500 to 4,999	41%	85%	79%	69%	15%
Under 2,500	42%	93%	87%	78%	23%
Total	37%	68%	61%	54%	13%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses.

Table 4
Reported Fire Department Needs vs. Grant Amounts – Personal Protective Equipment

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grant funds	Need = Any of the three needs shown to the right	Need = lack of SCBA for all on shift Q28a	Need = lack of PASS devices for all on shift Q29	Need = lack of Personal protective clothing for all Q30a
500,000 or more	16%	0%	0%	0%	0%
250,000 to 499,999	36%	7%	7%	7%	0%
100,000 to 249,999	24%	15%	2%	5%	7%
50,000 to 99,999	36%	7%	0%	5%	2%
25,000 to 49,999	34%	16%	10%	11%	2%
10,000 to 24,999	44%	35%	27%	24%	6%
5,000 to 9,999	48%	51%	44%	35%	6%
2,500 to 4,999	56%	76%	68%	53%	9%
Under 2,500	59%	86%	79%	64%	14%
Total	38%	38%	31%	26%	6%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses.

Table 4
Reported Fire Department Needs vs. Grant Amounts – Personal Protective Equipment (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grant funds	Need = Any of the three needs shown to the right	Need = lack of SCBA for all on shift Q28a	Need = lack of PASS devices for all on shift Q29	Need = lack of Personal protective clothing for all Q30a
500,000 or more	32%	4%	4%	4%	0%
250,000 to 499,999	37%	9%	0%	7%	2%
100,000 to 249,999	28%	3%	3%	1%	1%
50,000 to 99,999	32%	11%	6%	10%	0%
25,000 to 49,999	36%	21%	16%	17%	3%
10,000 to 24,999	42%	39%	30%	28%	4%
5,000 to 9,999	44%	68%	59%	52%	10%
2,500 to 4,999	43%	83%	78%	66%	15%
Under 2,500	39%	92%	86%	77%	21%
Total	39%	53%	47%	42%	9%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses.

Table 5
Reported Fire Department Needs vs. Awarded Grants – Facility Modification

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grants	Need = any fire station lacks exhaust emission control Q23d
500,000 or more	12%	50%
250,000 to 499,999	8%	100%
100,000 to 249,999	17%	58%
50,000 to 99,999	13%	53%
25,000 to 49,999	16%	66%
10,000 to 24,999	14%	64%
5,000 to 9,999	9%	65%
2,500 to 4,999	7%	80%
Under 2,500	4%	77%
Total	11%	65%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees and matching to USFA/NFPA Needs Assessment survey responses.

Table 5
Reported Fire Department Needs vs. Awarded Grants – Facility Modification (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grants	Need = any fire station lacks exhaust emission control Q23d
500,000 or more	9%	89%
250,000 to 499,999	9%	60%
100,000 to 249,999	6%	48%
50,000 to 99,999	7%	64%
25,000 to 49,999	9%	70%
10,000 to 24,999	8%	74%
5,000 to 9,999	6%	77%
2,500 to 4,999	3%	74%
Under 2,500	2%	77%
Total	5%	73%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees and matching to USFA/NFPA Needs Assessment survey responses.

Table 6
Reported Fire Department Needs vs. Grant Amounts – Facility Modification

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grant funds	Need = any fire station lacks exhaust emission control Q23d
500,000 or more	13%	37%
250,000 to 499,999	10%	100%
100,000 to 249,999	18%	66%
50,000 to 99,999	17%	61%
25,000 to 49,999	15%	77%
10,000 to 24,999	16%	73%
5,000 to 9,999	10%	66%
2,500 to 4,999	7%	83%
Under 2,500	5%	82%
Total	13%	67%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees and matching to USFA/NFPA Needs Assessment survey responses.

Table 6
Reported Fire Department Needs vs. Grant Amounts – Facility Modification (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grant funds	Need = any fire station lacks exhaust emission control Q23d
500,000 or more	16%	86%
250,000 to 499,999	16%	44%
100,000 to 249,999	8%	53%
50,000 to 99,999	8%	69%
25,000 to 49,999	10%	69%
10,000 to 24,999	9%	74%
5,000 to 9,999	5%	79%
2,500 to 4,999	3%	68%
Under 2,500	1%	70%
Total	7%	70%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees and matching to USFA/NFPA Needs Assessment survey responses.

Table 7
Reported Fire Department Needs vs. Awarded Grants – Training

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

		Need =	Need = Not all personnel who perform this duty have received formal training				
Community size	Percent of grants	Any of the five needs shown to the right	Structural firefighting Q13a,b	EMS Q14a,b	Hazmat Q15a,b	Wildland firefighting Q16a,b	Technical rescue Q17a,b
500,000 or more	23%	80%	0%	0%	13%	40%	67%
250,000 to 499,999	12%	83%	0%	0%	17%	50%	67%
100,000 to 249,999	10%	63%	0%	16%	32%	21%	53%
50,000 to 99,999	13%	71%	16%	13%	21%	18%	55%
25,000 to 49,999	10%	85%	18%	23%	35%	40%	68%
10,000 to 24,999	8%	77%	13%	27%	27%	37%	54%
5,000 to 9,999	8%	93%	38%	25%	61%	63%	62%
2,500 to 4,999	8%	98%	46%	49%	79%	67%	58%
Under 2,500	9%	87%	59%	37%	48%	67%	28%
Total	9%	84%	28%	27%	44%	48%	55%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Training" and "EMS Training", and matching to USFA/NFPA Needs Assessment survey responses

Table 7
Reported Fire Department Needs vs. Awarded Grants – Training (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grants	Need = Any of the five needs shown to the right	Need = Not all personnel who perform this duty have received formal training				
			Structural firefighting Q13a,b	EMS Q14a,b	Hazmat Q15a,b	Wildland firefighting Q16a,b	Technical rescue Q17a,b
500,000 or more	13%	46%	8%	8%	8%	31%	23%
250,000 to 499,999	14%	87%	7%	20%	27%	13%	87%
100,000 to 249,999	14%	82%	8%	16%	24%	43%	73%
50,000 to 99,999	12%	72%	9%	19%	23%	32%	58%
25,000 to 49,999	11%	82%	20%	15%	40%	38%	64%
10,000 to 24,999	11%	85%	29%	28%	51%	46%	61%
5,000 to 9,999	9%	88%	43%	34%	60%	61%	50%
2,500 to 4,999	8%	93%	53%	43%	64%	65%	46%
Under 2,500	7%	96%	68%	42%	63%	74%	47%
Total	9%	88%	40%	32%	52%	55%	55%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Training" and "EMS Training", and matching to USFA/NFPA Needs Assessment survey responses

Table 8
Reported Fire Department Needs vs. Grant Amounts – Training

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

		Need =	Need = Not all personnel who perform this duty have received formal training				
Community size	Percent of grant funds	Any of the five needs shown to the right	Structural firefighting Q13a,b	EMS Q14a,b	Hazmat Q15a,b	Wildland firefighting Q16a,b	Technical rescue Q17a,b
500,000 or more	17%	79%	0%	0%	16%	23%	75%
250,000 to 499,999	8%	67%	0%	0%	51%	56%	65%
100,000 to 249,999	5%	67%	0%	14%	52%	27%	66%
50,000 to 99,999	9%	58%	24%	25%	27%	8%	32%
25,000 to 49,999	10%	87%	13%	10%	30%	43%	72%
10,000 to 24,999	5%	72%	19%	41%	26%	24%	50%
5,000 to 9,999	2%	96%	43%	37%	62%	57%	74%
2,500 to 4,999	3%	100%	51%	52%	83%	65%	73%
Under 2,500	3%	70%	51%	21%	33%	56%	16%
Total	7%	76%	14%	17%	32%	30%	61%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Training" and "EMS Training", and matching to USFA/NFPA Needs Assessment survey responses

Table 8
Reported Fire Department Needs vs. Grant Amounts – Training (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

		Need =	Need = Not all personnel who perform this duty have received formal training				
Community size	Percent of grant funds	Any of the five needs shown to the right	Structural firefighting Q13a,b	EMS Q14a,b	Hazmat Q15a,b	Wildland firefighting Q16a,b	Technical rescue Q17a,b
500,000 or more	6%	42%	11%	2%	11%	38%	15%
250,000 to 499,999	4%	80%	4%	11%	18%	7%	80%
100,000 to 249,999	5%	76%	5%	18%	23%	40%	72%
50,000 to 99,999	7%	71%	6%	15%	10%	25%	60%
25,000 to 49,999	6%	82%	13%	8%	40%	29%	71%
10,000 to 24,999	5%	82%	27%	29%	45%	45%	56%
5,000 to 9,999	3%	91%	41%	27%	66%	57%	55%
2,500 to 4,999	2%	92%	43%	37%	58%	66%	58%
Under 2,500	2%	97%	64%	46%	72%	76%	48%
Total	4%	80%	24%	21%	40%	43%	58%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grantees for "Training" and "EMS Training", and matching to USFA/NFPA Needs Assessment survey responses

Table 9
Reported Fire Department Needs vs. Awarded Grants – Wellness/Fitness Programs

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grants	Need = Lack of program to maintain fitness and health Q18
500,000 or more	12%	25%
250,000 to 499,999	6%	33%
100,000 to 249,999	12%	57%
50,000 to 99,999	9%	46%
25,000 to 49,999	5%	64%
10,000 to 24,999	5%	55%
5,000 to 9,999	4%	60%
2,500 to 4,999	1%	88%
Under 2,500	1%	50%
Total	4%	56%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses.

Table 9
Reported Fire Department Needs vs. Awarded Grants – Wellness/Fitness Programs (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grants	Need = Lack of program to maintain fitness and health Q18
500,000 or more	11%	27%
250,000 to 499,999	13%	57%
100,000 to 249,999	13%	64%
50,000 to 99,999	8%	70%
25,000 to 49,999	9%	55%
10,000 to 24,999	6%	65%
5,000 to 9,999	3%	66%
2,500 to 4,999	2%	77%
Under 2,500	2%	67%
Total	4%	64%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses

Table 10
Reported Fire Department Needs vs. Grant Amounts – Wellness/Fitness Programs

A. 2005-2008 Grants versus 2005 Needs Assessment Survey

Community size	Percent of grant funds	Need = Lack of program to maintain fitness and health Q18
500,000 or more	18%	36%
250,000 to 499,999	3%	53%
100,000 to 249,999	8%	53%
50,000 to 99,999	7%	60%
25,000 to 49,999	4%	68%
10,000 to 24,999	4%	58%
5,000 to 9,999	3%	65%
2,500 to 4,999	0%	63%
Under 2,500	1%	89%
Total	6%	51%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses

Table 10
Reported Fire Department Needs vs. Grant Amounts – Wellness/Fitness Programs (Continued)

B. 2001-2004 Grants versus 2001 Needs Assessment Survey

Community size	Percent of grant funds	Need = Lack of program to maintain fitness and health Q18
500,000 or more	12%	13%
250,000 to 499,999	20%	74%
100,000 to 249,999	11%	73%
50,000 to 99,999	8%	80%
25,000 to 49,999	6%	50%
10,000 to 24,999	4%	68%
5,000 to 9,999	1%	58%
2,500 to 4,999	1%	76%
Under 2,500	0%	66%
Total	4%	62%

Note: Reported needs defined by indicated responses to questions. Need requires positive indication of need; blank answer to question is interpreted as no need.

Source: USFA files on Fire Act grant recipients and matching to USFA/NFPA Needs Assessment survey responses

Appendix A

Fire Service Needs Assessment Survey Form 2005

The next three pages contain the Needs Assessment Survey form. It was printed on legal size paper (8-1/2" x 14") but has been shrunk to fit letter size paper here.