

# Fire Prevention and Safety Grant Program: Research and Development Activity Frequently Asked Questions

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This document addresses Frequently Asked Questions (FAQs) related to the Fire Prevention and Safety (FP&S) Program – Research and Development (R&D) Activity. Applicants should refer to the FP&S Grant Program Notice of Funding Opportunity (NOFO) for full details and application requirements.

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## What is the purpose of the FP&S Program R&D Activity?

The purpose of the R&D Activity is to improve firefighter safety, health, or well-being through research and development that reduces firefighter fatalities and injuries. Projects submitted under the R&D Activity should identify specific outcomes that are expected to lead to improved firefighter safety, health, or well-being. These outcomes likely will be related to new or improved programs, policies, and/or products. As an applied research program that aims to benefit firefighters, applicants are expected to develop strong partnerships with relevant fire service organizations and fire departments.

The “2021 National Fire Service Research Agenda,” produced by the National Fallen Firefighters Foundation (NFFF), contains information that can be used as guidance for those interested in performing studies relevant to current research priorities of the fire service. A copy of the research agenda is available on the NFFF website at [National Fire Service Research Agenda Report Released - NFFF \(everyonegoeshome.com\)](https://www.nfff.org/national-fire-service-research-agenda-report-released-nfff-everyonegoeshome.com). In October of 2022, the U.S. Fire Administrator, in partnership with the NFFF, hosted the U.S. Fire Administrator’s Summit on Fire Prevention and Control and identified six critical issues facing the fire service that need immediate attention. Projects that address the National Fire Service Research Agenda and/or the critical issues identified at the U.S. Fire Administrator’s Summit with respect to firefighter health and safety are strongly encouraged.

## What changes were made to the FP&S Program R&D Activity since last year?

FP&S Program NOFO details the changes to the R&D Activity in the appendix of the NOFO.

## How do I apply for a FP&S Program grant?

The online FP&S Grant Program application is available through the FEMA GO (FEMA Grants Outcomes) application portal at [FEMA GO application portal](#). The application will also be linked with the [U.S. Fire Administration’s website](#) and the [Grants.gov website](#).

## What do I need to know about Environmental Planning and Historic Preservation (EHP)?

FP&S Program projects that involve the installation of supplies/equipment not specifically excluded from a FEMA EHP Review, per the Grant Programs Directorate Programmatic Environmental Assessment, such as ground-disturbing activities, or modification/renovation of existing buildings or structures, will require an EHP review. Some equipment activities will require an EHP review as well. Such activities include, but are not limited to:

- Installation of fire/smoke/carbon monoxide alarm systems
- Installation of sprinklers
- Installation of wall-mounted lock boxes
- Installation of storage racks/cabinets
- Building renovations such as removal of walls or installation of electrical or water lines
- Training/exercises in natural settings such as rope or swift water

- Installation of LED signs
- Tree trimming or vegetation removal/disturbance
- Any scope of work that involves ground disturbances

Please see FEMA’s EHP Screening form and instructions at [EHP Screening Form](#). EHP policy guidance can be found at [Environmental & Historic Preservation Guidance for FEMA Grant Applications | FEMA.gov](#). Recipients will be notified of their EHP responsibilities in the grant award package.

It is FEMA policy that actions initiated and/or completed without fulfilling the specific EHP requirements will not be considered for funding.

### **How can I help FEMA prevent fraud, waste, and abuse?**

If you have information about instances of fraud, waste, abuse, or mismanagement involving FEMA programs or operations, you should contact the Department of Homeland Security [Office of Inspector General Hotline](#), at 1-800-323-8603, or by fax at 202-254-4297. Who is eligible to apply under the R&D Activity?

Eligible applicants for the R&D Activity include national, state, local, federally recognized tribal, and nonprofit organizations, such as academic (e.g., universities), research foundations, public safety institutes, public health, occupational health, and injury prevention institutions. Both private and public nonprofit organizations are eligible to apply for funding in this activity. Fire departments are not eligible to apply for funding under the R&D Activity.

### **Who is eligible to apply under the R&D Activity?**

Eligible applicants under the R&D Activity include national, state, local, federally recognized tribal, and non-profit organizations, such as academic (e.g., universities), research foundations, public safety institutes, public health, occupational health, and injury prevention institutions.

### **How many applications may I submit?**

Eligible applicants may submit only one application for each eligible activity under the FP&S Program (one application under the FP&S Activity and/or one application under the R&D Activity). Up to three projects may be included in a grant application under the FP&S Activity and up to three projects may be included in a grant application under the R&D Activity. Eligible Applicants interested in applying under both the FP&S Activity and the R&D Activity must submit two separate applications, one for each activity. Application questions differ based on the application type. Submissions of duplicate applications may be disqualified.

### **I have an open FP&S Program award(s). May I still apply under the current FP&S Grant Program application period?**

Yes. However, because the possibility exists that the period of performance on the open grant award(s) and the new FP&S Program grant period of performance will overlap, you need to ensure that the start of your new grant does not depend on the completion of your open grant(s), or that receipt of a new FP&S Program award will not impact your

ability to continue with and/or complete your open grant award(s). The grant activities requested in the new FP&S Program cannot duplicate activities, expenditures, or personnel funded under the open grant award(s). Applicants with an active FP&S Program award who wish to apply under the new FP&S Program application period are subject to the guidelines and requirements outlined in the FP&S Program NOFO.

## **How much funding is available under the FP&S Program?**

The *Consolidated Appropriations Act, 2023* (Pub. L. No. 117-328) appropriated a total of \$36 million to carry out the activities of the FP&S Grant Program. Please review the FP&S Program NOFO for specific information on the funding available for the fiscal year you that you wish to apply.

## **What is the maximum amount of funding a recipient may be awarded?**

The total amount of funding a recipient may receive under an FP&S Program award is limited to a maximum federal share of \$1.5 million set by §33(d)(2) of the Federal Fire Prevention and Control Act of 1974, Pub. L. 93-498, as amended (15 U.S.C. § 2229(d)(2)). The maximum federal share of \$1.5 million is the total that may be requested under all six projects (up to three projects in a grant application under the FP&S Activity and up to three projects in a grant application under the R&D Activity). For multi-year projects, applicants may divide the \$1.5 million over the period of performance however they deem necessary.

R&D Activity, Early Career Investigator category projects are limited to a maximum federal share of \$600,000.

## **How many projects may I apply for under the R&D Activity?**

A total of three projects may be included in a grant application under the R&D Activity.

## **What project categories may I apply for under the R&D Activity?**

Applicants may apply for up to three separate projects within this activity. Proposed projects must address the potential for a successful research outcome to be implemented in the fire service and reduce firefighter fatalities or injuries. Eligible project categories include:

- Clinical Studies;
- Technology and Product Development;
- Database System Development;
- Preliminary Studies; and
- Early Career Investigator.

Applicants will be asked to indicate which of these categories is most relevant to each project. Categories help to organize the project(s) submitted.

## Is there a cost share for all applicants?

Yes. In general, an applicant shall agree to make available non-federal funds in an amount equal to and not less than 5% of the grant awarded. FEMA GO automatically calculates the cost share in the Budget Summary section of the application. Therefore, applicants should make sure to include total project costs, including cost share, when creating the budget line items/cards in the FEMA GO application. If an applicant does not enter the cost share as a budget line item/card (or as part of several budget line items/cards), then the federal share may be lower than anticipated. Please check the Budget Summary of the FEMA GO application very carefully to ensure that the federal share and cost share are correct prior to submitting the application.

All recipients should ensure that they are thoroughly familiar with FEMA's cost-sharing requirements, as well as appropriate cost principles identified at 2 C.F.R. Part 200 Subpart E. The recipient is not required to have the cost share at the time of application. However, before a grant is awarded, FEMA may contact potential recipients to determine whether they have the funding in hand or if they have a viable plan to obtain the funding necessary to fulfill the cost sharing requirement.

### Types of Contributions:

- Cash (Hard Match):
  - Cost share of non-federal cash is allowable for FP&S Program grants.
- In-kind (Soft Match):
  - In-kind cost share is allowable for FP&S Program grants. This includes using the values for the following in-kind contributions to meet the cost-share requirement:
    - Complementary activities (such as providing additional smoke alarms for installation or educational materials for public education); and
    - Provision of staff, facilities, services, materials, or equipment.
  - In-kind is the value of something received or provided that does not have a cost associated with it. For example, the value of donated services could be used to comply with the match requirement. Also, third party in-kind contributions may count toward satisfying match requirements, provided the recipient receiving the contributions expends them as allowable costs in compliance with the provisions listed in the NOFO.
  - Recipients who use in-kind contributions for their 5% cost share must comply with all applicable regulations and 2 C.F.R. Part 200 regarding matching or cost-sharing. Applicants who are under consideration for award and plan to use in-kind as their method for cost sharing will be asked to submit their plan for documenting and verifying in-kind contributions prior to award. Please see 2 C.F.R. § 200.306, as applicable, for further guidance regarding cost matching.

## Which internet browsers are compatible with FEMA GO?

FEMA GO is compatible with the most recent major release of Google Chrome, Internet Explorer, Mozilla Firefox, Apple Safari, and Microsoft Edge. Users who attempt to use tablet type devices or other browsers may encounter issues with using FEMA GO.

## When can I apply?

Applications will only be accepted during the application period outlined in the NOFO. FEMA GO automatically records proof of timely submission and the system generates an electronic date/time stamp when FEMA GO successfully receives the application. The individual with the Authorized Organization Representative role that submitted the application will also receive the official date/time stamp and a FEMA GO tracking number in an email serving as proof of their timely submission on the date and time that FEMA GO received the application.

Applications not received by the application submission deadline will not be accepted. Applicants should ensure they have adequate time to submit the FEMA GO application if using slow or unreliable internet connections..

**Applicants who submit system-related issues to FEMA GO before 3 p.m. ET on Friday, April 12, 2024 will have their issue addressed. No new system-related issues will be addressed after this deadline.**

## Do I need to register with the System for Award Management (SAM)?

Yes. Per 2 C.F.R. § 25.205, SAM registration is required to both begin and submit an FP&S Program application in the FEMA GO system. Organizational SAM.gov registrations are only active for one year and must be renewed annually. Therefore, applicants must ensure the applicant entity has a valid and active registration in SAM.gov before starting an application. If they do not already have one, organizations will be issued a Unique Entity Identifier (UEIO) with the completed SAM registration.

Step-by-step instructions for registering with SAM can be found at [SAM.gov | Entity Registrations](#). Applicants should contact SAM.gov with questions or concerns about their SAM registration.

Applicants are advised that FEMA may not make a federal award until the applicant has complied with all applicable SAM requirements. Therefore, an applicant's SAM registration must be active not only at the time of application, but also during the application review period and when FEMA is ready to make a federal award. Further, as noted above, an applicant's or recipient's SAM registration must remain active for the duration of an active federal award. If an applicant's SAM registration is expired at the time of application, expires during application review, or expires any other time before award, FEMA may determine that the applicant is not qualified to receive a federal award and use that determination as a basis for making a federal award to another applicant. More information on SAM.gov is included in the FP&S Grant Program NOFO and on the [Assistance to Firefighters Grant Programs Website](#). If applicants have questions or concerns about a SAM registration, please contact the Federal Support Desk at <https://www.fsd.gov/> or call (866) 606-8220, Monday – Friday between the hours of 8 a.m. – 8 p.m. ET.



## May I change or edit my application after it has been submitted?

You will be able to review or edit the entire application prior to submission. However, if you would like to edit or change your application after submission, you will have to withdraw the application from consideration of award. The application must then be resubmitted to FEMA prior to the application submission deadline to be considered for an award.

## How can I obtain help with the application?

The FP&S Program Help Desk at 866-274-0960 will be available to provide technical assistance with completing your FP&S Program application(s).

During the application period, the Help Desk will be staffed between the hours of 8 a.m. and 4:30 p.m. ET, Monday through Friday; and until 5 p.m. ET on the last day of the application period. However, these hours may change as the application period progresses. The toll-free number also accepts voicemail messages after hours or if the line is busy. Questions may also be e-mailed to [FireGrants@fema.dhs.gov](mailto:FireGrants@fema.dhs.gov).

## Where can I find FP&S Program documents and other information?

You can find FP&S Program documents and additional information on the [Fire Prevention and Safety Grant Program Webpage](#).

Information more specific to the R&D Activity can be found at [Fire Prevention & Safety Grants - Research & Development | FEMA.gov](#).

## When will the awards be announced?

Award announcements will be made at the beginning of summer and on a continuous basis thereafter until all available funds have been awarded, but no later than September 30th.

Recipients are notified via email and through the FEMA GO system of the award offer and must accept their awards no later than 30 calendar days from the award date. The recipient must notify FEMA of its intent to accept and proceed with work under the award through the FEMA GO system. Funds will remain on hold until the recipient accepts the award through the FEMA GO system and all other conditions of the award have been satisfied or until the award is otherwise rescinded. Failure to accept a grant award within the specified timeframe may result in a loss of funds. Recipients may request additional time to accept the award if needed.

## When an R&D Activity award is accepted, when does the period of performance start?

The period of performance for projects funded under the R&D Activity starts on the date of award, and will be 12, 24, 36, or 48 months.

## How do I sign-up for e-mail notifications about the FP&S Program?

To register for automatic e-mail notices of NOFO availability and other important program information, go to [Signup for FEMA Email Updates](#).

## What is program income?

Although not common, recipients may generate income while carrying out grant-supported activities during the period of performance under the FP&S Program award. This is referred to as program income. This income can be used to defray program costs, where appropriate, consistent with 2 CFR § 200.307. The Budget Summary section of the grant application contains a field for program income. The response should be \$0 unless the recipient anticipates generating program income during the period of performance. If the recipient plans to generate program income, it should be explained in the science narrative. The FEMA GO application will not include program income estimates in the total budget. FEMA will review the program income submitted and adjust the budget as appropriate, prior to award. Any program income must be used and managed in accordance with 2 C.F.R. § 200.307.

## Where do I submit the federally approved Indirect Cost Rate Agreement?

Applicants required to have a negotiated indirect cost rate agreement that desire to charge indirect costs to an award must provide a copy of their negotiated indirect cost rate agreement at the time of application. Applicants that are not required by 2 C.F.R. Part 200 to have a negotiated indirect cost rate agreement but are required by 2 C.F.R. Part 200 to develop an indirect cost rate proposal must provide a copy of their proposal at the time of application. Copies of the indirect cost rate agreements or proposals, along with the FP&S Program application number, must be submitted electronically to [FireGrants@fema.dhs.gov](mailto:FireGrants@fema.dhs.gov). Please ensure that the request details budget portion of your application includes information pertaining to your indirect cost rate agreement or proposal. Post-award requests to charge indirect costs will be considered on a case-by-case basis and based upon the submission of an agreement or proposal as discussed above or based upon on the de minimis rate or cost allocation plan, as applicable.

## I do not have an Indirect Cost Rate Agreement. May I charge a de minimis rate as part of project costs?

Yes, certain applicants that do not have a current negotiated (including provisional) indirect cost rate may elect to charge a de minimis rate of 10% of modified total direct costs, which may be used indefinitely. As described in 2 C.F.R § 200.403, costs must be consistently charged as either indirect or direct costs but may not be double charged or inconsistently charged as both. If chosen, this methodology, once elected, must be used consistently for all federal awards until such time as a non-federal entity chooses to negotiate for a rate, which the non-federal entity may apply to do at any time. See 2 C.F.R § 200.414(f) to determine if your entity is eligible to apply for the de minimis rate.

## May I include grant writer fees in the application?

Yes. However, for grant writer fees to be eligible, the services must be competitively sourced, specifically identified, and listed within the “Grant Request Details” section of the application and must satisfy the requirements under 2 C.F.R. § 200.458. Additionally, the costs must be paid between the 90 days prior to the publication date of the FP&S Grant Program NOFO and up to 30 calendar days after the application period closes. Fees payable on a contingency basis are not an eligible expense.

When adding the grant writer fee to the “Grant Request Details” section of an application, select “Add Activity” and choose “Grant Writer Fee” from the menu of options.

## How are the R&D Activity projects reviewed and selected for funding?

R&D Activity projects will be reviewed according to the evaluation criteria listed in the NOFO. Review the NOFO and focus on these criteria to develop a competitive application for panel reviews.

Each project will be evaluated based on its own merit. Each project must include a separate budget (budget cards within the application), one 5-page Narrative Statement in response to the Fire Service Panel Evaluation Criteria, one 20-page Narrative Statement in response to the Science Panel Evaluation Criteria, and one 25-page Appendix attachment that includes relevant supporting documents (such as letters of participation specific to the project and biographical information for principal team members), even if the information is the same for more than one project.

A panel of fire service professionals carries out the initial review. As detailed in the NOFO, the fire service panel uses a specific set of criteria to consider relevance of the proposal for improving firefighter safety, health, and well-being and the likelihood of implementation of successful research results in the fire service.

The highest scoring projects from the initial fire service evaluation receive further evaluation by a science panel that is composed of experts in fields relevant to the proposed research. The science review panel uses a set of specific criteria listed in the NOFO that addresses the scientific rigor of the proposal.

## What is meant by "firefighter fatalities and injuries"?

Line of duty deaths may be the result of incidents linked to firefighting, training, crashes, traffic control incidents, and other fire service activities. USFA tracks and collects information on the causes of on-duty firefighter fatalities that occur in the United States. See [Firefighter Fatalities in the United States \(fema.gov\)](https://www.fema.gov). Fatal (see [Firefighter fatalities in the United States | NFPA](https://www.nfpa.org)) and non-fatal injuries (see [Research \(nfpa.org\)](https://www.nfpa.org)) are also tracked and described by the National Fire Protection Association (NFPA).

Firefighter fatalities and injuries can be linked to behavioral and mental health events that occur during firefighting activities. Behavioral and mental health events include post-traumatic stress, depression, and suicide. Cancer is also a significant concern for firefighters and is related to exposures to carcinogenic chemicals and particulate exposures related to firefighting activities. See [Firefighter Resources, Cancer and Other Illnesses | NIOSH | CDC](https://www.cdc.gov/niosh). Cardiovascular disease has been a major cause of line of duty deaths and morbidity among firefighters related to the stressful work environment, excessive heat exposure associated with firefighting work, and other behavioral factors. See [Preventing Fire Fighter Fatalities Due to Heart Attacks | NIOSH | CDC](https://www.cdc.gov/niosh).

## What is meant by "strong partnership" with the fire service?

With the R&D Activity's focus on improving firefighter safety, health, and well-being, applicants are expected to partner with fire service organizations and departments from the earliest stages of study design to the end of the study. These partners should provide the project with a depth of fire service expertise and experience that likely will improve future dissemination, implementation, and impact (assuming the study is successful). For example, an applicant studying cancer outcomes among volunteer firefighters might partner with the National Volunteer Fire Council as well as fire departments in several regions of the country to get adequate volunteer firefighter participation. Applicants should submit letters of participation from partners and explain the specific roles and responsibilities of each key partner within the grant application.

## **What should be considered in selection of potential fire service partners and others?**

The principal investigator (PI) should assemble a research team with expertise and capabilities to accomplish all parts of the proposed project. For example, fire service partners may have the ability to test and evaluate new technology, to encourage firefighter participation in the project, or the ability to review and promote a program, product, or policy change based on project results. Other scientists or business experts may also be needed to accomplish the research aims. The proposed project, including partners and others, is evaluated for its ability to complete the proposed research in a timely manner and disseminate results relevant to improving firefighter safety, health, and well-being.

## **Where should letters from partners be included in an application?**

Partner letters should be included in the Appendix attachment. Fire service research partner involvement is encouraged throughout the project, from application through dissemination of results. Partnerships with fire departments are part of the fire service and science evaluation criteria. Letters of participation from partners should include a commitment to provide specific and active support in terms of fire service expertise (e.g., consultations, advisory board membership), encourage firefighter participation in the project and/or use of facilities (e.g., control burn buildings, fitness equipment).

## **What documents and information should be included in the Appendix?**

The Appendix may include the following:

- Investigator biosketches using the template in the NOFO.
- Letters from partners and other supporting organizations.
- Data collection instruments, additional tables and figures, illustrations, or specifications for product designs.
- If the project is a resubmission, applicants may use the Appendix to address how the proposal was adapted to address reviewer concerns from a previous year. Resubmission information should be located at the beginning of the Appendix.
- Early career investigator applications are required to have the mentor(s) signed letter of support and commitment along with their biosketch included in the Appendix.

The Appendix is limited to 25 pages per project. Applicants may reduce the size of full-page support letters to allow no more than two images placed side by side on a landscape format page. The reduced size letters must have a font of sufficient resolution to be read easily.

Note that the Appendix may not be used to continue the Narrative Statement in response to the science panel evaluation criteria. All narrative text, including pertinent footnotes and reference, must be in the Narrative Statement in response to the Science Panel Evaluation Criteria.

## What is meant by the R&D Activity’s focus on “fire service in the United States”?

The R&D Activity is aimed at improving the safety, health, and well-being of firefighters throughout the nation. Most projects will need to select or sample participants in a way that is feasible for the results to be generalized nationwide for firefighters. These projects, if successful, are expected to lead to new or improved programs, policies, and products that have potential for widespread adoption and use. Exceptions may occur but the reason for the exception must be clearly explained in the application.

Preliminary Studies are exceptions as the intended outcome is limited to new information needed to justify a future follow-on study that would satisfy the full expectations for impact for an FP&S R&D Activity project.

## Where can I find information about past awards?

The FP&S Program maintains a list of the grants awarded on its website at [Fire Prevention and Safety \(FP&S\) | FEMA.gov](#). Additionally, a collection of awarded R&D Activity project abstracts and recent project results can be found at [Fire Prevention & Safety Grants - Research & Development | FEMA.gov](#).

## What studies are not eligible under the R&D Activity?

The NOFO specifies what types of studies are ineligible under the R&D Activity. These include:

- Projects that focus primarily on curriculum development and delivery of education or training materials;
- A descriptive study about the fire service or any study without reduced firefighter injury or enhanced firefighter safety aims;
- Projects with local emphasis and little or no indication of application to the broader fire service;
- Projects that emphasize funding for service delivery;
- Applications that include violations of intellectual property;
- Projects requiring international travel to attend conferences or disseminate results; and
- Projects that purchase stock in any entity.

## What is the difference between the R&D Activity and the National/State/Regional Programs and Projects category under the FP&S Activity?

Research is conducted under the R&D Activity. Research means a systematic investigation, including development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. Research should be conducted in accordance with suitable methodologies set by specific professional fields and academic disciplines. If a study aims to conduct research that can be generalized nationwide, especially if it involves human subjects, then the application must be made through the R&D Activity so appropriate reviews (for funding) and monitoring (if awarded) can be conducted.

- Projects to determine effectiveness of firefighter safety, health, or well-being programs, policies, or products must be applied for under the R&D Activity.
- Projects requiring Institutional Review Board (IRB) approval to work with human subjects must be applied for under the R&D Activity.

The National/State/Regional Programs and Projects category under the FP&S Activity includes projects that:

1. Focus on residential fire issues;
2. Focus on firefighter safety, health, and well-being by dissemination and implementation of programs, policies or products from previous research studies that used rigorous scientific methods to determine effectiveness;
3. Do not include a research component; and/or
4. Directly advance the [National Strategy culminating from the U.S. Fire Administrator Working Groups](#).

Projects requiring IRB approval to work with human subjects are not eligible under the National/State/Regional Programs and Projects category. Projects with an IRB exemption determination may be eligible (for details see Section F: Human Subjects Research of the NOFO). The IRB exemption determination letter and IRB application must be provided at time of application.

### **What is the “clinical studies” category?**

This category may address one (or more) area(s) of specialization including clinical, behavioral, and social sciences including physiological and medical research activities. For example, clinical projects may focus on physiological function before, during, or after firefighter activity; behavioral research may address topics such as mental health interventions for work-related issues such as post-traumatic stress or depression; and projects in the social sciences category may seek an understanding of how departmental culture and psychosocial norms impact safety. Projects should have outcomes to improve firefighter safety, health, or well-being through research and development that reduces firefighter fatalities and injuries. Projects may be foundational, applied, or include rigorous interventions in trials. Projects must target the appropriate level of investigation based on the state of the science.

### **What is the “technology and product development” category?**

Technology and product development activities include a wide scope of projects that result in outcomes to enhance the safety or health of firefighters. Results may include new or improved equipment, new information useful for improving the safety of firefighting strategies and fire ground operations, or information about hazardous exposures. For example, firefighter safety can be improved through greater understanding of fire phenomena inside and outside structures or the development of products to enhance firefighter situational awareness and effectiveness. New products can be developed by application of new technologies or adapting existing products and technology to new uses. Technology and product development projects need to assess the ultimate practicality of deployment and use of the results by firefighters during actual firefighting operations. As the intention of the R&D Activity is to deliver outcomes that are likely to be implemented nationally by the fire service, inclusion of a cost-effectiveness analysis is encouraged.

## What is the “database system development” category?

Information from databases can inform the fire service about where there are challenges, and what specific factors influence firefighter safety, health, and well-being. For example, a database system may be developed to identify firefighters’ use of hospital emergency departments nationwide. Such epidemiologic information potentially could result in changes to fire service programs, policies, and products, leading to reduced fatal and non-fatal injuries nationwide. Researchers who apply for funding in this category also should consider resources and strategies for continued support and maintenance of the database system after the initial one to four-year funding period. These grants should be considered as start-up and demonstration funding only.

Note: If you intend to develop a dataset as a function of your specific research study, without data collection with the same participants post-study, then your proposal likely fits the clinical or technology category rather than the database systems category.

## What is the “preliminary studies” category?

Preliminary studies may be proposed to obtain enough evidence to justify a future larger, more comprehensive project. The preliminary study category supports researchers’ need to answer questions or establish methods prior to determining the need for a larger comprehensive research investigation. This is particularly true when there is little evidence already available in the literature or from other sources to support an idea. For example, when little or no research existed on women firefighters, a preliminary project established the need for specific areas of research, such as reproductive health. Data from preliminary work likely would strengthen a subsequent application for a larger (clinical or technology) study.

In another example, this category was used effectively to gain support for evaluation of advanced sensors that could be candidates for building a practical gas and particulate hazard warning system. The preliminary study allowed the researchers to identify and eliminate risks associated with sensor performance so that the follow-on major proposal was able to build and test a practical new product for deployment.

Note: If a project could be competitive without the results of a preliminary study (such as when adequate information and methods are already established with prior research in the area), then the clinical or technology category should be used.

## What is the "early career investigator" category?

This project category is intended to promote the development of new principal investigators (PI) who wish to engage in research to improve firefighter safety, health, and well-being. This category is reserved for projects led by a principal investigator who received a terminal academic degree (a doctoral level, professional level, or equivalent advanced level research degree) or ended post-graduate training (such as a post-doctoral fellowship or residency, whichever date is later) within ten (10) years of the opening date of the application period and who has not been a PI on a previous FP&S Program award. As the development of new research talent through mentoring is a focus of these awards, projects that are affiliated with larger ongoing fire service research efforts are encouraged. Projects in this category can be clinical, technology and product development, or database system development.

Description of the research project as well as the mentoring plan must be included in the Narrative responding to the Science Panel Evaluation Criteria. Applicants should identify how the project will support the development of the principal investigator within the field of firefighter research. The applicant's institution must be the sponsoring institution because individuals are not eligible to receive an award under this program. All proposed projects must have at least one fire service partner. These projects are limited to a maximum \$600,000 federal share per project. The mentor must provide a signed letter of support and commitment of their mentoring role along with a biosketch to include in the Appendix. Early career applicants will receive unique scoring in the science review process to include a score for the mentoring plan.

## **What kinds of expertise are required for Principal Investigators and interdisciplinary research teams?**

Generally, scientists who take the lead in R&D Activity projects in the clinical category are trained in an area(s) of specialization specific to the project topic. Examples include physicians or toxicologists in toxicology research, occupational epidemiologists in injury research, clinical or social psychologists in behavioral and mental health areas, and sociologists or behavioral scientists in social or cultural areas. Scientists and engineers that take the lead in R&D Activity studies in the technology and product development category should also be trained in an area(s) of specialization that is specific to the study topics, such as combustion scientists leading projects of toxic gas exposures, textile engineers for development of better fabric for advanced turnout gear and protective shelters, and fire protection engineers to address fire dynamics in structural firefighting. In some cases, physicians and engineers team up to investigate topics of heat stress and work effort needed to accomplish routine firefighting tasks to better define expectations for safe work on the fire ground. Also, scientists and engineers with relevant expertise may have many other specializations such as anthropology, behavioral sciences, biostatistics, chemical engineering, codes and standards, computer sciences, economics, electrical engineering, emergency medicine, epidemiology, fire modeling, geophysical sciences, health behavior, kinesiology, mechanical engineering, neural science, nutrition, physics, physiology, and public health.

## **Do applicants receive feedback from the review(s)?**

The FP&S Program Office will provide feedback on each project. However, written comments will only be provided for R&D projects that scored high enough to be reviewed by the science panel. All applicants will be provided an opportunity to speak in detail with the Program Office regarding an unsuccessful project.

## **Is there a place to indicate that my project is a resubmission from a previous year?**

It is not required to indicate a project is a resubmission. However, applicants can address in the Appendix how they adapted the proposal to address reviewer comments from a previous year. This information is generally helpful to both review panels.

## **How important is it to address all guidance and criteria in the application?**

It is critical that the application addresses each of the evaluation criteria as thoroughly as possible. Project evaluation total scores are rank ordered from the fire service review with the highest-scoring projects going forward



for additional science review. The projects are then ranked according to the highest science panel evaluation scores. FEMA makes awards based on this final ranking from the science panel.

## **How does the structure of the application support the Panel Reviews?**

Each project must include one Narrative Statement up to 5 pages in response to the Fire Service Panel Evaluation Criteria within the NOFO. Each project must also include one Narrative Statement up to 20 pages in response to the Science Panel Evaluation Criteria and one Appendix up to 25 pages as attachments in the FEMA GO application. The two narrative documents should be organized in order of the evaluation criteria listed in the NOFO to make it easier for reviewers to score and navigate the information.

Each narrative should be written for the appropriate audience. For example, the 5-page narrative should be written in language appropriate to the fire service reviewers, while the 20-page narrative should target a scientific audience. Each narrative should also include the contact information (e-mail address and telephone number) for the principal investigator on the first page. Applicants may refer to tables or figures in the Science Panel Narrative Statement or the Appendix document but must use the 5-page narrative to respond directly to the Fire Service Panel Evaluation Criteria. References are not typically included in the 5-page Fire Service Panel Narrative Statement.

The first page of the Science Panel Narrative Statement must include an abstract of approximately 300 words that addresses purpose and aims, relevance, methods, and anticipated outcomes. All narrative text, including pertinent references and footnotes, must be in the Science Panel Narrative Statement. Tables and figures may be included in either the Science Panel Narrative Statement or the Appendix document.

The Appendix may include, as appropriate, data collection instruments, additional tables and figures, illustrations, specifications for product designs, and letters of commitment and role descriptions from partners. Additionally, if the project is a resubmission, applicants may use the Appendix to address how they adapted the proposal to address reviewer concerns from a previous year.

A biosketch for the principal investigator and lead scientists, as well as other key research personnel listed in the budget, are to be included in the Appendix but are limited to a maximum of two pages per biosketch. Applicants are strongly encouraged to follow the biosketch sample provided in the NOFO. Early career investigator projects are required to have the mentor(s) signed letter of support and commitment in addition to their biosketch.

## **What are the character limitations for text boxes in FEMA GO?**

The project name field is limited to a maximum of 100 total characters. The abstract field is limited to a maximum of 5,000 total characters.

## **What further guidance can be given for addressing the criteria considered in the Fire Service Panel review?**

The primary information about fire service evaluation criteria is provided in the NOFO. Review each fire service evaluation criterion in the NOFO as each application section is prepared. Prepare responses to the criteria using language that is friendly for a fire service audience. Refer the fire service reviewers to information in the science

narrative that would clarify the proposal. Fire service reviewers have full access to all application information provided. Further guidance is offered here, per criterion:

**Purpose:** Reviewers will consider your justifications of the study importance, which may be established by citing high rates of fatalities or injuries related to the condition being studied as established by respected sources, such as Centers for Disease Control and Prevention, NFPA, National Institute for Occupational Safety and Health, and USFA; new trends toward increasingly high fatality or injury rates from the literature; and/or identification within the NFFF research priorities. Applicants may draw on their own experience and that of firefighters by providing anecdotal data useful for clarifying the purpose. If applying under Early Career Investigator, applicants should identify how the project will support the development of the Principal Investigator within the field of firefighter research. If applying under Preliminary Studies, applicants should consider the project being proposed as well as the potential results of a closely related future full study.

**Potential Impact:** In describing potential impact, projected numbers of reduced injuries or fatalities could be included to emphasize the impact of the (expected) results. If strategies to overcome implementation barriers are provided, this can further demonstrate the applicant’s knowledge of fire service realities and the change process.

**Implementation by Fire Service:** For implementation by the fire service, address how the fire service would adopt the (successful) results. It is best to address this issue for the fire service reviewers clearly. If future implementation would require a series of steps before the fire service would be ready for change, the applicant can suggest some appropriate strategies. Note that these areas will be addressed again under the “dissemination and implementation” criteria for the science reviewers.

**Barriers:** Barriers and proposed solutions to timely completion of the study and the eventual implementation of the proposed results are important to discuss, especially those barriers that involve fire service participants, from recruitment and retention to compliance and bias, to national and local political concerns, stigma, and any other pertinent factors specific to the project. If it is not possible to overcome a barrier, then address how it will be managed. Addressing these types of barriers, as well as the strategies to overcome them, is another way to underscore knowledge of the realities of the fire service.

**Partners:** Because fire service partnerships are a central element of a research team, development of partnerships prior to the application would be reflected in the detailed letters of support and participation provided in the Appendix. Provide an overview of those relationships. In many cases, fire service reviewers will expect to see evidence of relevant national or regional partnerships that support the study’s purpose and goals and eventual national implementation. For example, if the population of interest were volunteer firefighters, then the National Volunteer Fire Council would be expected to be a helpful partner. If the project is a preliminary study or early career investigation it is good to explain why there may be fewer partners necessary to support the smaller study designs.

## **What further guidance can be given for addressing the criteria considered in the Science Panel Review?**

The science review of an application is a thorough and rigorous evaluation by experts knowledgeable in the research areas relevant to the proposed project. It is critical that the content of the Science Panel Narrative Statement and the Appendix fully address how the proposed research is responsive to the evaluation criteria. The Science Panel

Narrative Statement must follow the order of the science panel evaluation criteria listed within the NOFO. Further guidance is offered here, per criterion:

Project goals, objectives, and specific aims: The goals, objectives, and specific aims criterion provides a framework for the applicant to move from a statement of broader purpose (such as reducing toxic exposure) to providing precise, measurable, and/or behavioral details representing the plan to achieve these goals (such as increased time lapsed from suppression to overhaul). The applicant's goals, objectives, and specific aims should drive the study design and project methods. The methods of measurement and analyses must follow the applicant's goals, objectives, and specific aims and should lead to answers to the proposed question(s).

Literature review: The literature review demonstrates that the scientific team is knowledgeable about what has been studied in the past. Literature reviews typically identify gaps in knowledge or what is lacking or needed to advance the science to the next level. This expertise suggests the ability to do applied research in the proposed area. Importantly, the literature review makes evident how the proposed research will contribute to the existing body of knowledge in this area. Without a strong literature review, the relevance of this project will be less evident.

Project methods: Project methods describe the overall approach to the study. The methods will identify the study design, such as a randomized control trial or a large-scale fire test series design. Related information, such as how to select participants or structures, the sequence and timing for the project, or firefighting methods utilized, should be described. It is important to justify the scientific and technical rigor of the research and merit of the project. Plans to recruit and retain human subjects should be described, where applicable. Where human subjects are involved, describe plans for submission to the IRB.

Project measurements: Project measurements include the macro and micro aspects of the research. The applicant may specify established instruments to collect data and implement the project. The applicant should discuss the data to be collected to evaluate the performance methods, technologies, and products proposed. The applicant should demonstrate the measurement methods and equipment selected for use are appropriate (validity and reliability of measures) and sufficient to successfully deliver the proposed project objectives. A table format may be useful to handle extensive lists of measurements and portray timing. Study flow diagrams and timelines can be helpful. Sufficient information is needed to support the feasibility of the project.

Project analysis: Project analysis may include the statistical plan for determining achievement of the project aims. Quantitative and qualitative statistical methods as well as power analyses to justify sample size, as appropriate to the study design, are typically expected. Specify within the analysis plan what data will be analyzed, the statistical methods that will be used, the sequence of analytic steps, and interactions, as appropriate. For example, where fire departments rather than individual firefighters are the unit of analysis then sampling, measurement strategies, and the analyses would reflect that study design. The analysis plan should specify what constitutes significant or successful results.

Dissemination and implementation: The dissemination and implementation criterion require applicants to indicate how the results of the proposed project (if successful) would be disseminated to the fire service and scientific communities. Not only does this criterion cover dissemination of results, but also how the results might move to implementation, that is, moving from research to practice. The applicant should discuss how the project will impact or improve firefighter health, safety, or well-being. The applicant should show how the issues for dissemination and

implementation have been taken into consideration throughout the project and in development of their project product. For example, a product made available online would improve access and adoption. Also, providing the research results of relevant national standards organizations to promote national adoption is a proven means to implement successful research results. The development of dissemination and implementation plans does not intend to suggest that the applicant would be responsible for all the subsequent activities.

### **What types of costs may be impacted by the Build America, Buy America Act (BABAA)?**

The Build America, Buy America Act (BABAA) requires that none of the funds provided under the FP&S Program may be used for a project for infrastructure unless the iron and steel, manufactured products, and construction materials used in that infrastructure are produced in the United States.

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project.

Infrastructure is defined as “infrastructure projects which serve a public function, including at a minimum, the structures, facilities, and equipment for, in the United States, roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy.”

See the FP&S Program NOFO for information about BABAA. If your project includes installation, repair, or a modification to a facility, your entity may be required to comply with the BABAA.