



U.S. Fire Administration

National Cohesive Wildland Fire Management Strategy
Critical Success Factor — FEMA Grants
Final Report and Action Plan

FEMA Grants Work Group Report to the Wildland Fire Leadership Council

November 2016



FEMA

Table of Contents

Executive Summary	1
Background	1
Inception of Workgroup and Tasking by Wildland Fire Executive Council.....	1
Tasking Update.....	2
Workgroup Membership	2
Project Timelines and Process.....	2
Description of Outcome.....	3
Section 1. Tasks — Awareness, Education And Outreach Category	5
A. Identification of Information Needs.....	5
B. Communications Strategies.....	7
Section 2. Tasks — Grant Policy and Guidance Development Category	9
Section 3. Tasks — Grant Processes Category	11
A. Grant Application Process.....	11
B. Grant Review Process	11
Section 4. Tasks — Research Considerations Category	13
Appendix A: Critical Success Factor (12) Task Group Members and Alternates	15
Appendix B: Task 4.1 Detailed Notes	17
Appendix C: Acronyms	19

Executive Summary

As part of the development of the National Cohesive Wildland Fire Management Strategy (Cohesive Strategy or CS), the Regional Strategy Committees (RSCs) identified barriers and critical success factors (CSFs) that would impact the successful implementation of the Cohesive Strategy at the national level. The Wildland Fire Executive Council (WFEC) tasked the U.S. Fire Administration (USFA) to lead the effort for the CSF (12), addressing leveraging Federal Emergency Management Agency (FEMA) grants to maximize community wildfire mitigation. Three FEMA grant programs were included in this effort: Pre-Disaster Mitigation (PDM), Hazard Mitigation Grant Program (HMGP), and Fire Prevention & Safety (FP&S) Grants under the Assistance to Firefighters Grant (AFG) Program.

The CSF (12) workgroup conducted a gap analysis between stakeholder community wildland fire mitigation needs and provisions contained within grant program policy and guidance documents. The analysis revealed numerous areas for consideration that could have a positive impact on addressing community wildfire mitigation and increasing community resilience to the detrimental impacts of wildfire. Recommendations for further consideration were organized into four broad categories: Awareness, Education and Outreach; Grant Policy and Guidance Development; Grant Processes; and Research Considerations.

Cohesive Strategy vision for the next century:

“To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.”

Background

Inception of Workgroup and Tasking by Wildland Fire Executive Council

During Phase II in the development of the National Cohesive Wildland Fire Management Strategy, the three Cohesive Strategy RSCs — Northeast, Southeast and West¹ — were tasked by the WFEC to prepare a list of existing barriers that would impede, and necessary critical success factors that would facilitate, the successful implementation of the Cohesive Strategy. The Cohesive Strategy regions were then asked to identify, from the original list of over 50 items, those barriers and CSFs that required action at the national level to address, were cross-cutting across the three Cohesive Strategy regions, and could be completed within five years from the list’s creation (Summer 2012). The resulting list of the top priority barriers and CSFs was submitted to the WFEC.

As the Cohesive Strategy progressed through Phase III, the WFEC sought from its membership a lead agency and point of contact to address each of the national barriers and CSFs. The USFA accepted the role of leading the workgroup for CSF (12): FEMA Pre-Disaster Mitigation Program. Lead agencies were asked to update the original write-up for their assigned barrier or CSF, as well as identify the activities necessary to mitigate the barrier and/or CSF, appropriate resources necessary to implement those activities, and expected duration of the activities.

¹ The Cohesive Strategy Regions are composed of the following states. The **Northeast Region**: Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin. The **Southeast Region**: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, the Virgin Islands, and Virginia. The **Western Region**: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, the Western Pacific Islands, and Wyoming.

Cohesive Strategy goals:

- Restore and maintain landscapes.
- Fire-adapted communities (FACs).
- Safe and effective wildfire response.

Tasking Update

While the original intent of CSF (12): FEMA Pre-Disaster Mitigation Program, as submitted by the RSCs, was to “Enhance [the] Pre-Disaster Mitigation program to maximize fuels reduction across the landscape with emphasis on private lands,” the workgroup felt it important to include two other FEMA grants that can also fund wildfire mitigation projects, programs and activities — the HMGP and the AFG Program/ FP&S Grant. This resulted in revising the name from CSF (12) to “FEMA Grants.”

This original charge was also modified by the workgroup to reflect FEMA’s focus on Whole Community, as well as requirements specified in the grant programs’ authorizing language. Specifically, potential actions proposed by the RSCs to revise grant guidelines to eliminate the need to meet National Environmental Policy Act requirements (i.e., actions that could be categorically excluded), transfer FEMA assistance programs and funds

to the U.S. Forest Service (USFS), and increase FEMA Pre-Disaster Mitigation grant funding, were determined to be outside the scope of this workgroup. Instead, the workgroup sought to identify actions that would lead to greater understanding of the grant programs and grant applicant/recipient needs which could, in turn, lead to a greater likelihood of grant award.

Workgroup Membership

Representatives from the following agencies and organizations were sought for membership in the CSF (12) workgroup. Refer to Appendix A for a listing of task group members and agency affiliations.

- Cohesive Strategy Northeast RSC.
- Cohesive Strategy Southeast RSC.
- Cohesive Strategy Western RSC.
- Department of Agriculture — USFS.
- Department of Homeland Security (DHS) — FEMA — Federal Insurance and Mitigation Administration (FIMA).
- DHS — FEMA Grant Programs Directorate (GPD).
- DHS — FEMA GPD — AFG Program/FP&S Grant.
- Department of the Interior (DOI) Office of Wildland Fire (Note: Representatives from the Bureau of Indian Affairs (BIA) were recommended for membership).
- Insurance Institute for Business and Home Safety (IBHS).
- International Association of Fire Chiefs (IAFC) — Wildland Fire Policy Committee.
- National Association of State Fire Marshals (NASFM).
- National Emergency Management Association (NEMA) — (State Hazard Mitigation Officers).
- National Fire Protection Association (NFPA).
- National Native American Fire Chiefs Association (NNAFCA).

Project Timelines and Process

The workgroup was assembled during June through September 2013, with some members joining the effort at a later date. Monthly meetings began in October 2013. It was projected to take approximately one year to complete the tasking; however, because of the level of detail addressed by the workgroup, completion of the draft report was delayed. It is important to note that for some of the actions, work has already begun or may have been completed.

The workgroup developed a list of critical information regarding the identified grant programs, then divided into smaller task groups to research each of the grant programs in greater detail against the critical criteria. Informational and programmatic gaps were identified, explored and organized into a list of potential actions that could be taken to address the gaps. Lead and collaborating agencies/organizations are being identified to comprise the task groups that will implement the actions. During work group discussions, additional details that could provide clarification and guidance for implementers were identified and included in an internal implementation plan. Where identified by the working group, task priorities are provided.

Description of Outcome

Specific tasks identified in the CSF (12) Action Plan can be grouped into four main categories. Each of those categories is briefly described below.

Awareness, Education and Outreach Category

Based on stakeholder feedback, gaps in awareness and understanding of the identified grant programs exist at all stakeholder levels — local applicant, state, tribal, national (organizations), and federal. The workgroup recommends that clarifying information be provided to these target audiences in varying formats, as outlined in subsequent sections of this plan, so as to maximize the effectiveness of message delivery. To meet these needs, this category has been subdivided into two subcategories:

- Identification of information needs.
- Communications strategies.

Grant Policy and Guidance Development Category

Several grant policy-related issues were identified that resulted in challenges to successful development, award or implementation of wildfire mitigation grant applications. The workgroup identified areas within current grant policy and guidance where additional clarification is needed, as well as identified areas for potential policy revisions that could result in the use of FEMA grant funds for more effective wildfire mitigation activities.

Grant Processes Category

Workgroup recommendations in this area are intended to address identified gaps in the grant application and review processes, as well as applicable timelines, which could inhibit the submission or awarding of wildfire mitigation applications.

- Grant application process.
- Grant review process.

Research Considerations Category

Targeted research could help illustrate the effectiveness of measures taken to reduce the wildfire threat, increase community resilience, and improve life safety measures for community members and firefighters. In addition, the workgroup felt it important to identify wildfire mitigation related research priorities that could be eligible for funding under the FEMA grants.

Section 1. Tasks — Awareness, Education And Outreach Category

A. Identification of Information Needs

Task 1.A.1: Solicit feedback regarding success stories and lessons learned from grant recipients and regional grant program managers. Feedback mechanism(s) to be determined.

Grant Program(s): PDM, HMGP, FP&S.

Priority: 1

Task 1.A.2: Identify possible reasons why there are so few wildfire mitigation projects funded under the grants; use this information to inform internal FEMA grant personnel and provide feedback to potential grant applicants.

Grant Program(s): PDM, HMGP, FP&S.

Priority: 1

Task 1.A.3: Ensure transparency in identifying the business processes for the grant application life cycle (application, review and funding obligation).

Grant Program(s): PDM, HMGP.

Task 1.A.4: Provide information regarding the environmental assessment (EA) process and the proposed categorical exclusion. Include clarification regarding when project implementation may begin following FEMA's approval of the EA and how that relates to the grant's period of performance.

Grant Program(s): PDM.

Task 1.A.5: Clarify and explain what a cost benefit analysis is, identify specific information that must be included, and provide examples for applicants.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.6: Provide solid examples of how grant recipients and subrecipients can meet the funding match requirement, especially in terms of in-kind contributions.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.7: Explain how the grant priorities are established and implemented; provide this information to target audiences.

Grant Program(s): PDM, HMGP.

Task 1.A.8 (also see Tasks 1.A.16, 3.B.4): Recognize and acknowledge the benefits that can be provided by Cohesive Strategy and other regional, state and local data by developing and providing training regarding available wildland urban interface (WUI)/wildland fire-related data. Training should include how to use the data to support and inform the applicant's risk/vulnerability assessment, cost-benefit analysis, and funding request justification.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.9: Provide a list of examples of eligible WUI/wildfire mitigation activities to inform applicants, including explanation of specific factors that make the projects/ programs eligible. Also provide a list of activities not deemed eligible and an explanation for why they are not.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.10: Advise local agency mitigation planners to include fire districts and fire departments in their planning, training, activities and outreach.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.11 (also see Task 1.B.3): Compile a collection of WUI/wildfire mitigation success stories. Collection should include projects/programs funded under the FEMA grants, as well as other non-FEMA funded activities.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.12: Provide examples of existing wildfire mitigation “5 Percent Initiative Grants” and “7 Percent Planning Grants,” and explain the associated parameters.

Grant Program(s): HMGP.

Task 1.A.13: Share eligibility requirements and program incentives with potential applicants and stakeholders by providing examples or best practices. The goal is to incentivize communities to participate.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.A.14: The task group should seek collaboration with FEMA mitigation planning team leads to develop a crosswalk for mitigation plans and Community Wildfire Protection Plans (CWPP).

Grant Program(s): PDM, HMGP (unified Hazard Mitigation Assistance (HMA) Guidance; FEMA will determine to which grant program this clarification may be applied/applicable).

Task 1.A.15: Clarify the guidance to local governments that it is an option to have homeowners provide the matching funds/in-kind match (“sweat equity”). Document and share best practices, such as in-kind match tracking.

Grant Program(s): HMGP, PDM, possibly FP&S.

Task 1.A.16 (also see Tasks 1.A.8, 3.B.4): Provide an overview of the Cohesive Strategy and how the activities funded under the FEMA grants could help accomplish the goals of the Cohesive Strategy. Develop strategies for how to use Cohesive Strategy data and science, in conjunction with local, state and regional data, to justify wildfire risks, as well as the potential effectiveness of activities being requested under the grants.

Grant Program(s): PDM, HMGP, FP&S.

Notes: If FEMA grant program offices agree that grant prioritization can be informed by identifying areas that are more at-risk, determine if there is specific Cohesive Strategy data that could be critical in supporting justification of the activities requested in the application. Important detail to include in outreach: The Cohesive Strategy is a new way to look at existing data and the analysis of that data.

Task 1.A.17: Explore the feasibility of having the FEMA review of PDM/HMGP wildland fire mitigation applications incorporate “how well” the activity requested in the application meets what is in the approved state or local Hazard Mitigation Plan to supplement the current “met/not met” criteria.

Grant Program(s): PDM, HMGP.

B. Communications Strategies

Note: One goal is to integrate wildland fire into communications efforts already being undertaken for other hazards, incorporating the WUI/wildland fire community.

Task 1.B.1: Determine how applicants and subapplicants would prefer to receive this information, and target informational and educational programs to meet these needs. Methods could include using partner websites, frequently asked questions (FAQs), working with states as grant recipients, list-serve messaging, social media, handouts, webinars, etc.

Task 1.B.1.a: Reference the PDM and HMGP Grants.

Grant Program(s): PDM, HMGP.

Task 1.B.1.b: Reference the FP&S Grant.

Grant Program(s): FP&S.

Task 1.B.2 (also see Task 1.B.5): Identify key communicators, including state hazard mitigation officers, fire grant regional staff, Regional Environmental Officers (through Office of Environmental Planning and Historic Preservation's (OEHP's) HMA Liaison), regional mitigation specialists (from all FEMA regions, though Regions VI, VIII, IX and X would most likely have the most experience in this area), CSF (12) member agency/organization personnel, state fire training directors, state fire marshals, state firefighter and fire chief associations. Provide them with pre-prepared and updated presentations and other communications tools they can deliver at the state and local levels.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.B.3 (also see Task 1.A.11): Share grant information with potential applicants and stakeholders via a user-friendly website, such as the FEMA transparency website for HMGP awards, where users can easily retrieve or link to project/program details, and where WUI/wildfire mitigation success story presentations are showcased. The CSF (12) workgroup could help inform the development of this website capability.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.B.4: Increase awareness regarding how individual homeowners can be eligible for assistance by communicating through local mitigation planning committees, Firewise communities, and other mechanisms.

Grant Program(s): PDM, HMGP.

Note: This task is not intended to compete with FACs; Firewise; Ready, Set, Go! (RSG); or other programs.

Task 1.B.5 (also see Task 1.B.2.): Develop a set of FAQs as another tool in the key communicators toolbox.

Grant Program(s): PDM, HMGP (unified HMA guidance; FEMA will determine to which grant program this clarification may be applied/applicable).

Task 1.B.6: Education and outreach efforts should include the sharing of best practices associated with eligible WUI/wildland fire mitigation-related activities, materials, programs, etc.

Grant Program(s): PDM, HMGP, FP&S.

Task 1.B.7: Investigate the feasibility of providing a grant and application program kit to applicants and subapplicants at the local/state/tribal level (as appropriate).

Grant Program(s): PDM, HMGP.

Task 1.B.8: Create a wildfire-specific course/workshop/webinar (to be updated regularly) on successful application development, grants management, and project implementation.
Grant Program(s): PDM, HMGP, FP&S.

Task 1.B.9: Enhance means for disseminating grant information notices regarding application periods, funds availability, training, and other outreach information. Ensure messaging can reach all pertinent audiences, including the state capability to inform local entities.
Grant Program(s): PDM, HMGP, FP&S.

Task 1.B.10: Provide assistance to states through the State Hazard Mitigation Officer regarding wildfire hazard mitigation activities, measurement, etc., targeting states with little experience or understanding in this area.
Grant Program(s): PDM, HMGP.

Section 2. Tasks — Grant Policy and Guidance Development Category

Task 2.1: Monitor the status of the President’s recommendation in the fiscal year 2015 budget for an additional \$400 million for climate change grants, and seek opportunities to collaborate with the FEMA Mitigation Directorate to ensure wildfire mitigation is identified as one of the hazards to be addressed.

Grant Program(s): PDM.

Priority: N/A; status is complete — the additional funding was not appropriated.

Task 2.2: Monitor annual budget appropriations regarding funding for wildfire mitigation, and collaborate with the FEMA Mitigation Directorate, as appropriate, to provide programmatic and technical expertise.

Grant Program(s): PDM, HMGP.

Task 2.3: Provide clarification of the grant performance period relative to the application period, completion of the programmatic and environmental review, and awarding of funds. Provide clarification regarding the 2015 DHS categorical exclusion (CATEX) and how it will have a positive impact in reducing the time it takes for grant recipients to be able to implement awarded grant activities under PDM and HMGP.

Grant Program(s): PDM, HMGP.

Task 2.4: Provide clarification about the parameters for the “5 Percent Initiative” and “7 Percent Mitigation Planning Initiative.” Include updated information on the availability of up to 10 percent funding. Develop job aids, as needed.

Grant Program(s): HMGP.

Task 2.5: Clarify the HMA requirement to confirm the WUI boundary and the related information required in a wildfire mitigation application. Determine if current research still supports this requirement.

Grant Program(s): HMGP, PDM (unified HMA guidance; FEMA will determine to which grant program this clarification may be applied/applicable).

Task 2.6: Monitor the status of FEMA’s proposed Programmatic Environmental Assessment (PEA) and CATEX to determine whether FEMA’s OEHP would still require its own EA if part of the land included under a FEMA grant already has an authorized/approved EA under another grant program through a different federal or state agency.

Grant Program(s): HMGP, PDM.

Task 2.7: Inform grant guidance development (rules, regulations, requirements, priorities, policies):

- Submit recommendation that FIMA leadership reconvene the External Stakeholder Work Group.
- Monitor for and seek opportunities to provide comments to future HMA Guidance updates via Federal Register notices and External Affairs outreach to partners, stakeholders and associations.

Grant Program(s): HMGP, PDM.

Task 2.8: Clarify types of or model programs and activities that could qualify for FP&S grant funding.

Grant Program(s): FP&S.

Task 2.9: Consider fuel sequencing (tying fuel treatments in the wildland with homeowners' and communities' defensible space) as an eligible grant activity. Reconsider the eligibility of fuelbreaks, in conjunction with integrated fuels treatment programs, as a viable mitigation activity to reduce the likelihood of structural ignition.

Grant Program(s): PDM.

Task 2.10: Consider ways to provide grant funding to local government agencies willing to implement structure or home wildfire mitigation assistance programs to community residents. Programs should include structure or home hardening, defensible space on the homeowner's property, and fuels reduction on adjacent public land.

Grant Program(s): PDM, HMGP.

Task 2.11: Provide comment to inform future wildfire policy.

Grant Program(s): HMGP, PDM.

Notes: Completed for 2014 cycle; the public comment period for this was held in 2014. Current FEMA policy revision cycle calls for policy updates no later than every four years. Since the new HMA Guidance was released in 2015, the next review must be completed by 2019 at the latest.

Section 3. Tasks — Grant Processes Category

A. Grant Application Process

Task 3.A.1: Explore the possibility of extending the length of the application period.
Grant Program(s): PDM.

Note: The grant application is very detailed, and the 90-day application period may not allow adequate time for both applicant states and subapplicant localities to gather and thoroughly prepare application information.

B. Grant Review Process

Task 3.B.1: Examine business processes — from application review, to award and receipt of funding by recipients and subrecipients — to determine where and how current practices are having negative impacts on grant recipients and subrecipients, and recommend/establish consistent practices to ameliorate those impacts wherever feasible.
Grant Program(s): PDM, HMGP.

Note: Grant recipients have experienced variable delays in the amount of time in which the grant review process is conducted, as well as delays in receiving awarded funds and subsequent commencement of the project. This impacts how much time recipients and subrecipients have to complete their projects within the performance period.

Task 3.B.2: Provide subject matter expertise to develop and recommend criteria reviewers can apply during application review in order to help determine the subapplicants' technical capacity to successfully implement the requested WUI mitigation project/program.
Grant Program(s): PDM, FP&S.
Priority: 3

Task 3.B.3: Provide subject matter expertise to develop and recommend FP&S grant application evaluation criteria for WUI mitigation activities. Identify possible opportunities for sharing FP&S application evaluation criteria with PDM and HMGP application reviewers for their consideration in identifying effective WUI mitigation activities for potential PDM and HMGP awards.
Grant Program(s): FP&S, PDM, HMGP.

Task 3.B.4 (also see Tasks 1.A.8, 1.A.16): Identify and describe possible national, regional, tribal, state and local data sources that could be used by applicants to provide justification and help inform decisions for WUI mitigation activities requested in their applications. Encourage FEMA grant program offices and states to recognize the value in and support the use of these data sets in evaluating applications for funding.
Grant Program(s): PDM, HMGP, FP&S.
Priority: 3

Task 3.B.5: Provide a recommendation to the AFG program office to evaluate current levels of WUI expertise on the FP&S Criteria Development and grant review panels. The task group should draft a position paper to provide justification for inclusion of WUI subject matter experts (SMEs), to include specific information or recommendations to be taken to the Criteria Development panel for consideration and suggestions for developing a pool of WUI SMEs.

Grant Program(s): FP&S.

Task 3.B.6: Encourage states to consider establishing panels to review PDM and HMGP grant applications that request funding for WUI mitigation activities.

Grant Program(s): PDM, HMGP.

Section 4. Tasks — Research Considerations Category

Task 4.1: Explore research opportunities to quantify structure retrofit mitigation actions.

Grant Program(s): HMGP, PDM.

Notes: See Appendix B for suggestions and recommendations to be considered a starting point for actions under this task.

Task 4.2: Determine what types of research may be eligible for funding under HMGP's "5 Percent Initiative" funding available for mitigation.

Grant Program(s): HMGP.

Task 4.3: Determine what, if any, types of research may be eligible for funding under the FP&S Research and Development funding stream.

Grant Program(s): FP&S.

Appendix A: Critical Success Factor (12) Task Group Members and Alternates

Name	Title	Organization/ Agency	Organization/ Agency Represented on Workgroup
Bartholomew, Brad	Mitigation & Recovery Section Manager; State Hazard & Mitigation Officer; Public Assistance Officer	Utah Emergency Management	NEMA
Blankenship, Patti Task Group Co-lead	Technical Advisor	DHS/FEMA/USFA	Cohesive Strategy Subcommittee
Brooks, Maureen	Community Fire Planner, Fire Prevention	USFS/Northeastern Area State and Private Forestry	CS NE Regional Strategy Committee and National Strategic Committee
Cowger, Rich	Fire Chief	Columbus (MT) Fire Rescue	IAFC
Crew, Chris	State Hazard Mitigation Officer	NC Department of Public Safety/ Division of Emergency Management	NEMA
Flack, Joan	Program Specialist, HMA	FEMA Region IX	FEMA/Mitigation
Gaines, Glenn Task Group Co-lead	Deputy Fire Administrator	DHS/FEMA/USFA	WFEC
Harrington, Tom	Branch Chief	DHS/FEMA/ GPD-EHP	FEMA
Holguin, Soledad	Fire Prevention Specialist	Pacific Region, BIA	DOI/BIA
LaRosa, Nicole	Acting Branch Chief, HMA Grants Policy Branch	DHS/FEMA/FIMA	FEMA/FIMA
Larson, Mark	State Fire Marshal	State of Idaho, Department of Insurance	NASFM (Idaho)
Latipow, Kurt	Fire Chief	City of Lompoc, CA	IAFC
Lighthall, Katie	Coordinator	CS Western Regional Strategy Committee	CS Western Regional Strategy Committee
McCord, Robert	Branch Chief, HMA	FEMA Region IX	FEMA/Mitigation

Name	Title	Organization/ Agency	Organization/ Agency Represented on Workgroup
Nanamkin, Jim	Regional Wildland Fire Prevention Specialist	DOI/BIA	DOI/BIA
Openshaw, Mark	Fire Chief	Ft. McDowell Yavapai Nation Fire Department	NNAFCA
Palmer, Cindy	Hazard Mitigation Specialist	DHS/FEMA/FIMA/ Risk Analysis Division	FEMA/FIMA
Rosenberg, Cece	Branch Chief, HMA Grants Policy Branch	DHS/FEMA/FIMA	FEMA/FIMA
Quarles, Steve	Senior Scientist for hurricane and high wind building durability and fire protection	IBHS	IBHS
Rochman, Julie	President and CEO	IBHS	IBHS
Steinberg, Michele	Senior Fire Service Specialist	NFPA — Wildland Fire Operations Division	CS Western Regional Strategy Committee
Vienneau, Kevin	Emergency Management Specialist	DHS/FEMA/HMA Grants Policy Branch	FEMA/FIMA
Wallace, Mark	State Fire Marshal	Oregon Office of State Fire Marshal	NASFM (Oregon)
Willette, Ken	Division Manager	NFPA — Public Fire Protection	NFPA
Wilson, Maggie	Section Chief	DHS/FEMA/ GPD-FP&S & SAFER Grants	DHS/FEMA/ GPD-AFG
Zupko, Mike	SGA Representative	Southern Governors' Association	CS SE Regional Strategy Committee

Appendix B: Task 4.1 Detailed Notes

Task 4.1.a: Laboratory — investigation of vulnerabilities to wind-blown embers (firebrands) and effectiveness of mitigation strategies.

- Direct ember ignition of component.
 - Potential for ember accumulation as a function of building feature (e.g., interior corner), other factors.
 - Metal flashing at wall intersection (roof-to-wall, ground-to-wall).
 - Effectiveness of gutter cover devices.
 - Evaluate effectiveness of exterior water spray system to extinguishing wind-blown embers at building.
- Indirect ember ignition, resulting in flame contact and/or radiant heat exposure.
 - Evaluate effectiveness of fence-to-wall connections; determine effective strategy.
 - Evaluate effectiveness with weathering of intumescent coatings (current IBHS project).
 - Evaluate effectiveness of gel-coatings with weathering.
 - ▶ Determine current state.
 - ▶ Fill in.

Task 4.1.b: Field — implement specified mitigation strategies on homes in selected wildfire-prone communities. Evaluate cost, required skill level. Prepare retrofit guide/visuals/video.

- Replace wood-shake roof (no particular research needed, except potential for fire-retardant treatment (FRT) shakes).
- Develop defensible space, including 0- to 5-foot zone.
- Convert selected vent-types/locations to alternate (less vulnerable) locations (e.g., gable end to ridge).
 - Replace screening (coarse to finer mesh).
 - ▶ Install mesh under turbine vent.
 - Replace current vent with ember resistant/flame resistant type.
- Install metal flashing at wall intersection.
 - Local replacement of combustible siding (e.g., at former, siding at roof-to-wall at split level).
- Install gutter cover devices and drip edge at roof edge.
- Box-in eave (convert open-eave framing to soffit ed eave).
- Fence-to-wall connection (creating noncombustible connection between combustible fence and building).

Appendix C: Acronyms

AFG	Assistance to Firefighters Grant
BIA	Bureau of Indian Affairs
CATEX	categorical exclusion
CEO	Chief Executive Officer
CS	Cohesive Strategy
CSFs	critical success factors
CSSC	Cohesive Strategy Subcommittee
CWPP	Community Wildfire Protection Plans
DHS	Department of Homeland Security
DOI	Department of the Interior
EA	environmental assessment
FAC	fire-adapted community
FAQs	frequently asked questions
FEMA	Federal Emergency Management Agency
FIMA	Federal Insurance and Mitigation Administration
FP&S	Fire Prevention & Safety
FRT	fire-retardant treatment
GPD	Grant Programs Directorate
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
IAFC	International Association of Fire Chiefs
IBHS	Insurance Institute for Business & Home Safety
NASFM	National Association of State Fire Marshals
NEMA	National Emergency Management Association
NFPA	National Fire Protection Association
NNAFCA	National Native American Fire Chiefs Association
OEHP	Office of Environmental Planning and Historic Preservation
PDM	Pre-Disaster Mitigation
PEA	Programmatic Environmental Assessment

RSC	Regional Strategy Committee
RSG	Ready, Set, Go!
SGA	Southern Governors' Association
SME	subject matter expert
USFA	U.S. Fire Administration
USFS	U.S. Forest Service
WFEC	Wildland Fire Executive Council
WFLC	Wildland Fire Leadership Council
WUI	wildland urban interface