



Contact us:
Leslie Marshall, Ph.D.
Director, SFPE Foundation
9711 Washingtonian Blvd., Suite 380
Gaithersburg, MD 20878
foundation@sfpe.org

Request for Proposals
Engineering Consultant for FEMA-Funded WUI Project
“Engineering Science for the Fire Service: Developing a WUI Risk Assessment & Mitigation Curriculum”

Project Background & Description

The SFPE Foundation currently holds a FEMA Fire Prevention & Safety Grant (FY2021) to develop an engineering science-based educational curriculum for fire service personnel that helps address unmet training needs with respect to Wildland-Urban Interface (WUI) fire risk assessment and mitigation. Fire protection engineers can offer educational tools and resources to help support fire departments in the field. These tools can be applied across the spectrum of WUI fire hazards – in areas like individual asset protection, community evacuation and notification, and community-level wildfire protection and mitigation. This project assesses fire department training needs in WUI fire property risk assessment and mitigation strategies that can be addressed with engineering-based resources and guidance, document best practices, develop an engineering-based curriculum for firefighters conducting WUI property risk assessment and developing mitigation strategies, and illustrate how the curriculum can reduce risk by addressing unmet training needs for a wide range of departments.

Earlier this year, the SFPE Foundation contracted the Mid-Atlantic Center for Emergency Management & Public Safety (MACEM&PS) to serve as the Curriculum Consultant for this project. They have developed a classroom-based training curriculum (including courses, course content, delivery methodology, and learning assessment) that introduces fire service personnel to engineering-based guidance and tools that can provide more nuanced guidance to fire departments conducting WUI property fire risk assessment and mitigation activities, especially in areas where existing codes, regulations, or tools are not locally contextualized. The curriculum covers the engineering science behind the risks associated with different asset and community configurations, structural components, configurations, and other features of the built environment in the WUI so that fire departments can adapt their approaches to better meet local needs.

In the next phase of the project, from May through mid-June, the Curriculum Consulting team will pilot the curriculum with a total of six fire departments located in CA, CO, ID, KY, MT, and one other state (to be named). We are seeking an experienced **Engineering Consultant** to evaluate the risk reduction potential of the training if implemented in communities across the country. The Engineering Consultant will attend all six pilot training demonstrations, and they will work closely with the Curriculum Consulting team, the Project Advisory Panel, and SFPE Foundation staff. They are expected to develop a plan for evaluating the training and estimating the potential for WUI property fire risk reduction as a result of training implementation (including quantitative and qualitative approaches); recommendations for areas of improvement with respect to the training (including recommending case study examples that show how engineering-based guidance can improve outcomes); and guidance on where (and with whom) we should prioritize offering the training to have the greatest impact.

Complete proposals are due by 11:59 pm ET on Wednesday, April 12th.



Contact us:
Leslie Marshall, Ph.D.
Director, SFPE Foundation
9711 Washingtonian Blvd., Suite 380
Gaithersburg, MD 20878
foundation@sfpe.org

Tasks & Deliverables

The list in this section describes our minimum expectations for the project. Respondents are welcome to elaborate on these ideas or make additional suggestions to improve upon the project and/or our approach.

1. Develop and conduct a formal evaluation of the difference in property risk assessments and mitigation strategies adopted by fire departments before and after completion of the pilot testing of the curriculum.
 - a. Present a draft of the proposed plan for evaluation to SFPE Foundation staff and the Project Advisory Panel prior to the first pilot for input and feedback. The plan should incorporate both qualitative and quantitative methods. Revise as needed prior to the first pilot.
 - b. Utilize the results of this assessment to calculate the risk reduction potential of rolling out the curriculum to the fire service more broadly. Special attention should be paid to whether the curriculum has a positive impact on fire department WUI fire preparedness conditional on prior level of experience with WUI fires, size, and resource levels.
 - c. Make use of interviews with key stakeholders and desk review where needed; including contacting the six pilot departments to collect any necessary information before, after, or during the pilots.
 - d. Must attend and observe all six pilot trainings (1 full day each), to be held between May 1 and June 23, 2023 in CA, CO, ID, KY, MT, and one other US state (to be named shortly); and to utilizing those pilot trainings as an opportunity to gather data to inform the formal evaluation of risk reduction potential. (The dates for the pilot trainings are being negotiated by the Curriculum Consultant and should be finalized by mid- to late-April.)
 - e. Meet with SFPE Foundation staff and the Project Advisory Panel after the first two pilots are completed to advise on whether any changes to the evaluation process are needed.
2. Produce a formal report that details your findings from the formal evaluation of the risk reduction potential of implementing the training at various scales that covers all items specified in (1) above, as well as the following:
 - a. The report should describe your approach to the evaluation, including justification for that approach. It should also describe, gather, and analyze all relevant information collected during the evaluation process, including both quantitative and qualitative data and analysis.
 - b. It should include recommendations for how to improve the training to have an even greater impact on risk reduction potential, where applicable. This should include making additional suggestions for where case studies (with specific examples) could be added to improve the training's focus on engineering methods and approaches for the fire service operating in the WUI.
 - c. It should also include guidance on where (and with whom) we should prioritize offering the training to have the greatest impact, with quantitative measures to help illustrate the potential of implementing the training with various audiences.
 - d. The formal report is due by the end of July. The Engineering Consultant will present their report to the Project Advisory Panel in early August. If changes are requested to the report, then the final version will be due no later than the end of August 2023.



Contact us:
 Leslie Marshall, Ph.D.
 Director, SFPE Foundation
 9711 Washingtonian Blvd., Suite 380
 Gaithersburg, MD 20878
foundation@sfpe.org

3. In the final phase of the project, collaborate with the Curriculum Consultant, SFPE Foundation staff, and Advisory Panel to advise on illustrative case studies of the impact of the curriculum on risk reduction for fire departments in the WUI, and contribute technical content to the production of illustrative videos, infographics, and other communications materials.
 - a. Provide examples from your evaluation of the training to illustrate the potential impact of the training on WUI fire risk reduction potential.
 - b. Provide feedback on any communications or training materials developed to support the curriculum or its dissemination.

*Note: The objective of the project in this phase is to produce the curriculum, its content, method of delivery, method of learning assessment, and to understand its potential to reduce the risk faced by WUI communities if implemented on a large scale. The implementation of the curriculum (e.g., with publicly available courses, instructors, implementation partners, etc.) is beyond the scope of this phase of the project.

Project Timeline

| | |
|-----------------|---|
| March 2023 | SFPE Foundation solicits requests for proposals for an Engineering Consultant who will be engaged to evaluate the effectiveness of implementing the curriculum with six pilot fire departments. |
| April 2023 | <p>The Engineering Consultant is selected and work begins no later than April 24th. A draft plan for the evaluation is due to SFPE Foundation staff and the Project Advisory Panel by April 28, and no later than 5 business days prior to the first pilot site visit.</p> <p>The Curriculum Consultant revises the draft curriculum based on feedback and a revised version is complete by the end of April 2023. The Curriculum Consultant schedules the six pilot site visits for May & June 2023, and shares dates with Engineering Consultant.</p> |
| May – June 2023 | <p>The Curriculum Consultant will coordinate with the Engineering Consultant to pilot the revised curriculum with 6 fire departments of varying size, experience level, and location to evaluate effectiveness in addressing unmet training needs where engineering-based guidance and expertise is relevant. The Colorado Springs and Boise Fire Departments, and a small department in Kentucky, will serve as 3 of the pilot departments. The other three pilot departments will be in California, Montana, and one other US state (TBD).</p> <p>The Engineering Technical Consultant will attend all six pilots and evaluate the difference in property risk assessments and mitigation strategies adopted by fire departments before and after completion of the pilot testing of the curriculum. The results of this assessment will be used to estimate the risk reduction potential of scaling the curriculum to the fire service more broadly.</p> |



Contact us:
 Leslie Marshall, Ph.D.
 Director, SFPE Foundation
 9711 Washingtonian Blvd., Suite 380
 Gaithersburg, MD 20878
foundation@sfpe.org

| | |
|----------------|---|
| July 2023 | <p>The Curriculum Consultant will work with the Engineering Consultant (with oversight from SFPE Foundation staff and the Advisory Panel) to take information collected during the pilot testing and convert it into short videos, infographics, case studies, and other outreach materials to illustrate the curriculum and its potential to benefit the fire service. These materials will help engage implementation partners for the next stage of the project (outside the scope of this grant), which will focus on curriculum delivery and impact measurement at a national scale. The final curriculum must be completed by the end of July 2023.</p> <p>The Engineering Consultant is responsible for submitting their formal evaluation report by the end of July 2023.</p> |
| August 2023 | <p>In early August, the Engineering Consultant will present their findings to the Project Advisory Panel for any questions and additional feedback. If any changes to the report are needed, the final version will be due by the end of August 2023.</p> <p>Collaborate with the Curriculum Consultant, SFPE Foundation staff, and Advisory Panel to advise on illustrative case studies of the impact of the curriculum on risk reduction for fire departments in the WUI and contribute technical content to the production of illustrative videos, infographics, and other communications materials; give feedback on materials created wherever possible.</p> |
| September 2023 | <p>SFPE Foundation Staff and other project personnel conduct community outreach and dissemination exercises targeting the U.S. fire service. Interest in the curriculum from fire departments across the US, as well as interest from implementation partners with a history of course and training delivery to the fire service, will be evaluated.</p> |

Cost and Duration

As outlined above, the project is expected to run from April 2023 – August 2023. As this project is primarily externally funded, we have strict cost requirements. **Successful proposals may not exceed \$50,000 USD total.**

This total cost should be inclusive of all project deliverables described above, except for those items noted below:

- Respondents do not need to budget for travel expenses for the six pilot site visits, which will be covered by the SFPE Foundation following mutual agreement with the selected contractor. One individual from the Engineering Consultant team will be supported to travel to each pilot location.
- If supplies are needed to conduct the training evaluation, some modest funding may be available by mutual prior written agreement with the SFPE Foundation.



Contact us:
Leslie Marshall, Ph.D.
Director, SFPE Foundation
9711 Washingtonian Blvd., Suite 380
Gaithersburg, MD 20878
foundation@sfpe.org

How to Respond

Applicants should submit a single proposal document (in PDF format) *no longer than 6 pages single-spaced* outlining:

- 1. Qualifications and experience for all relevant team members (1 page max)**
 - a. This must include evidence of prior experience relevant to this project.
 - b. Preference is for respondents with experience applying engineering-based knowledge, tools, or resources to fire departments operating in the WUI in the United States.
- 2. Proposed approach to evaluating the risk reduction potential of the training (3 pages max)**
 - a. This must account for all project deliverables described in this request for proposals.
- 3. Commitment to project timeline and deadlines for completion of deliverables (1 page max)**
 - a. The successful respondent must be able to meet the deadlines and deliverables as described in this request for proposals. Include an affirmative acknowledgment of these deadlines and assurance that you will be able to meet them on time and on budget.
- 4. Budget & Reporting Requirements (1 page max)**
 - a. Respondents should indicate that they can provide all project deliverables within the maximum cost allowed for this project of \$50,000 USD.
 - b. Once a proposal is selected, SFPE Foundation staff will determine the timeline for payment as part of the contracting process with the selected respondent.
 - c. The successful respondent must be able to keep detailed records (including receipts) for all expenses incurred under the scope of this project and will be required to abide by federal contracting guidelines.
- 5. Completed "Conflict of Interest Disclosure Form for Contractors & Grant Recipients" available on the SFPE Foundation [website](#)**
 - a. All team members named in the proposal are required to complete a copy of this form.
 - b. Note: This form should be included at the end of the proposal document, but it does *not* count towards the six-page limit.

We welcome applications from groups or individuals.

Proposals will be reviewed and evaluated based on the following criteria:

- *Team Qualifications (25%)*
- *Scientific Merit of Proposed Approach (25%)*
- *Ability to Meet Project Deadlines / Achievability (25%)*
- *Ability to Deliver within Budget / Project Value (25%)*

Deadline for Submittals: 11:59 pm ET, Wednesday, April 12, 2023

Direct submissions and inquiries to Dr. Leslie Marshall, SFPE Foundation Director, at foundation@sfpe.org. No phone calls, please.



Contact us:
Leslie Marshall, Ph.D.
Director, SFPE Foundation
9711 Washingtonian Blvd., Suite 380
Gaithersburg, MD 20878
foundation@sfpe.org

Contractor Selection

Proposals will be evaluated by SFPE Foundation Staff and the Project Advisory Panel based on the proposal elements listed above. The selected contractor will be required to abide by all applicable guidelines for federal award recipients and will be asked to complete additional forms to ensure compliance with federal, state, and local guidelines, as well as any policy and regulatory guidelines required by the SFPE Foundation.

Intellectual Property

The SFPE Foundation will retain the rights to the final deliverables and any tools, documents, or other materials produced under the scope of this project. The SFPE Foundation will utilize these items to the extent required by the terms and conditions of the SFPE Foundation's grant agreement with the funding agency, FEMA.

RFP Amendment 1 - Tentative Pilot Dates:

(March 28, 2023) -- To assist respondents in developing their proposals, we are sharing the tentative dates for the six pilot trainings. These are subject to change depending on the availability of the fire departments. Once the Engineering Consultant is selected, they may also be involved in scheduling any dates that are not yet finalized (though we expect at least the in-person to be finalized in the next couple of weeks).

- Pilot #1- May 9th (in-person training)
- Pilot #2- May 16th (in-person training)
- Pilot #3- June 6th (in-person training)
- Pilot #4- June 13th (in-person training)
- Pilot #5- TBD (virtual training likely – May or June)
- Pilot #6- TBD (virtual training likely – May or June)