



Contact us:
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Request for Proposals

Curriculum 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 recently received 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 will assess 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.

The aim of this project is to develop 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 is expected to cover 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. The curriculum will be designed to address unmet training needs for a wide range of departments – regardless of their size or prior experience with WUI fires – and will empower them to adapt available resources to their own needs and thereby reduce risk in their communities.

We are seeking an experienced **Curriculum Consultant** to lead the development of the curriculum of engineering-based resources and tools for fire departments conducting WUI risk assessment and mitigation activities. The Consultant will work with SFPE Foundation Staff, the Project Advisory Panel, and (later on) an Engineering Technical Consultant, to produce the curriculum with input from fire service personnel, existing reports, interviews and desk review, the SFPE Foundation WUI Working Group, and other partners; revise the draft curriculum based on feedback from fire service outreach campaign and dissemination activities; collaborate with the Engineering Technical Consultant, staff, and advisory panel to produce illustrative case studies of the impact of the curriculum on risk reduction for fire departments in the WUI, and lead the production of illustrative videos, infographics, and other communications materials in support of the curriculum.

Complete proposals are due by 11:59 pm ET on Thursday, December 8th.



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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. Conduct a desk review of existing training, best practices, and unmet needs to understand where the engineering science based WUI curriculum could have the greatest impact on the U.S. fire service.
 - a. Make use of interviews with key stakeholders and attend a virtual national workshop with more than 20 fire service personnel (hosted and organized by SFPE Foundation) to better understand needs and opportunities.
 - b. Review materials generated by participants in SFPE Foundation's WUI Working Group Initiative, a collaborative effort by fire engineering experts from around the world seeking to identify ways that fire engineering expertise can be used to help solve the problem of WUI fire hazards; meet with key stakeholders for input.
 - c. Following the virtual workshop with fire service personnel, produce a summary report and present it to SFPE Foundation Staff and the Advisory Panel for feedback; propose focus areas for the curriculum.
2. Develop a curriculum that brings engineering-based science to the U.S. fire service to better address unmet training needs with respect to WUI property fire risk assessment and mitigation.
 - a. The curriculum should include tracks for more and less experienced departments and be scaffolded so that less experienced departments can be brought up to speed on best practices as quickly and expediently as possible.
 - b. It should prioritize flexibility and adaptability since departments across the US vary greatly in their size and prior experience with WUI fires, risk assessment, and mitigation planning.
 - c. The design and delivery of the curriculum must be developed in consultation with fire service representatives and subject to community input throughout.
 - d. The curriculum should include detailed information about what courses should be included, what engineering-based knowledge and resources or existing tools should be covered, the proposed methods for content delivery (including pros and cons of different formats, e.g., live in-person, virtual, hybrid), what supplies or additional materials would be needed to implement it, and any other information needed to completely deliver the curriculum content in full.
 - e. The curriculum must also include learning assessment modules designed to evaluate attendee learning and gauge the potential for behavior change in the field.
3. Seek feedback on the draft curriculum from a wide range of fire service and fire engineering professionals and produce a revised version for piloting.
 - a. Present the draft curriculum during a virtual session of the SFPE Foundation's WUI Symposium.



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- b. Coordinate with SFPE Foundation Staff to actively seek opportunities for feedback on the curriculum, whether via stakeholder interviews, social media outreach, or conference attendance.

4. Pilot the revised draft curriculum with six U.S. fire departments selected by the Advisory Panel and the SFPE Foundation.
 - a. The pilot will include site visits designed jointly with the involved departments.
 - b. The Curriculum Consultant is responsible for designing the pilot delivery of the content.
 - c. A separate Engineering Technical Consultant will be contracted by SFPE Foundation. They will be responsible for evaluating the risk reduction potential of the WUI education administered through the curriculum; they will be engaged to assess 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 calculate the risk reduction potential of rolling out the curriculum to the fire service more broadly, which will directly address unmet training needs for departments in the WUI. Special attention will be paid to whether the curriculum has a positive impact on fire department WUI fire preparedness regardless of the department's prior level of experience with WUI fires and regardless of the size and resources available to the department.

5. Use information collected during the pilot testing of the curriculum with select fire departments to lead the creation of short demonstration videos, infographics, and other public outreach materials to facilitate presentation of the curriculum and its impact to a broader audience.
 - a. These outreach materials will be used to engage implementation partners in 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.

*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

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| December 2022 | Curriculum Consultant selected. SFPE Foundation Staff plan virtual 1-day workshop for 20+ fire service representatives, coordinating with Curriculum Consultant on content and agenda. Curriculum Consultant begins desk review. |
| January - February 2023 | Curriculum Consultant continues review of best practices, existing training and course content, and begins to identify gaps where there are unmet training needs that could be filled by engineering-based science and resources. |



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| | <p>Curriculum Consultant attends virtual 1-day workshop (January 25) with fire service representatives (led by SFPE Foundation Staff) and collects information on fire service needs and priorities; summarizes this information in a report shared with Staff and the Advisory Panel; and identifies focus areas for the curriculum. Case studies from more and less experienced fire departments will showcase areas of greatest need for engineering-based guidance; the workshop will draw on existing reports and risk assessments identifying related needs for the fire service.</p> <p>Curriculum Consultant reviews SFPE Foundation WUI Working Group Initiative materials and interviews key participants to identify the engineering-based guidance, resources, and tools that could be included in the draft curriculum to address unmet training needs for fire departments conducting WUI risk assessment and mitigation activities.</p> <p>Curriculum Consultant creates a first draft of the curriculum (due by end of February 2023) that incorporates engineering-based guidance provided, in part, by SFPE Foundation’s WUI Working Group, a collaborative effort by fire engineering experts from around the world seeking to identify ways that fire engineering expertise can be used to help solve the problem of WUI fire hazards.</p> |
| <p>March 2023</p> | <p>In early March, the draft curriculum is presented by the Curriculum Consultant for feedback from fire service and fire engineering communities during the virtual SFPE Foundation WUI Symposium; feedback on the draft will also be sought from SFPE Foundation partners, collaborators, and other stakeholders; SFPE Foundation Staff will also lead a public outreach campaign via digital and social media content to invite additional feedback from fire service members and other stakeholders.</p> <p>SFPE Foundation solicits requests for proposals for an Engineering Technical Consultant (not covered in this RFP for a Curriculum Consultant) who will be engaged to evaluate the effectiveness of implementing the curriculum with pilot fire departments.</p> |
| <p>April 2023</p> | <p>The Curriculum Consultant revises the draft curriculum based on feedback and a revised version is complete by the end of April 2023.</p> <p>The Curriculum Consultant coordinates with SFPE Foundation Staff and the Engineering Technical Consultant to schedule the pilot site visits for May 2023.</p> |
| <p>May 2023</p> | <p>The Curriculum Consultant will coordinate with the Engineering Technical 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 Curriculum Consultant will be responsible for delivery of the draft curriculum, while the Engineering</p> |



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| | <p>Technical Consultant will be responsible for designing and conducting a formal assessment of the risk reduction potential for departments piloting the draft curriculum.</p> <p>The Engineering Technical Consultant (outside the scope of this RFP) will 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> |
| June – July 2023 | <p>The Curriculum Consultant will work with the Engineering Technical 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> |
| August – 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 December 2022 – September 2023. As this project is primarily externally funded, we have strict cost requirements. **Successful proposals may not exceed \$65,000 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 or for supplies needed for the pilot site demonstrations, which will be covered by the SFPE Foundation following mutual agreement with the selected contractor.
- A modest amount of supplemental funding is also available to support the production of illustrative videos, infographics, and other communications materials in support of the curriculum (to be arranged with the selected recipient).
- The SFPE Foundation may also cover expenses associated with travel to approved conferences or events to disseminate the draft curriculum for feedback, provided a mutual written agreement has been reached with the selected contractor.



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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 curriculum development (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 \$65,000 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. **Please note:** this request for proposals is only for the role of Curriculum Consultant. We will contract the role of Engineering Technical Consultant separately in early 2023; please do not submit a proposal that seeks to fill both roles.

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, Thursday, December 8, 2022

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



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Contractor Selection

Proposals will be evaluated by SFPE Foundation Staff and the 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.