Assistance to Firefighters Grant Program

Performance Assessment System

Fiscal Year 2015 Annual Report to Congress

October 19, 2015

Homeland Security

Federal Emergency Management Agency

Message from the Administrator

October 19, 2015

I am pleased to submit the following Fiscal Year 2015 Annual Report to Congress titled the *Assistance to Firefighters Grant Program Performance Assessment System*. This report is prepared by the Federal Emergency Management Agency (FEMA), pursuant to the requirement in the *Federal Fire Prevention and Control Act of 1974* (FFPCA) (Pub. L. No. 93-498), as amended by the *Fire Grants Reauthorization Act of 2012* (FGRA). Congress enacted the FGRA as Title XVIII of the *National Defense Authorization Act for Fiscal Year 2013*, (Pub. L. No. 112-239).

Section 1803 of the FGRA amended Section 33 of the FFPCA by including a requirement that the Administrator of FEMA develop and implement a performance assessment system, and to annually evaluate and report the effectiveness of the Assistance to Firefighters Grant (AFG) program. This report summarizes FEMA's development and ongoing refinement of the AFG performance assessment system, which is based on quantifiable programmatic effectiveness and priority metrics.

Pursuant to congressional requirements, FEMA provides this report to the following Members of Congress:

The Honorable Ron Johnson
Chairman, Senate Committee on Homeland Security and Governmental Affairs

The Honorable Thomas Carper
Ranking Member, Senate Committee on Homeland Security and Governmental Affairs

The Honorable Lamar Smith
Chairman, House Committee on Science, Space, and Technology

The Honorable Eddie Bernice Johnson
Ranking Member, House Committee on Science, Space, and Technology

The Honorable Bill Shuster
Chairman, House Committee on Transportation and Infrastructure

The Honorable Peter A. DeFazio
Ranking Member, House Committee on Transportation and Infrastructure

Inquiries relating to this report may be directed to me at (202) 646-3900.

Sincerely,

W. Craig Fugate
Administrator
Federal Emergency Management Agency

Executive Summary

This report, titled *Assistance to Firefighters Grant Program Performance Assessment System* for FY 2015, is submitted pursuant to Section 33(p)(4) of FFPCA (Pub. L. No. 93-498) as amended by Section 1803 of the *Fire Grants Reauthorization Act of 2012* (FGRA) (Pub. L. No. 112-239). This report summarizes FEMA's AFG program performance assessment system and evaluates the program's effectiveness at achieving congressionally established goals.

Background on the AFG Program

FEMA awards AFG funds to fire departments, nonaffiliated emergency medical service (EMS) organizations, and state fire training academies. Approximately 84 percent of these awards go towards purchasing personal protective equipment (PPE), vehicles, and other operational equipment. Additionally, the AFG program funds projects to modernize facilities, deliver training, and develop wellness and fitness programs. Under AFG's authorizing statute, FEMA also awards Fire Prevention and Safety (FP&S) grants to support firefighter and public safety through research and community initiatives, such as installing smoke detectors in high-risk areas. From Fiscal Year (FY) 2002 through FY 2014, FEMA has awarded over $6.8 billion to more than 62,368 AFG recipients.

Structure of the Report

This report is comprised of two sections that follow the statutory requirements of the FFPCA, as amended:

(1) AFG Performance Assessment System: Describes the methodology behind FEMA's AFG performance evaluation metrics, including refinements since 2014.

(2) AFG Program Evaluation: Uses the most recently available data from FYs 2008–2013 to assess the effectiveness of the AFG program and develop performance metrics to continually track progress and implementation.

AFG Performance Assessment System

In 2014, FEMA developed an AFG performance assessment system to measure the AFG program's effectiveness. The performance assessment system is comprised of objective, quantitative performance metrics including programmatic effectiveness metrics based on safety standards and programmatic priority metrics based on the strategic goals of the AFG program. Due to improvements in the FY 2013 AFG application process, FEMA has made a number of refinements in the assessment methodology for FY 2013 data in order to continue reporting on the status of all metrics introduced in the 2014 AFG Performance Assessment System Report. FEMA will continue to refine and develop new measures for the report as modifications to the AFG recipient selection methodology continue to alter the available data.

AFG Program Performance Assessment

To assess the AFG program's effectiveness, FEMA analyzed the most recently available data from applications between FYs 2008-2013 and closeout reports between FYs 2008-2011. FEMA measures AFG program effectiveness by examining the extent to which recipients achieve

compliance with safety standards related to equipping on-duty personnel with protective gear as well as maintaining vehicles and/or operational equipment. The data show the following results:

- AFG awards for FYs 2008–2011 supported the purchase of PPE used by recipients to increase the average percent of on-duty members equipped with protective gear that meets industry or related safety standards from 90.7 percent to 98.4 percent;
- AFG awards helped over 98 percent of FYs 2008-2011 vehicle-recipients permanently remove a sub-standard vehicle from service; and
- AFG awards for FYs 2008-2011 supported bringing 87 percent of equipment-recipients into compliance with state, local, National Fire Protection Association (NFPA), or Occupational Safety and Health Administration (OSHA) standards.

FEMA also tracks programmatic priority metrics to assess the AFG program's success in advancing key grant program priorities. These data demonstrate that the AFG program promotes fire safety and national preparedness by: (1) enhancing mutual and automatic aid capabilities; (2) prioritizing the protection of critical infrastructure; and (3) helping fire departments provide sharable regional resources.

Assistance to Firefighters Grant Program
Performance Assessment System
Fiscal Year 2015 Annual Report to Congress

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I. Legislative Language

This report, titled *Assistance to Firefighters Grant Program Performance Assessment System* for FY 2015, is submitted pursuant to Section 33 of the *Federal Fire Prevention and Control Act of 1974* (Pub. L. No. 93-498) as amended by Section 1803 of the *Fire Grants Reauthorization Act of 2012* (Pub. L. No. 112-239).

"(p) ENSURING EFFECTIVE USE OF GRANTS –

"(2) PERFORMANCE ASSESSMENT.—

"(A) IN GENERAL.—The Administrator of FEMA shall develop and implement a performance assessment system, including quantifiable performance metrics, to evaluate the extent to which grant awards awarded under this section are furthering the purposes of this section, including protecting the health and safety of the public and firefighting personnel against fire and fire-related hazards.

"(B) Consultation.—The Administrator of FEMA shall consult with the fire service representatives and with the Comptroller General of the United States in developing the assessment system required by subparagraph (A).

"(4) ANNUAL REPORTS TO CONGRESS.—

"(A) IN GENERAL.—Not later than September 30, 2013 and each year thereafter through 2017, the Administrator of FEMA shall submit to the Committee on Homeland Security and Governmental Affairs of the Senate and the Committee on Science and Technology and the Committee on Transportation and Infrastructure of the House of Representatives a report that provides—

"(i) information on the performance assessment system developed under paragraph (2); and

"(ii) using the performance metrics developed under such paragraph, an evaluation of the effectiveness of the grants awarded under this section.

II. Background

In 2000, Congress amended the *Federal Fire Prevention and Control Act of 1974* to establish the AFG program to "[protect] the health and safety of the public and firefighting personnel against fire and fire-related hazards…"[1] Congress most recently reauthorized the AFG program in January 2013 with the enactment of the *Fire Grants Reauthorization Act of 2012*, enacted as Title XVIII of the *National Defense Authorization Act for Fiscal Year 2013*, (Pub. L. No. 112-239).

FEMA awards AFG funding to fire departments, non-affiliated EMS organizations, and state fire training academies. In addition, FEMA awards funding to other nonprofit organizations recognized for their experience and expertise with respect to fire prevention, fire safety programs and activities, or firefighter research and development programs.

After the September 11th attacks and the creation of the U.S. Department of Homeland Security in 2003, FEMA expanded the scope of the AFG program to include national preparedness and regional disaster response considerations.

AFG Program Overview

FEMA has awarded over $6.8 billion in AFG funding to more than 62,368 recipients across the country from FY 2002 through FY 2014. The AFG grant program includes three primary components: operations and safety, vehicle acquisition, and joint/regional programs. These components provide awards to recipients across a number of funding lines, including: equipment, PPE, vehicles, training, facility modification, and wellness and fitness programs. Equipment grants include items such as flashlights, hoses, and ladders, whereas PPE refers to items that are explicitly "worn" for protection by firefighters or EMS personnel such as boots, gloves, and self-contained breathing apparatus.

In 2002, FEMA introduced FP&S grants. These grants fund fire-safety community initiatives for high-risk groups more likely to sustain a fire-related injury—such as children and individuals with access and functional needs—as well as geographic areas with above-average fire risks. In 2005, FEMA introduced research and development (R&D) projects aimed at improving firefighter health and safety as an eligible project under the FP&S Program. Figure 1 illustrates AFG grant allocations across all the program's major funding lines since FY 2002.

[1] Section 1701 of the *Floyd D. Spence National Defense Authorization Act* for Fiscal Year 2001 (Pub. L. No. 106-398)

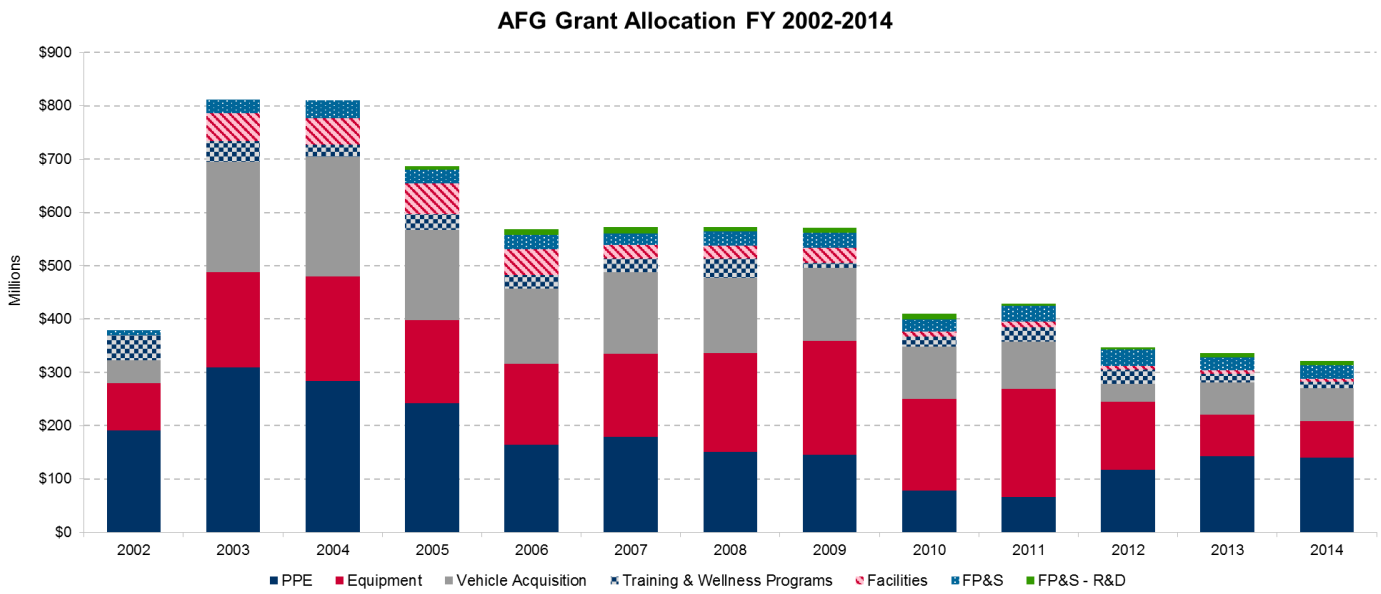

Figure 1: From FY 2002 – FY 2014, FEMA has awarded over $6.8 billion in AFG grants.[2]

As shown above, from FY 2002 through FY 2014 recipients have used AFG awards to purchase nearly $2 billion in firefighting equipment, $2.2 billion in PPE, and over $1.5 billion in vehicles. Together, these three categories account for over 84 percent of all AFG awards.

[2] Although FP&S grants are part of the AFG program, FEMA administers these grants through a separate Notice of Funding Opportunity. Additionally, data included in Figure 1 is incomplete for FY 2014.

III. AFG Performance Assessment System

FEMA's AFG performance assessment system has two components: (1) programmatic effectiveness metrics based on applicable safety standards and (2) metrics based on programmatic priorities. For both components, FEMA analyzes the most recent data available from AFG recipient applications and closeout reports to calculate results and develop key findings. For this report, FEMA analyzed AFG grant applications from FYs 2008–2013 and closeout reports from FYs 2008–2011.[3]

A. Programmatic Effectiveness Metrics

In 2014, FEMA developed programmatic effectiveness metrics to assess the AFG program's success in increasing recipient compliance with industry safety standards.[4] These metrics are based on standards from NFPA, OSHA, state governments, and local regulatory agencies. Appendix A includes a list of the NFPA and OSHA standards that are most relevant to the AFG performance assessment system.

- **NFPA Standards:** The NFPA is an international nonprofit organization of subject-matter experts that develops codes and standards for the fire, electrical, and construction trades with the goal of reducing the worldwide burden of fire—including fire-related injuries, property damage, and other effects. Increased departmental compliance with NFPA standards demonstrates progress in advancing firefighter and public safety. Several AFG funding categories, including PPE, vehicles, and certain types of equipment, correspond to specific NFPA standards that define minimum safe operational requirements.

- **OSHA Standards**: OSHA maintains several standards applicable to AFG recipients, primarily in the areas of firefighter safety. While OSHA standards are only applicable to private-sector employers, 27 states and territories have adopted federally approved occupational health and safety programs. These states and territories apply OSHA standards to all state and local government agencies, including fire departments.

- **State, Local, Tribal, and Territorial Governments Regulatory Standards:** In non-OSHA states, the local, tribal, territorial or state regulatory agencies develop and enforce standards for fire service personnel. These standards, however, vary across jurisdictions. For example, West Virginia requires departments to either contract with a qualified self-contained breathing apparatus (SCBA) repairman and produce evidence of annual testing, or to have at least one member of the department certified as an SCBA repair person.[5]

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[3] FY 2014 grant data was unavailable for this analysis because FEMA had not yet issued those awards during the drafting of this report.

[4] As required by Section 33 of the FFPCA, FEMA consulted with fire service representatives in the development of the performance system and provided the final system plan to the Comptroller General of the U.S. for review.

[5] West Virginia State Fire Commission, *Requirements for West Virginia Fire Departments*, October 22, 2014, http://www.firemarshal.wv.gov/FireDepartmentServices/Documents/State%20Fire%20Commission%20-%20%20Requirements%20for%20WV%20Fire%20Departments%20102214.pdf.

The programmatic effectiveness metrics identified in Table 1 focus on increased compliance with safety standards for PPE, vehicle acquisition, and equipment—the three funding lines that account for over 84 percent of all AFG awards. These measures allow FEMA to assess the impact and effectiveness of the AFG program in achieving its congressionally established goals.

Table 1: AFG Programmatic Effectiveness Metrics and Explanations

Programmatic Effectiveness Metric		Explanation
PPE	Average percent of on-duty members from AFG PPE recipient departments who received PPE in compliance with applicable NFPA and OSHA standards	FEMA tracks this metric to determine if AFG grants assist PPE recipients to equip more of their on-duty members with PPE in compliance with applicable NFPA and OSHA standards. PPE—including SCBA—provides enhanced overall thermal protection for firefighters, allowing them to safely remain in adverse conditions for longer periods of time. **Relevant Safety Standards:** NFPA 1971, NFPA 1981, NFPA 1999, 29 CFR § 1910.120, 29 CFR § 1910.134, 29 CFR § 1910.156
	Percent of AFG PPE recipients who equipped 100 percent of on-duty active members with PPE in compliance with applicable NFPA and OSHA standards	FEMA tracks this metric to evaluate the percent of PPE recipients enabled to equip all of their on-duty, active members with PPE in compliance with applicable NFPA and OSHA standards. This metric provides additional insight into the average-based metric above to distinguish the percent of recipients who achieve full compliance as a result of grant award. **Relevant Industry Standards:** NFPA 1971, NFPA 1981, NFPA 1999, 29 CFR § 1910.120, 29 CFR § 1910.134, 29 CFR § 1910.156
Vehicles	Percent of AFG vehicle recipients requesting funding to replace a sub-standard vehicle who then permanently removed the sub-standard vehicle from service	FEMA tracks this metric to evaluate the percent of vehicle recipients who report removing sub-standard vehicles from service following grant award and closeout. **Relevant Industry Standards:** NFPA 1901 and NFPA 1906
	Percent of fire vehicles 15 years old or older that were replaced using AFG funding	FEMA tracks the age of fire vehicles replaced through the AFG program because it reflects vehicle condition, capability, and safety. Replacing older fire vehicles increases compliance with NFPA 1901, which states, "…fire departments should seriously consider the value (or risk) to fire fighters of keeping fire apparatus older than 15 years in first-line service... [vehicles that are] over 25 years old should be replaced "[6] **Relevant Industry Standards:** NFPA 1901 and NFPA 1906
	Percent of fire vehicles 25 years old or older that were replaced using AFG funding	
Equipment	Percent of AFG equipment recipients who reported that their non-wearable AFG-funded equipment primarily provided a health and safety benefit to members of the organization	FEMA tracks this metric to evaluate the percentage of recipients who reported that non-wearable equipment purchased with AFG awards primarily provided a health and safety benefit to members of the organization—thereby increasing compliance with applicable safety standards. In addition, these grants may also enhance operational efficiency or other mission-related purposes. **Relevant Industry Standards:** NFPA 1801, OSHA § 1910.158, OSHA § 1910.161, and OSHA § 1910.63

[6] NFPA 1901, *Standard for Automotive Fire Apparatus*, (National Fire Protection Association 2009), pg. 176

Programmatic Effectiveness Metric		Explanation
	Percent of AFG equipment recipients who reported that the AFG grant brought them into compliance with state, local, NFPA, or OSHA standards	FEMA tracks this metric to determine if AFG funding increases recipients' compliance with state, local, NFPA, or OSHA standards. **Relevant Industry Standards:** NFPA 1801, NFPA 1936, NFPA 1963, NFPA 1964, OSHA § 1910.156, and state and local standards

B. Programmatic Priority Metrics

FEMA also developed programmatic priority metrics in 2014 to assess the success of AFG grants in advancing key program goals. Each of these programmatic priority metrics focuses on elements of firefighter and EMS contributions to national preparedness and regional response capacity. FEMA uses these data—along with other application characteristics—to determine which applicants receive AFG awards. Table 2 introduces these programmatic priority metrics.

Table 2: AFG Programmatic Priority Metrics and Explanations

Programmatic Priority Metric		Explanation
PPE	Percent of AFG PPE recipients responsible for protecting critical infrastructure[7]	FEMA tracks this metric to assess the AFG program's role in promoting national preparedness by prioritizing recipients responsible for protecting critical infrastructure.
Vehicles	Percent of AFG-funded vehicles supporting either automatic *or* mutual aid[8]	Since FY 2008, 100 percent of AFG vehicle grantees participated in either mutual- or automatic-aid agreements. FEMA encourages recipients to participate in both mutual- and automatic-aid agreements. FEMA tracks these metrics to assess the percentage of recipients who support either automatic or mutual aid as well as recipients who support both.
	Percent of AFG-funded vehicles supporting *both* automatic and mutual aid	

C. Annual AFG Assessment Methodology

FEMA analyzes available data from recipient applications and closeout reports to conduct an annual performance assessment of the AFG program that compares *actual* results against *projected* application data. Prior to receiving an AFG award, FEMA requires applicants to project the grant's impact on several categories in the application, including:

- How the grant will improve their department's compliance with related NFPA, OSHA, state, and local standards;
- How the new purchases will affect their department's inventory and operations; and

[7] Critical infrastructure in this report refers "any system or asset that if attacked would result in catastrophic loss of life or catastrophic economic loss," as defined in the AFG application, including a list of examples.
[8] According to the Insurance Services Office, "automatic aid is assistance dispatched automatically by contractual agreement between two communities or fire districts to all first alarm structural fires. That differs from mutual aid or assistance [that is] arranged case by case" depending on response needs.

- How the department will train or prepare its personnel to safely and effectively employ grant-funded purchases.

FEMA uses these projections to award AFG funding and to establish baselines for the grant's expected impact for each of the programmatic effectiveness and priority metrics. Upon grant closeout, recipients submit reports to FEMA explaining how they spent the AFG award and the grant's *actual* effect on increased compliance with industry standards, department inventory and operations, and personnel training. FEMA expects recipients that use AFG funding effectively will meet or exceed their projected impacts.

In addition to comparing projected to actual impacts for each grant, FEMA evaluates grant outcome trends over time for each metric. FEMA drafted this report during the process of adjudicating FY 2014 AFG program applications; therefore, FY 2013 applications and FY 2011 closeout reports offered the most recent data available to inform the analysis in this report.

D. Refinements to the AFG Performance Assessment System

FEMA has continued its efforts to improve the application process for AFG recipients while reducing the burden on fire departments and other eligible applicants. In FY 2013, FEMA allowed joint/regional applications for the training, equipment, and PPE funding lines in order to achieve greater cost effectiveness, and regional efficiency and resilience. Any eligible fire department or a nonaffiliated EMS organization could act as a "host" applicant and apply for large-scale projects on behalf of itself and any number of AFG-eligible organizations in the local area. As a result of this change, FEMA removed the question for most applicants about whether the equipment they requested would benefit or otherwise be available for use by other organizations. This question was only asked of state fire training academies in FY 2013—a very small subset of the total number of applicants. Therefore, FEMA is no longer reporting on the following metric: "Percent of AFG-funded equipment purchases that benefit and/or are available for use by other organizations."

FEMA has made several other refinements to the AFG performance assessment system. For example, FEMA improved the methodology to assess age-related vehicle metrics in 2013. In order to streamline the applications, FEMA eliminated a question about the age of the oldest vehicle that an applicant currently owns. Instead, FEMA now relies on a question about the age of the vehicle actually being replaced. This change will influence the analysis of post-FY 2013 data moving forward, resulting in a more accurate understanding of how AFG funds directly contribute to the removal of outdated vehicles from the road.

In 2012, FEMA also removed the application question that asked whether the equipment requested would provide a health and safety benefit to the applicant's members. Because projections are unavailable for FY 2012 and FY 2013 and no new updates for this metric will be available after the analysis of FY 2011 closeout reports is published in this report, 2015 will be the last year that FEMA includes this particular metric in the AFG performance assessment system. As FEMA further streamlines and improves the AFG application process to reduce the burden on the applicant pool, it will continue to modify the program's performance assessment system.

IV. AFG Program Evaluation

This section evaluates the effectiveness of the AFG program against the programmatic effectiveness and priority metrics in the program's performance assessment system. The analysis is based on data from grant applications between FYs 2008-2013 and closeout reports between FYs 2008-2011.[9]

A. Programmatic Effectiveness Metrics

AFG grants strongly support compliance with accepted safety standards for PPE, vehicles, and equipment. From FYs 2008–2011:

- AFG awards supported PPE recipients to increase the average percent of on-duty members equipped with protective gear that meets industry or related safety standards from 90.7 percent to 98.4 percent;
- AFG awards helped over 98 percent of recipients permanently remove a sub-standard vehicle from service; and
- AFG awards supported bringing 87 percent of equipment-recipients into compliance with state, local, NFPA, or OSHA standards.

Notably, AFG recipients experienced a cumulative increase in the percentage scores for six out of the seven effectiveness metrics between FY 2008 and FY 2011. This positive trend over several years demonstrates that recipients effectively spent AFG funding to increase gains to firefighter and public safety. The following tables include a more detailed analysis of each programmatic effectiveness metrics.

Metric 1: PPE

Average percent of on-duty members from AFG PPE recipient departments who received PPE in compliance with applicable NFPA and OSHA standards						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Projected	*96.2%*	*97.8%*	*98.9%*	*97.8%*	*99.0%*	*97.2%*
Actuals	95.4%	97.6%	98.7%	99.4%	N/A	N/A
Results: From FY 2008–2011, AFG PPE recipients increased the average percent of on-duty members equipped with PPE in compliance with NFPA and OSHA standards by more than four percentage points—from 95.4 percent to 99.4 percent.						

Metric 2: PPE

[9] FY 2012–2014 closeout reports are not yet available for analysis, as AFG is in the process of collecting and adjudicating closeout submissions. This data provides insight into trends among recipients, not fire departments at large.

Percent of AFG PPE recipients who equipped 100 percent of on-duty active members with PPE in compliance with applicable NFPA and OSHA standards						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Projected	*92.2%*	*95.5%*	*97.5%*	*95.3%*	*97.4%*	*95.9%*
Actuals	90.7%	95.0%	97.3%	98.4%	N/A	N/A

Results: AFG awards enable the vast majority of PPE recipients to equip 100 percent of their firefighters with PPE that is compliant with NFPA and OSHA standards. Between FY 2008–2011, the percentage of fire departments receiving PPE grants that did achieve 100 percent compliance rose from 90.7 percent to 98.4 percent. Ensuring that all on-duty firefighters have access to compliant protective and respiratory equipment reduces the risk of response-related injuries and exposure to hazardous materials.

Case Study: Oklahoma Improves Fire Safety for Hearing-Impaired Residents

People with physical disabilities are often underserved in public fire education efforts and face a higher risk of death and injury from fire. To decrease these fire risks, the Oklahoma Assistive Technology Foundation (OkAT) used Fire Prevention and Safety (FP&S) grant funding to install visual and tactile alarms and alert devices in homes with hearing-impaired occupants. As of April 2015, OkAT had installed alarms in 125 homes, 58 percent of which previously had no working smoke alarm. Working closely with an American Sign Language interpreter, OkAT installers also conducted home fire inspections, assisted residents with establishing a home fire escape plan, and shared fire safety tips to reduce the risk of home fire injuries. One hearing-impaired recipient of OkAT's assistance reported that the strobe light in her newly installed device warned her of a fire in her kitchen. As a result, she was able to safely escape the fire and contact the fire department. OkAT plans to complete similar installations in a total of 500 homes.

Metric 3: Vehicles

Percent of AFG vehicle recipients requesting funding to replace a sub-standard vehicle who then permanently removed the sub-standard vehicle from service						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Projected	*98.1%*	*98.4%*	*99.2%*	*100%*	*98.8%*	*99.0%*
Actuals	97.7%	99.0%	98.9%	100%	N/A	N/A

Results: FY 2011 was the first year in which 100 percent of recipients applying to replace a sub-standard or unsafe vehicle from service reported that they had permanently removed that vehicle from service. Closeout data also indicated that recipients either nearly met or exceeded projections for each year from FY 2008 through 2011 and, on average, over 98 percent of all respondents from FY 2008-2011 indicated they had permanently removed the sub-standard vehicle from service. Vehicles that are not permanently removed from service can be placed in reserve status or otherwise removed from front-line operations.

Metric 4 and 5: Vehicles

Percent of fire vehicles 15 years old or older that were replaced using AFG funding						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Projected	*99.3%*	*100%*	*99.5%*	*100%*	*98.8%*	*100%*
Actuals	99.2%	100%	97.7%	100%	N/A	N/A
Percent of fire vehicles 25 years old or older that were replaced using AFG funding						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Projected	*86.1%*	*87.7%*	*89.4%*	*90.4%*	*85.4%*	*96.6%*
Actuals	85.0%	86.9%	87.2%	85.1%	N/A	N/A

Results: On average, more than 99 percent of fire vehicles that recipients replaced with FY 2008–2011 AFG funds were 15 years old or older and nearly 86 percent were 25 years old or older. Replacing older fire vehicles improves compliance with NFPA 1901, which recommends removing fire vehicles that are over 15 years old from first-line service and calls for departments to replace vehicles over 25 years old.

Case Study: Arizona Provides Operational Training for Regional Responders

In 2014, the Phoenix Fire Department applied $584,652 from an AFG Operations and Firefighter Safety Training grant to deliver three sessions of an 80-hour Incident Safety Officer Systems (ISOS) training course to 100 of their officers and 50 officers from regional and mutual aid departments. The course enhances first responder safety by improving risk management, hazard identification, hazard mitigation, communications, and Incident Command System (ICS) skills in compliance with applicable NFPA standards. The impact of the training program extends through the greater central Arizona region, as the Phoenix Fire Department is part of the Central Arizona Life Safety Response System Council, which participates in the largest formal automatic/mutual aid system in the U.S. and serves a population of over 3.8 million people. In a recent example, fire crews from four metropolitan Phoenix cities who responded to the same incident applied tactics learned in the AFG-funded ISOS training to locate a missing firefighter, whom they later found unharmed.

Metric 6: Equipment

Percent of AFG equipment recipients who reported that AFG-funded equipment primarily provided a health and safety benefit to members of the organization						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012***	**FY 2013***
Projected	*92.2%*	*92.2%*	*94.5%*	*98.4%*	*N/A*	*N/A*
Actuals	90.1%	89.6%	89.6%	94.6%	N/A	N/A

Results: From FY 2008–2011, the percent of equipment applicants whose purchases primarily benefitted the health and safety of their members rose 4.5 percentage points, from 90.1 percent to 94.6 percent. Among the types of equipment these recipients purchased were communications equipment, vehicle airbags, thermal imaging devices, and automatic defibrillators.

*Note: FY 2012 and FY 2013 applications did not ask the question relating to health and safety benefits of requested equipment, so the FY 2011 actual entry of 94.6 percent will be the last time this metric appears in the report.

Metric 7: Equipment

Percent of AFG equipment recipients who reported that the AFG grant brought them into compliance with state, local, NFPA, or OSHA standards						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Projected	*99.9%*	*74.8%*	*80.9%*	*86.1%*	*100%*	*99.3%*
Actuals	100%	74.2%	78.3%	76.9%	N/A	N/A

Results: From FY 2008-2011, nearly 87 percent of equipment recipients reported using AFG funds to bring their fire departments into compliance with state, local, NFPA, or OSHA standards, reflecting the AFG program's success in supporting compliance with safety standards.

B. Programmatic Priority Metrics

The AFG programmatic priority metrics assess FEMA's success in advancing AFG program goals, such as awarding grants to departments responsible for critical infrastructure protection as well as creating shareable regional resources for emergency response. For example, from FY 2009-2011, 100 percent of vehicles purchased using AFG grants supported either automatic- or mutual-aid agreements, and 91 percent supported both. Additionally, across all programmatic priority metrics recipients met or nearly met the gains projected in their applications. The following tables include a more detailed analysis of each of these metrics.

Metric 8: PPE

Percent of AFG PPE recipients responsible for protecting critical infrastructure						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**
Actuals	N/A	68.3%	79.3%	84.9%	84.2%	85.3%

Results: The percentage of PPE grants awarded to fire departments responsible for protecting critical infrastructure has increased by 17 percentage points since 2009. This steady increase reflects FEMA's continued focus on prioritizing awards for fire departments with greater responsibility for supporting national preparedness and regional response.

Note: Data on AFG awardees' contributions to critical infrastructure protection are only included in applications.

Metric 9 and 10: Vehicles

Percent of AFG-funded vehicles supporting either automatic **or** mutual aid						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013***
Projected	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Actuals	100%	100%	100%	100%	N/A	N/A
Percent of AFG-funded vehicles supporting **both** automatic and mutual aid						
Year	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013***
Projected	*91.3%*	*92.2%*	*87.3%*	*94.8%*	*94.9%*	*97.0%*
Actuals	91.5%	91.7%	88.5%	94.3%	N/A	N/A

Results: For the fourth year in a row between FY 2008 and FY 2011, 100 percent of AFG vehicles recipients supported *either* mutual or automatic aid. Additionally, closeout data from the same period indicates that over 91 percent of AFG-funded vehicles supported *both* mutual and automatic aid. This trend demonstrates FEMA's continuing commitment to award AFG grants to fire departments with automatic- and mutual-aid agreements. Such agreements function as force-multipliers because increased capability in one locality improves the response capabilities in nearby areas.

***** FY 2013 projections for this metric do not include state fire training academy applicants because they are not subject to mutual aid agreements

V. Conclusion

This report fulfills the requirements in FFPCA — as amended by FGRA — to evaluate the effectiveness of the AFG program. Over the past 14 years, FEMA has increased firefighter and public safety through the AFG program. The AFG program has enabled fire departments across the country to obtain critically needed equipment, protective gear, emergency vehicles, training, and other resources. With over 62,368 recipients receiving grant funds from FY 2002 through FY 2014, the AFG program has strengthened each recipient's ability to protect its community and enhance the health and safety of firefighters and medical emergency first responders.

The AFG program enables recipients to fill critical gaps and promote national preparedness capabilities around the country, ensuring that communities have the resources they need to safely and effectively fight fires and respond to other disasters. By funding equipment, protective gear, emergency vehicles, training, and other activities—such as installing accessible smoke alarms for individuals and geographic areas with elevated fire risks—the AFG program has increased firefighter and public safety. The AFG program also contributes to national preparedness by providing vehicles and equipment to serve as regional assets when responding to large-scale disasters.

Appendix A: Industry Standards

Table 3: NFPA Standards in the AFG Program Performance Assessment System

NFPA Standard	Title	AFG Category	Description
NFPA 1801	Standard on Thermal Imagers for the Fire Service	Equipment	Establishes requirements for new thermal imagers used by fire service personnel during emergency incident operations
NFPA 1901	Standard for Automotive Fire Apparatus	Vehicles	Defines the requirements for new automotive fire apparatus—including fire engines, pumpers, and trailers—designed to transport emergency personnel and equipment
NFPA 1906	Standard for Wildland Fire Apparatus	Vehicles	Defines the requirements for new automotive fire apparatus—including apparatus equipped with a slip-on fire-fighting module—designed primarily to support wildland fire suppression operations
NFPA 1936	Standard on Powered Rescue Tools	Equipment	Specifies performance requirements for powered rescue tools and components that are used by emergency services personnel to facilitate the extrication of victims from entrapment
NFPA 1963	Standard for Fire Hose Connections	Equipment	Establishes uniform performance requirements for new fire hose couplings and adapters
NFPA 1964	Standard for Spray Nozzles	Equipment	Provides performance requirements for fire-fighting spray nozzles to assure that they nozzles are suitable, effective, and safe for fire suppression use
NFPA 1971	Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting	PPE	Protects firefighters by establishing minimum levels of protection from thermal, physical, environmental, and bloodborne pathogen hazards encountered during structural and proximity firefighting operations
NFPA 1981	Standard on Open-Circuit SCBA for Emergency Services	PPE	Establishes minimum levels of respiratory protection and functional requirements for SCBA
NFPA 1999	Standard on Protective Clothing for Emergency Medical Operations	PPE	Specifies requirements for EMS protective clothing to safeguard personnel during emergency medical operations from contact with blood and body fluid-borne pathogens—as well as provide limited protection from chemical, biological, radiological, and nuclear terrorism agents

Table 4: OSHA Standards in the AFG Program Performance Assessment System

OSHA Standard	Title	AFG Category	Description
29 Code of Federal Regulations (CFR) § 1910.120	Hazardous Waste Operations and Emergency Response	PPE	Sets requirements for first-responder training on basic hazard and risk assessment techniques as well as selecting and using proper PPE
29 CFR § 1910.134	Respiratory Protection	PPE	Establishes prerequisite respiratory protection equipment, PPE, and procedures for hazardous occupations, including interior structural firefighting
29 CFR § 1910.155-165	Fire Protection	PPE, Equipment	Defines requirements for the organization, equipment, training, and PPE of fire departments and fire brigades

Appendix B: Acronym List

AFG	Assistance to Firefighters Grant Program
CFR	Code of Federal Regulations
EMS	Emergency medical services
FEMA	Federal Emergency Management Agency
FFPCA	*Federal Fire Prevention Control Act of 1974*
FGRA	*Fire Grants Reauthorization Act of 2012*
FP&S	Fire Prevention and Safety Grants Program
FY	Fiscal Year
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PPE	Personal protective equipment
R&D	Research and development
SCBA	Self-contained breathing apparatus