

Questions for the Science Research Panel?	
Sheila Murphy	
	Shelia/Brendan: How do post-wildfire sediment basins affect water quality?
	Sheila: can you expand more regarding how you would use chemistry to assess recovery?
	Sheila/Brendan: how well developed is research on the impacts of wildfire vs Rx fire on water quality, not just on sedimentation but also DBPs?
Brendan Murphy	
	For Brendan Murphy: on size of grains for parameterizing pre-fire risk models... can citizen scientists be deployed to help
	Brendan: When you say watershed scale, what size watershed are you looking at?
	Brendan. What data source do you recommend for soils data?
Jason Kean	
	For Jason Kean: is there a programmatic, formal way in place to transfer the knowledge gained from research models to operational models?
	For Jason: Is work is being done to predict how debris flow erosion/sedimentation is distributed in different channel reaches?
	Jason, is there progress being made on modeling debris flow runout? Your modeling typically ends at the "built environment". Montecito running out to the ocean was a big surprise.
Laura Myers	
	Laura: Do you have a step by step guide for messages and times for messages that we can have access to?
	For Laura Myers, what is the best way to keep a community engaged in the flood risk 2,3,4 years after a fire?
	To Laura: can the sheriff's department help set the level of announcement to evacuation orders? Science to information is an art, and how to deliver a message to the public is a challenge?
	For Laura Myers: if people want clear and direction instructions because options confuse them, what are the legal implications of providing specific, directed instructions?
	Laura, how do you get to the "sweet spot" you mentioned? How do you get past normalcy bias?
Pete Robichaud	
	For Pete Robichaud: how can we gather data for use in the ash modeling?
	Pete Robichaud mentioned links to documents he mentioned would be posted in the chat - particularly interested in those referencing buffer widths. thank you.
	For Pete. As a practitioner I keep hearing seeding is no benefits To the watershed. The agency that denies sites your research

	For Pete Robichaud: what are some of the trade-offs in using higher-resolution data for burn severity estimation?
Communication/ Social Science	
	social science is so important, but I've only heard of this one example of research focused on post-fire. is there a larger social science community that is looking at this, or is the research very limited at this time?
	If there is messaging re: debris flow risks and damage does actually occur, are there best practices to tactfully say "we told you so"?
	How can we effectively communicate model uncertainty to not only emergency responders, but local homeowners?
	How has society and policy makers' on science affected funding and use of science for postfire challenges? E.g. science deniers
Sharing Information	
	With model creation and development, what efforts are going in to making these models easily usable for practitioners? Will workshops, courses, and user guides e available?
	Many agencies and universities are working on sediment or hydrologic models. What type of coordination/collaboration is occurring amongst agencies and Universities to minimize duplication?
	Incomplete information is better than no information. How can we get access to the information and understanding that the research community has but is not fully vetted or ready for peer review? In warning ops something is better than nothing.
	What kind of information is helpful for us practitioners to provide for researchers / model development?
	Does Joint Fire Science fund the transition from research to operational models? Getting the models into the management paradigm is a critical step.
	How can we break the silo mentality that is a barrier to information dissemination?
	Many of us in the field have observations from past events and would love to contribute. How can we submit this information? Where do we go? I have lots of pictures I shared with Sue Cannon in the past - is there a place we can share these with you?
	Reporting DF occurrences is important. But it seems cataloguing non-events with significant precip is also important. Where do we report either?
Modeling	
	What do you think is a good DEM resolution to model debris flow inundation areas?
	What's the current state-of-the-knowledge regarding importance of precipitation relative to other factors contributing to post-wildfire DFs?
	What are the barriers to making erosion and debris flow models transferrable across climate/ecoregions?

	What is a good way of defining a flash flood or impactful flood?
	What's the relationship between fire intensity and post-fire DF susceptibility?
Response Tools	
	Could UAS drones be incorporated as a Situational Awareness (SA) tool for the inventory of burned areas as well as performing post-fire mapping efforts?
	Shouldn't models be designed with temporal purpose? An immediate treatment design doesn't always need anything more than risk. Therefore, shouldn't there be a separation between identification of emergency needs verses longer term mitigation designs.
	Recommendation for inundation maps for hard boundaries is to embed them into fluvial hazard zone maps. This requires a methodology - states that have it are Washington, Colorado, Vermont...
Pre-Fire	
	How useful are predictions for next-season wildfires, based on, e.g., satellite soil moisture data from the current year.
Other Technical Questions/Comments	
	What are the parameters in a Synthetic Burn Scenario?
	Are there any financial impacts that can be predicted as a result of post fire conditions
	It helps with insurance estimations.

What other aspects of post-fire science would you like to see researchers address?	
Pre-Fire Planning/Work	
	Effectiveness of fuel treatments
	Simple models for practitioners to use during PRE FIRE assessments that look at vulnerabilities (most are very challenging for practitioners)
	A complete comparison of modelling accuracy from pre to post fire impacts.
	Pre-fire assessments that can provide potential risk ahead of time.
	If there are preemitive mitigation efforts that can be out into place to lessen post fire impacts.
	More work expanding on simulating burn severity for use in pre-fire assessments
	Easy mitigations for private property
	Simple post fire risk mapping for use before fires
	Pre fire impact assessment
	+1 to comment on pre fire engagement
	Pre-fire risk assessments using publicly available geodata and GIS tools.
	Pre-fire analysis, including proactive management of invasive species, and analysis of the efficacy of that management in light of fire/post-fire information.
	Pre-fire planning and prep for post-fire response
	cost savings/economic benefits of fuels treatment
	How do these events occur and/or repeat over longer time periods.
	Fire Monitoring Handbook FMH update/revision
	Identification of high risk areas
Modeling	
	Fuel models
	Modeling post fire response in more humid climates
	Additional research on reburn effects on soil properties and water quality/availability.
	Relationship between fire intensity and post-fire DF susceptibility.
	Model refinements for geographic areas
Short-Term Response	
	Rapid risk assessment procedures that can be implemented by broader disciplines
	Updates to effectiveness of post fire treatments
	impacts of heavy equipment usage in post-fire zones - both for harvesting, debris removal, and restoration/reforestation activities
	What can firefighters do/avoid doing while they're out there there on the fire and just after?

Region specific research	
	Hawaii and Pacific-specific post fire science.
	Regional climate influence such as NA monsoon
	Climate-adapted reforestation
Infiltration	
	Post fire ground cover and infiltration database
	More refined infiltration adjustment guidance for post-fire conditions.
Technology	
	AI methods to harvest information (i.e. human-readable text that is not necessarily immediately "understandable" by machines) and to integrate that information for fire science research
	How to balance High Tech with High Touch?
Bulking/Debris Flows/Erosion	
	Bulking rates and model
	Sediment bulking
	Sediment bulking and routing
	Bulking of flood flows
	Importance of soil disaggregation depth on debris flow initiation
	Bulking factors for runoff
	Bulking rates
	Mapping of pre fire tendency toward debris flow
	In-channel erosion-transport-deposition processes incorporated in erosion models
	Bulking
	Bulking factor criteria
	Debris and sediment flow rates and impacts on downstream coastal areas and waters
	Regional variations in post fire debris flow initiation.
	Mapping for Pre-Fire debris flow levels so you have a benchmark.
	flash flood thresholds in combination with debris flow thresholds
	Wind erosion effect on vegetation recovery and health impact on air and water
Soil	
	soil functional and productivity recovery
	Research on soil effects from reburn.
	Studying pre-fire dry soil repellency compared to post-fire repellency, therefore a better understanding of how the soil conditions changed.
	How microbial recovery impacts soil and vegetation recovery

Sharing Information	
	How to collect information that can be fed upward?
	Turn research into a product for BAER Teams
	Potential integration of postfire science with JFSP Fire Science Exchange Network
	Practitioner information sharing
	increased open source easy models for lower level technician types... not every district has "academics"
	Better science delivery to the practioners
	More meaningful engagement with practitioners throughout the research process - not just as stakeholders but as meaningful partners
	How can we set up a reporting system for event and non-events? Something similar to the CMOR citizen drought impact reporting.
	Trainings or user friendly models to predict erosion rates and downslope sedimentation vulnerabilities in steep coastal slopes
	Interpreting the input and output accuracies in the results
	Getting the observation data (gauge,radar,stream) to the NWS into the AWIPS warning computer system.
	Scalability of projects, upland treatment effectiveness in different ecotypes, and how to collaborate better in such a tough hierarchical structure with few voices
	Does text onboarding help with dissemination?
	Normalized schema for aggregate modeling.
	Catalogue of storm events that trigger a debris flow event
	inventory of storms of record for Forests, inventory of damaging storm that trigger post-fire events
Community Engagement	
	Engaging citizen scientists
	Outreach education for the public
	Communication tools
	Messaging content and dissemination
	More messaging/communication studies with practical use
	Communication with local long term recovery groups.
	How to better utilize local agencies and organizations In post fire planning, burn assessment, and implementation.
Community Action	
	political / social science around changing local regulations / zoning to get people out of the high risk areas
	Supporting locals after the BAER teams leave. Tools to help managers make calls post fire, second year, third year, etc. most are guessing at best... this leads to many not leaving their homes after multiple calls to evacuate....
	Development in high- and medium-risk zones (social science and geography?)

	Impacts/consequences to human and other bio systems. How can those systems affect the science (e.g., development that does/not plan for wildfire and Post-fire vulnerabilities)
	+1 to supporting locals after Baer leaves
	USACE involvement in BAER team deployments.
	I'd like to see researchers on the BAER Teams often to see/help the rapid assessment process
Values at Risk	
	Values at risk decision support tools
	Monetizing values at risk
	Effects to cultural resources, particularly different types
Climate change	
	climate change and how post fire response may differ in places where there have not historically been many fires (ie. Alaska and the western PNW)
	changes in vegetation type w/ changes in climate
	Better forecast modeling in light of climate change and modified likelihood of debris-flow initiating precipitation events
Hydrology/Precip	
	RAINFALL THRESHOLDS
	Density of rain and stream gages is very low in many Forests.
	Rainfall thresholds and identifying recovery differences across California
	Thresholds
	Post fire flood flow estimation improvement
	Improving post fire hydrology prediction
	Changes in hydrology - streamflows that are not necessarily going to be a flash flood/debris flow issue, but may affect runoff characteristics that could still impact river flooding and modeling.
	2nd + year precip thresholds
	Use of lightening strike data to map probability of summer thunderstorms
Recovery/ Monitoring	
	Riparian area protections and recovery
	guidance on evaluating recovery in the field
	More on effectiveness of practices in reducing flood/DF and in speeding recovery of ecosystem services
	How does drought impact recovery
	Post-fire ecosystem recovery
	Mapping post fire recovery across broad areas
	How best to monitor invasive and noxious weed infestations post-fire and how different species respond to different fire conditions in different parts of the country.

	Effectiveness of post fire erosion mitigation measures
	Types of monitoring methods in post-fire recovery environments.
	Native seeding.
	Native seeding
	Seeding with fast growing non native sterile species.
	What protection structures work best to protect the alluvial fan.
	Effectiveness of inexpensive treatments at stream crossings
	Cost/ benefit comparisons of suppression vs. rehabilitation.
	How climate and invasive spp affect post fire effects and vegetation recovery
	Separating rapid risk assessment from longer term modeling and design
	Interaction of post fire landscapes and insect and disease susceptibility and spread in the lo big term, and how that intersects with recovery
	Better burn severity data developed by fire ecologists

Ideas for overcoming "research to operation" barriers or other barriers of note?	
Get researchers out in the field	
	Have researchers come out into the field (our working environment) more
	Bringing researchers to the field
	Having researchers assist with Baer assessment.
	Toward bringing researchers into the field: Do they (are they willing to) maintain BAES qualification?
	Connect with NGO's in the field.
	Continued/more interaction with researchers during event response
Let's talk	
	Include practitioner input from the beginning of the research.
	Researchers involving practitioners at the partner level, not just stakeholder.
	accessibility to researchers during events for timely answers
	Don't speak down to practitioners. Practitioners are often very educated and invested in the research process, but it sometimes seems that researchers assume they know the most meaningful questions or best approaches
	Continued/more interaction with researchers during event response
	More direct interaction and discussion between researchers and practitioners, like we have been doing over the last 2 days
	We need more tools and ways for researchers to leverage practitioners for data collection and collaboration
	a place to drop off a question to a general audience and see who has answers or would be available to help
	Time to build relationships
	More/better communication between groups
	Work with outreach organizations (shameless plug for JFSP Fire Science Exchanges, Fire Adapted Communities Learning Network, etc.)
	Communication, coordination, and collaboration
	More direct interaction and info sharing
	Communications, training, more one to one discussion on model usage.
	Education to increase public knowledge & support
	Include practitioners and locals to identify issues and direct questions
	Do not be afraid to share your knowledge and ideas before they are fully vetted or ready for peer review. They can inspire tools you haven't imagined.

	More coordination between agencies to pool together funds, and to ensure funding is not being used for research already completed. Perhaps annual meetings to review what everyone is doing and identify ways to work together and pool funds.
What is the goal of the research?	
	Focus on how research products can provide operational intelligence
	Keep practitioner needs above publication pressures
	Examine research success criteria to reward researchers for informing operational application
	Research never results in a product, model, or updates
	Keep practitioner needs above publication pressures
	Create a success/failure paper based on after effects of practical implementation.
	Focus on management implications, practitioners assume that research techniques were done correctly, just give us the results and how to apply them
Capacity/Access to Research	
	Access is an issue for practitioners. The previous question lumped time and access together. Conduits from researchers rely sometimes on paid journal subscription that local practitioners don't always have access to
	Easily Digestible reports, charts, or media
	Connecting short (1, 2 page) use-cases to data and models (i.e. traceable applications of data and models)
	Test and refine tools to be included as default for agency workflows.
	The 2 page informal newsletter that doesn't provide all the info but let's practitioners know it's out there
	Co-production of science knowledge, integration of postfire in JFSP Fire Science Exchange Network
	What tools/models are most useful for practitioners? Interactive tools? Static maps?
	Include an application section to the research paper
	Summary/state-of-the-science/review papers are useful!
	Capturing post-fire solutions in the form of some more-or-less standardized PROCESS-FRAMEWORK so that people can dive into specific parts of that framework that apply to their problem
	Find better ways to compile research papers from multiple sources, USGS and USFS and serial publications
	One stop shopping for geospatial data layers
	Data and information sharing; where research input is integrated directly into operational systems. Also, the general co-production method mentioned during the panel discussion.
	Use lay person language. Keep acronyms to a minimum.
	PR outputs through the universities, agencies, state, etc., not just publishing papers in academic journals
	Success stories of how used by other practitioners
	Understand what is needed for our "operations" and boil the research outcomes down to tailor it - we don't have the time to do that

	Create specialists in facilitating tech transfer
	Capacity for local teams in areas with no access to BAER, BAR, etc.
	BAER practioners (at least the feds) have full-time jobs that do not allow them to spend a lot of time on digesting research
	Understand agency limitations. IT, people hours, policies, etc
New and Unique Ideas?	
	Pie-in-the-sky, - participating in something like the experimental forecast office situations that the NWS has for flash floods and other weather types, but not for post-fire flash flood debris flows.
	Citizen scientists - engagement, education, alternative perspectives
	crowdsourcing for implementation ideas
	crowdsourcing might be an interesting concept
Mapping/Modeling	
	Mapping of areas within basins that are Predisposed to potential debris flows
	Mapping of erosivability of slopes or basins
	Showing geographically where model are most appropriate
	Hydro & erosion model comparison tools -- which are better for given situations or locations
	Susceptibility to erosion if burned (by SBS category)
	Predicting precipitation and integrated maps....data data data pre fire to support post fire...
	Drought/climate change - vegetation change
	Pre-screening of more risky watersheds based on size, slope, soil types, etc.
	Studying pre-fire soil characteristics in terms of things like what ore the runoff characteristics of dry summer soil than how that has changed after the fire.
	Specific sub watersheds for managers to better focus treatment/funding on
Agencies/Government	
	Agency culture
	Policy and legislative barriers
	Speedier timeline within ageny to move from research to operations
	Too many process/justification barriers - and need adequate funding to effectively implement
	Have research specialist on BAER teams to give recommendations to other agencies outside of federal boundary.
	I think the way the forest service institutionally separates researchers from forest system staff is a huge barrier that impedes collaboration
	Higher priority of cross-mentoring for practitioners across Forests/ agencies/ states/ etc.
	Need to work on developing a culture and capacity of local and state leadership in post fire work

	Pre-fire outreach to local emergency response planners
Webinars/Training/Conference	
	More webinar/education opportunities
	Many of us can't travel need online solutions. My travel for training, conferences was completely cut for 3 years. Frustrating and infuriating...
	advocate more time for specialists to perform and learn
	More webinars that are recorded
	meetings like this, and interactive webinars directed towards practitioner groups lead by researchers.
	Webinars
	Trainings on how to use models and what the outputs mean
	In-person workshops on tools, models, outputs, etc.
	Get the researcher out into the events! Especially newer researchers!
	Workshops and short fieldbook/worksheets
	Would like to see more conferences and online discussions about research and where others have applied the research and what their results were.
	Fire Science Consortium events
	More JFSP consortium field trips
Online Forum/Information	
	Online open forums for discussions
	Blogs
	Like the blog idea; periodic digest well organized
	Create a one stop shop multi agency website that contains all the data in an arcgis platform
	podcasts that boil / dumb it down
	No real social media presence or community
	One web location to find information from across the country and across different disciplines.
Funding	
	Advocate funding for this
	Additional funding
	Funding to implement
	Barrier- Practitioners working in dual resources due to a reduction in budget (i.e. soils and hydrology).

What pre-fire research could be done (or is being done) to inform post-fire response?	
Soils	
	Many times soil burn severity is more related to fire weather than fuel loading - how do we capture that in pre-fire modeling?
	Better soils data
	good soils maps for fire teams could inform tactics
	Improve burn severity accuracy for rangelands
	Completion of order 3 soil surveys for landscapes
	Soil moisture impacts on soil burn severity
	soil burn severity and relationships to soil properties and characteristics
	Soil burn severity impacts on recovery over geographic ranges
	soil-plant relationship understanding. How plant communities change after disturbance (fire) with respect to soil characteristics or properties.
	Better incorporation of quality soils data into models
	Effect of reburns on soil burn severity
	Soil-ecological site relationships understood and documented for state and transition models.
Riparian Areas	
	identify what characteristics of riparian areas are necessary to protect areas post-fire and design strategies to protect them
	Impacts to riparian areas from firewise recommendations implementation
Hydrology/ Flooding/ Debris	
	Predicting what the hydrologic response based on soil type, climate type, geology
	Longer term hydrologic change in different ecosystems
	Changes in the water tables.
	Long term catchment monitoring
	calibrating hydro models
	Hydrologic modeling that can be more robust than rapid models
	More stream gauges
	Culverts and climate change
	Additional stream and rain gages to increase gage density.
	Pre-screening/ identification of risky watersheds based on size, slope, soil types, etc.
	Floodplain mapping
	Rainfall thresholds

	Rainfall thresholds between flood flows and catastrophic debris flows
	More on Jason's pre planning for debris flowd
	Define how important is difference between Debris flow and hyperconcentrated flow to hazard assessment ?
	Flood magnitude Prediction in small/ ungaged basins
	Identifying areas vulnerable to debris flow prior to fire events. Many times Fire is followed shortly by precipitation and time for response or analysis is short
	More hydro/erosion/debris flow model validation
	Pre fire debris flow assessments as discussed
Communication	
	how to best educate the public on a threat they can't image or don't think will ever affect
	What messaging worked
	Outreach with communities
	Response educational needs. Implementing training.
	Develop information sharing and coordination platforms
	Assessment tools to inform community land use planning and zoning decisions.
	Land use planning tools that incorporate post fire erosion vulnerability
	How development is encroaching on the wildland-urban interface and what factors are taken into account in development and expansion
Mapping	
	Basic geomorphology data
	Mapping high risk areas using publicly available data.
	Mapping alluvial fans and activity
	GIS. Pictures worth 1000 words!
	Simple maps of post fire risk (H, M, L) to use prefire
	Beefing up GIS data.
	Alluvial fan mapping and characterization of dominant fluvial or debris flow processes (contributing materials)
	Map data in a way that is in a format for those of us that are not arcMap experts can use.
	Geomorphic mapping
	Region specific burn severity mapping from fire ecologists
	Yes!!! To preplanning efforts!!!!!! What gis layers are needed, what data matters - how do we incorporate into CWPPs
	completion of state and transition models for ecological sites
	map areas of high risk and discourage development in those areas
	basic GIS mapping exercises - no models needed
Valuation	

	Resource valuation is important to increase consistency
	Help provide resource valuation across all jurisdictions
History	
	historical event database - all the way back to early archives, to show potential in areas that haven't seen fire for a long time
	Relationship between fire history and increased erosion potential
Lidar	
	More LiDAR!!!!
	LiDAR based flow models for watersheds.
	Map fans on lidar
	LiDAR data everywhere
	Lidar availability
	LiDAR for more of states
	More landscape characterization and identifying high risk watersheds, or high burn severity probability. Lid ar!
	More lidar
	Challenges of lidar are mainly availability!
Fire/Fuels	
	Understanding how to quickly assess fuel loads and potential post fire risks.
	Effects of fire intensity
	Wildfire ontology
	More work on how to simulate burn severity pre-fire
	Relationship between vegetation, fire intensity, burn severity, and post fire effect
	Take into account treatments, fires and post-fire processes as updated pre-fire conditions
Other	
	expand fully functional usgs streamstats to Nevada
	Developing local, optimized post fire seed mixes! Or even soil innocula
	Drought effects on restoration strategies
	More coordination with invasive species management actions, research, and information.
	Easy models and training on how to pre-identify vulnerable watersheds. The work oit there is not user friendly so is being left out of pre fire assessments, plans, and mitigation activities

Questions for Mike and Troy	
Navigators Concept	
	Will these navigators be additional funded positions or just asking additional job duties of existing positions? Have you thought about having people already doing some of this work (extension, outreach, UPH, etc.) just have additional funding?
	How do you plan to find the navigators for communities?
	Many State Geological Surveys have people who would be great navigators. Is AASG (Am Assoc State Geologists) involved in there efforts?
	Would Navigators be necessary for Pre-incident, During Incident/Post Fire Planning and Mitigation Implementation phases?
	do you see the navigators as government or non-profits? Funding?
	Are navigators only post-fire or also pre-fire?
	Look for ways that navigators can be holistic and integrated positions - prefire and post-fire and help support local capacity
	Am I hearing. Navigation taskforce, very small team, multi-governmental level?
	Bravo on the roadmap and navigator ideas. Small counties simply can not navigate the maze of state and federal programs. It will take a team for most large fires. The smaller the county, the larger the team that is needed.
	I've seen quasi navigators from the firefighter community try to liaison the post fire response without sucess
	Much of the discussion here over the past two days has focused on landscape impacts. Is there any thought that these navigators may need to cover more integrated post-fire issues?
Coordination with Others	
	Army Corps of Engineers and Silver Jackets are working on very similar roadmap products, many already completed for some states. Are you coordinating efforts?
	Have you considered reaching out to soil and water conservation districts to be a good place to start with navigators. They are local, often have technical resources, and are generally trusted by the public.
	NRCS, DOI, USFS and NRCS main players identified in the diagram. Noting that there are much broader agency resources available (HUD, SBA, EPA, USACE, etc)and the issues are broader than land mgt and fire mgt.
	We often have Baer interagency liaisons that fulfill the navigator roll. Even after the assessment is complete. They work with other cooperaters to assist with post fire planning.
	how many states have implemented interagency BAER teams of state and local representatives?
	We have federal interagency liaisons often during Baer assessments
	Other than BAER, what other programs is the group looking at?
Communication	

	What opportunities exist for people to get involved in shaping these conversations?
	How best to package info for reaching WGA on post fire issues? What are they responsive to?
	communication
	Do you have plans for webinars or trainings for practitioners?
	mentoring
	mentorship
	How have you communicated your policy gaps and opportunities to both practitioners and researchers?
	Are there any upcoming roadmap and navigator trainings? Opportunities to bring partners in to learn from you together?
	Many of us live in small towns either impacted by now or soon to be wild fires.... I have been struggling to get on a team that can help the locals, can you assist with this? Seems the only time they care is when a fire happens...
Funding	
	do you foresee a time when BAER-like federal funds will be available for non-federal and tribal land mitigation?
	How can small rural local agencies access funding to support training for staff to be effective post fire response?
	Tribal lands r covered by doi Baer teams. Nrcs and army Corp of engineers can fund post fire treatment on pvt. Lands.
	Does your work include assisting regions who have no federal lands and their associated resources, experts, and efforts?
Get it done!	
	I excited to see a road map! Our NGO was able to help disaster survivors make a match (using volunteer hours and funds) for the federal programs. It was a great partnership.
	Are you working with communities of all sizes?
	Is there a roadmap for people working in areas with no federal lands and/or no experience with post fire work?
	There has been a lot of postfire science discussion in this symposium, where does science fit in with WFLC and WGA?
	How can the results of this symposium be used by WFLC and WGA?
	Time frame for roll out?
	What are some of the top policy issues that you think might be solvable In short(er) timeframes?
	preparation time
	What are your suggestions for navigating the issues big liability? How can federal employees balance providing risk information with non federal players with liability?

Questions for Anne and Cara?	
Local/State	
	Local Conservation Districts are also a great resource!
	Local Fire Safety Councils
	Watershed interest groups -- great example from New Mexico. How can we expand this reduction of litigation to forest thinning when that will be better for the watershed?
	Association of State Floodplain Managers at national level and state chapters are focusing more on post-fire issues and being more proactive of managing floodplains to minimize these impacts.
FALN/FAC/Firewise	
	Is Burned Area Learning Network part of or tied to the Fire learning Network?
	Does Burned Area Learning Network have a blog or webpage or place to share this information for learning exchange?
	Our Long Term Recovery Group is a member of Fire Adapted Communities and it is proving to be a very efficient partnership!
	Firewise communities Are a great way to share
Engaging	
	Are these networks working together?
	How can we get involved in some of these networks?
	Would assume many Universities are engaged in research - not sure if they are engaged with existing networks mentioned.
	Practitioners and stakeholders added to discussions
Feds	
	Army Corps of Engineers and Silver Jackets "roadmaps" or "toolkits"
	Planning - early engagement with BAER folks et al to help discussions of how landscapes may react to a fire
Funding	
	Comment: connection of Troy's slide, fed, non-fed lands and funding sources - the NM RMRS GTR-315 suggestion: connect to state hazard mitigation plan and local HMP to connect to FEMA grant programs
	funding
Indeed it is	
	intense effort

Any networks/efforts we missed?	
Local/NGO	
	Local Conservation Districts are awesome!
	Prescribed Fire Councils
	Watershed councils
	Floodplain Management Assoc
	Our Air Quality District is very helpful, also.
	In New Mexico working with Spanish Land Grant communities and or acequia associations
	Local nursery for native species grasses. Local farmers for weed free straw
	Long Term Recovery Groups and their DCM's are a great resource to the private land owners!
	California has integrated regional water management groups that would be a good interagency network.
	Watershed partnerships, NGOs and others that pull regional fire folks and natural resource managers together: Fire Safe Councils, etc
	Healthy Headwaters collaboration of water providers and land managers (recently moved to National Wildlife Federation)
Engagement	
	How can we get involved with some of these networks?
	How do these networks articulate with watershed consortia etc
	Are their networks with water providers that we should be engaged with?
	are researchers engaged with networks?
	Have we been effective in getting info on these networks out to practitioners?
	Visualization Tools
	Information
	It would be great to see some kind of centralized "address book" for practitioners and researchers working in post fire to connect.
	Partnerships
Federal	
	NASA Satellite Needs Working Group
	DOI Remote Sensing Working Group; Infrared Interpreters; etc.
	The NASA/NOAA/USGS co-funded Federation of Earth Science Information Partners (ESIP) Agriculture and Climate Cluster has recently started to examine AI-related methods for knowledge discovery related to wildfire mitigation and response.
	Army Corps of Engineers and Silver Jackets "roadmaps" and "toolkits", some completed and some in progress

Joint Fire Science Program	
	JFSP Governing Board could be requested to give additional emphasis to Postfire environment
	Does Joint Fire Science have a post-fire sub-area ?
	How do we become a "part of" the JFSP to create a learning exchange focused on post-fire
Fire Adapted Communities	
	Fire Adapted Communities Learning Network opportunities for people to join as Affiliate members
	Community Wildfire Protection Plans incorporate all your models. CWPP is used to implement work in Fire Adapted Communities
	State fire adapted communities networks: WA, NV, MT, NM, CO, and AZ
Conferences	
	High Altitude Reveg conference, Natural Areas Conference, George Wright Society

Two words to describe what we need in post-fire response?

Collaboration

- Collaboration
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- Collaboration
- Networking
- Participation
- Established_Networks

Relationships

- relationships
- Relationships
- relationships

Communication

- Communication
- Communication
- communication
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- communication
- communication
- communication
- communication
- Communication
- communication
- More_communication
- Outreach
- outreach

Coordination

- Continued_coordination
- Coordination

Coordination
coordination
coordination
Coordination
coordination

Education

Education
Education_for_end_users
mentorship
mentorship

Funding

Funding
funding
Funding
Funding
funding
Funding
Funding
funding
funding
Funding
More_funding
Outreach_to_appropriators

Capacity

Local_capacity
Local_capacity
Local_teams
More_time
support
Capacity

Science

Science
science

Long Range

Long_range
long_range

Other

modeling_advancement
One_government
Place-based
Research-to-Operations
trees
Trust
Advocacy
Broadening
Clear_rolls
Climate_research

Communities
connectivity
cross_boundaries
debris_flow
Holistic
Impact_visualization
Innovation
Integration