

Posted participant recommendations and comments from the BALN workshop 4/16-4/17/2015

✓ = individual sticky note posted by a participant

Title bolded= poster heading on the wall

+ dot= dot sticker placed by another participant agreeing with the statement on the sticky note

*recommendation that came out of the final discussion

Improvements

- ✓ Regional (R3) Wildfire Risk Assessment could be useful for prefire planning **+dot**
- ✓ How can prefire planning assist postfire action?
 - Accelerate assessment, reduce cost, time, and exposure **+ dot**
 - Would allow incorporation of long-term ecological goals
 - Take action before the fire to make roads and infrastructure more resilient, i.e. comparable to changing from shingle roof to metal
 - Could establish wall to wall data across admin. Boundaries
 - ID emergency response such as pulling culverts could be simply implemented without the investment in assessment
 - Increase capacity of BAER/BAR to reflect increasing workload and complexity of workload.
- ✓ Next conference I think we should include decision makers/line officers and explore social/political aspects-how important is “wnimby” (why not in my backyard?) in the long term rehab decision outcome **+dot**

*Require CWPPs and updates to do preplanning for postfire recovery and resilience. State forestry is critical as is NMAC (NM Assoc. of Counties) as they fund and approve plans **+2 dots**

Engaging the public

- ✓ Think about the messenger. Focus on people who know the social context. Personalities and relationship =paramount
- ✓ Forest Science and Postfire and climate change effect:
- ✓ Be clear about what we do know a lot about and what we do not helps build trust
- ✓ Have a third party facilitator at (public) post wildfire mtgs.- not agency and not community affected.
- ✓ There is no such thing as the “public” ...”public” scale (?) is a non -starter in communication
- ✓ How do we engage communities in long term recovery?
 - Could be part of a community wildfire protection plans-

- Listen to the community- what are their attitudes? What have they seen and experienced on their landscapes in the postfire environment? State of the science on postfire trajectories. Also emphasize what we don't know.
- ✓ More effort is needed for prefire id of values at risk, landowner perception and land mgt objectives. One avenue is wildfire protection process, many of the players are involved, just need to expand beyond protection from fire to protection/actions needed from post fire effects such as flooding, run on seeding, weeds, etc.
- ✓ Outreach-
 - Go to communities to present information
 - Designate an office or agency to perform outreach – tiered approach- individuals vs communities
 - Communicating to seasonal residents can be a challenge
- ✓ Community available models (social), ex. “trial by fire” (Anne found a video here <http://trialbyfiredoc.com/>, is this what was meant?)
 - Communities that have people (groups) without insurance-insurance avenue
 - Impacting or influencing building ordinances
 - Documentary of community postfire, Education institute, 10-15 minutes
- ✓ Need for fillable form for communities to list priorities (infrastructure) and non-traditional partners to help communities (churches, food banks, etc) “ IF a fire happened tomorrow, who do I need at the table”
- ✓ Managing expectations of the public
- ✓ How can we effectively move our policy/action based on FORESIGHT rather than waiting for a community to experience a fire and act in HINDSIGHT **+dot**
- ✓ Map fire scenarios and post fire treatments in preplanning (hydrology, fire intensity and debris flow) ex. Flagstaff modeling showed downtown would be under water.
- ✓ Often rural communities that need preplanning and fire education the most are not roaded (remoteness, convenience for agencies, etc.)
- ✓ Forest Service could do trainings on land grant communities and unique NM communities to help build trust. Every land manager should read “trespassers on our own land”
- ✓ How to better engage communities?
 - No need to reinvent the wheel
 - Excellent examples and case studies
 - Big events create opportunities to initiate preparedness activities
 - People do not always respond to science and information. “Stories” are important
 - Multipronged approach
 - Challenge when leaders refuse to engage
- ✓ Incorporate postfire into “fire adapted communities” forum
- ✓ Interagency approach addressing restoration, during the fire and after the fire

- ✓ “Living with Fire” message expanded to restoration, incident management, postfire,
Incorporate the “certainty” of living with postfire flooding is part of living in the wildland
- ✓ Use WFDSS more to help communities see their vulnerabilities (erodible soil, infrastructure) to help prepare for wildfire- engage communities to create these layers (id special community places)
- ✓ Preplanning needs to include planning for what you want to do if a wildfire occurs
 - Treatments
 - Social planning
 - Communication, etc.
- ✓ Fire prevention people may be another resource for communicating BAER to communities
 - Use the Fire risk protocol and add to BAER preseason meeting
 - Share Research highlights (NAU, etc.)
 - Invite southwest consortium to national and regional preseason meetings
- ✓ Utilize the forest prevention/education program to get the word out on BAER and postfire effects!
- ✓ Have companion community resilience and recovery teams that support and broaden BAER efforts. They could be agency or companion entities like non-profits, municipalities, etc.
- ✓ Education

Short and Long Term Risk Assessment

- ✓ The risk assessment process could build upon the Forest Service’s Risk Management Protocol which involves:
 1. Risk Assessment
 2. Risk Analysis
 3. Two way risk communication
 4. Risk sharing dialog
 5. Risk informed decisions
 6. Document risks (WFDSS)
 7. Monitoring and adjustments
- ✓ Postfire risk integrated into WFDSS +dot
- ✓ Have the BAER team work with fire management during pre-season meeting during phase I risk management assessment + 2dots

- ✓ Ability of models to account for the contributions of interceptions
In R3 (Forest Service) w/ annual cereal grains there in interception in yr 1
- ✓ Need to have a hydrologist on the incident team

Adaptive Management Loop (questions in italics were posed to the group)

- ✓ Research needs
Matrix of biotic and abiotic factors in a spatial data base that can quickly assign a criteria of risk and/or probability for success that can facilitate a rapid BAER assessment
- ✓ *Should we seek to restore burned areas to preburn condition?*
No. Need to ask question in terms of scale and in regard to structure, composition and function
- ✓ BALN- Identify and connect data/information of past 2 decades of large fire
- ✓ *What research is needed?*
Meta-analysis:
A review of large and small studies, present key themes, findings, considerations in scale, biotic/abiotic factors, timing, etc.
- ✓ Look for gaps in the research
- ✓ Look back at BAER or restoration/rehab actions that are 10 years or older
- ✓ Understand the historic variability in crownfire in the SW.
- ✓ *How do you know when to accept change?*
No- not in most cases- want to restore healthy watershed/function, but not necessarily configuration

What is feasible cost or ecological

Use FMP to direct goals, forms and functions- look at 20,000 ft level goal for that pice of land

Guiding hand to help move on ? trajectory

- ✓ Fed agency transparency with budgets, sow, timeline
- ✓ Diversification of structure, composition, etc. to guard against (?) whatever comes
- ✓ *Research needs*
 - High severity patches size, at what configuration (?) affect postfire mgt. activities, natural regeneration, erosion, etc.
 - Increased monitoring of postfire effects informs next project

- Longer term impacts of BAER actions (10 yrs postfire)
 - Societal attitudes toward burned landscapes
 - Treatment effectiveness of specific postfire treatments, what are the variety of benefits from each treatment?
 - What are the butterfly effects to water, etc. of fire
 - Knowledge transfer! NEED sharing research/info
 - Get managers to make presentations and write papers- how do we get the info from them (it's easy to get info from academics)
- ✓ Require quantified treatment effectiveness monitoring and reporting function, mandatory for all BAR projects
 - ✓ *Adaptive management loop*
The large patches that are created through high burn severity events need to be instrumented to know the variation of temperature and moisture in support of future treatments/actions
This monitoring will create the feedback loop for adaptive mgt. + 2 dots
 - ✓ What are the implications of climate change for thinning?

Needs

- ✓ Need more public information officers with strong fire ecology background to help explain to the public the goals and objectives of BAER/BAR and why or why not! Treatments are taking place with respect to sustainability, natural response, ecological integrity and resilience of ecosystem service + dot
- ✓ Enable and implement more prewildfire treatments to mitigate high severity wildfire effects, strategically placed to protect priority ecosystem services
- ✓ Have a workshop for prefire planning for postfire action + dot
- ✓ There is a need for communities and implementers to communicate the value of science to policy makers and funders.
- ✓ *Preplanning for postfire recovery*
Preplan data assembled, development of native plant materials, standing mulch and seed contracts

- ✓ *Prefire* for the ideas below **+dot** :
 - Municipalities have responsibility
 - Staff
 - Assemble infrastructure info-culverts, low area areas
 - Soils data
 - Reservoirs
 - Useful for BAER teams
 - Provides municipality an opportunity to act pre-emptively
 - Citizens
 - General awareness
 - Postfire*
 - Useful tools for BAER
 - BAER provides communication

- ✓ *Prefire planning*
 Id local government and user groups and have a point of contact for each group

- ✓ Better utilize and document best management practices to harness postfire (energy) soil erosion, sedimentation, and debris to restore soil/sediment storage/connectivity and water storage capacity in degraded down cut river/riparian and wetland systems

- ✓ *Research need or tech transfer*
 I would like to have more research results that characterize the fire behavior/extent of pre-settlement fire on the landscape-admission that canopy fires were in the pre-settlement fire regimes and understanding of that complexity throughout our various ecosystems.

- ✓ Need to do more research on the effectiveness of seeding, particularly in the Southwest at high elevations with the pine ? and mixed conifer sites
 I feel the current research we have in regards to the effects of seeding or effectiveness of it keeping soils in place is inadequate

- ✓ Could some agency such as homeland security or even the state be placed in charge of large incidents that would coordinate the entire emergency response, fill gaps, etc. allowing the agencies that have specific tasks and funding sideboards to get their piece done more efficiently?

- ✓ Question to study
 Does seeding in the SW (timely, in mc or pipo) reduce erosion?
 Amount of time until erosion returns to prefire levels

- ✓ All aspects of our thinking about fire
Prefire treatments, fire response, etc.
Needs to have some element of frontloading for postfire response
- ✓ At a meeting yesterday, I was told by a natural resource professional that if streams were in good shape-meanders are good, channels connected to floodplains, riparian vegetation good, postfire flooding was not a problem. The stream would either prevent it or mitigate the damage to the point that prefire money would be better spent on stream work than on forest thinning. Specifically they said the Dixon Apple Orchard video was overused. Needed: bring along our colleagues.
- ✓ Next steps
Next time tap deeper into grassroots organizations and agencies that are more involved in work on the ground.
- ✓ Build capacity for local BAER Team members (educate local BAER team members on technical knowledge) + dot
- ✓ Change policy to encompass all postfire activities- BAER, salvage, replanting etc. together across agencies. Tie NRCS EWP program to BAER so funds are available faster- Pete Robichaud
- ✓ Develop quantifiable criteria to help assess/measure ecological/fire resilience.
- ✓ Would like to see the NRCS EWP program mirror that of the FS BAER program. This could allow for both federal and private land to be treated at the same time. +dot

Engaging the Public

- ✓ Why is the public so hard to engage?
 - Diverse
 - Many individual perspectives
 - Not a single point of contact for groups
 - Burn out after suppression effort (by managers?)
- ✓ Community PIO/outreach, instead of BAER
Is it really a BAER team responsibility to engage communities?
Provide an education piece, communities have to send it out (communities often better messenger too)
- ✓ Use fire prevention officers or NRCS. Include contact with communities, talk about post fire effects and limits of BAER program.

- ✓ Would a PIO for BAER help manage expectations for ES/BAER/BAR?
- ✓ Emergency plans in all communities should include fire risk and consequences before any fire occurs. A kind of fire “prevention” or explanations of prefire treatments should also be included. In this way, people could be prepared (physically and psychologically) for not having unreal expectations in pa postfire situation.
 - That would be a way of:
 - Having people more prepared and protected
 - Conserving private/public properties and values
- ✓ Before
 - BAER info into WFDSS
 - Info packets to communities across the west
 - Send table BAER exercises (what are these?)
- After
 - BAER-PIOs
- Before
 - GIS BAER from community assessment
- ✓ Need to add the social scientists
- ✓ Social Thresholds (understand these along with ecological ones)
- ✓ There is different language being used to define emergency, disaster, by scientists and by the community. How do we bridge this? How does the community find out how to assess danger?
- ✓ BAER-PIO
 - Generate information packets disseminate widely around the West
- ✓ WFDSS BAER info

*Do write up about the BALN to the www.facnetwork.org audience

* Keynote address for the 2016 NM WUI summit

- ✓ Dedicate a person to social media to squat rumors/ tell what is really happening
- ✓ Social scientist who can focus on post fire impacts to communities
- ✓ Tell communities what is going on
 - Transparency about budget for postfire rehab programs- one or a few fires could eat up the national budget
 - Limits to ability to act

- ✓ During phase I of the FS risk mgt protocol at which time the assessment of values at risk is done, the BAER folks should participate in this process to understand what potential mitigation may be commensurate (?) for the values at risk.
- ✓ Two way communication at community meetings. Usually we (agencies) go to deliver “the message” but we also need to listen to the community needs, history, and vision. Hearing them will connect them and build relationships +dot
- ✓ Communications:
 - Vocal groups have a lot to say and dictate how policy is created or even modified to appease the crowd
 - Agencies speaking the truth about the realities of land status, taking risks to tell communities like it is.
- ✓ Recognize the limitations of study design and exercise common sense
- ✓ Outreach through SWCD and extension to public on what BAER is (do prefire)
- ✓ From Day 2 session 1 Q3
 - Acknowledge downstream communities
 - Message= what you stand to lose
 - Scoping mtgs.=concerns, issues, knowledge gaps, solutions
 - Neutral moderators
 - Educate media to change the message
 - Honest sympathy.
- ✓ Be honest and scare them into action
- ✓ Include elements of human stories from fire, not just data
- ✓ Engage communities: sometimes there can be a positive effect after severe fire- raises awareness to support treatments. Example: Schultz fire (2010) in Flagstaff led to public support for Bond Vote for Flagstaff Watershed Protection Program

*Write a position paper to change postfire policy across agencies. Submit through congressional offices- Pete Robichaud

- ✓ Engage county supervisors and developers about appropriate development and build codes for wildfire and flooding

Rehab and restoration tools and processes

- ✓ Designs need to be really strategic
Where are areas likely to have success in regeneration?
- ✓ Joint BAER/ESR meeting events (BLM, BIA, NRCS, USFS, etc.)
- ✓ Postfire treatment:
In burned areas, perhaps treatments (due to pressures from communities and the public) are not always the best use of resources. The risks of “undesired outcomes” are high with many treatments (intro of invasives, clogged culverts, etc.) However, a “top to bottom” approach can have successful outcomes to protect soil, slow down water, etc., so that can be a model for short-term work for short-term objectives.
- ✓ Fire resource advisors are trained in the BAER process and able to communicate
- ✓ At the SW Fire Science Consortium Resilience Workshop in Tucson, many of the participants were practitioners. At one of the breakouts was a discussion of postfire rehab. What was considered effective was all over the map. About the only agreement was that 90% of the postfire treatments were useless, done principally out of the need to do *something*. This was discussed before lunch in a different form.
- ✓ NIMO teams can oversee fire suppression. We want similar coordination for BAER but different funding sources makes this a challenge. Without coordination, it is hard to tell a consistent story to the public on a large fire.
- ✓ Responsibility
 - Fire IM T, IC BAER and agency administrator
 - IC’s have standards for qualifications- training, experience are prerequisite qualifications
 - What are the training qualifications for agency administrators and BAER leads? + dot
- ✓ Preplanning for BAER-We should ID values at risk ahead of time to pass off to the BAER team- this is being done by USFS in California.
- ✓ Use the (FS?) Watershed Condition Assessment/Framework as a tool for prefire planning to determine potential vulnerability to debris flows, etc. to an uncharacteristic wildfire.
- ✓ Problem: FEMA only replaces infrastructure that existed, not what is needed after a wildfire. Example: tiny culverts in a watershed that now has huge flows. +dot
- ✓ Integrate CWPP into BAER + 3 dots

- ✓ Other burn severity calibration methods to reduce time, cost, exposure associated with calibrating imagery. Time is so critical for BAER- is the time, \$, exposure required to refine that assessment resulting in better outcomes?
- ✓ Hillslope and channel interactions:
 - Research from Cerro Grande/ Los Alamos Reservoir showed the fines being detached/transported in years 1-2, and the gravels (and larger) being detached/ moved in years 2-3. Sediment balance research shows that when sand (largest of the fines, almost gravel) is added to a flow, the transport rates are increased. So what? If the fines are kept on the slope (or encouraged to accumulate), less sand will be added to the channel and sediment transport capacity will be reduced, letter down-cutting, and therefore faster recovery or stabilization of sediment balance processes + dot
 - !when soils move downhill, the cost of returning a soil particle's potential energy is tremendous
- ✓ Have a preseason tech transfer between university and FS research and BAER teams. Share tools, research results and policy changes +3 dot and " I love this idea"
- ✓ BAER teams
 - How do we move away from throwing \$ at it?- target only to necessities + dot
- ✓ Are the adjustments to burn severity maps improving outcomes of emergency response? i.e. burn severity is combined with the presence of critical resources, potential effectiveness of treatments- is the refining of severity improving outcomes to the degree that warrants time, money, exposure?
- ✓ Knowing the odds of success should help minimize the trial and error of postfire treatments. This is not just betting on the come, but hedging the treatments for success
- ✓ We need to do a better job of monitoring BAER treatment effectiveness to inform adaptive management. Need more monitoring funding! + 2 dots
- ✓ Create a table/spreadsheet/database of different postfire treatments with their short-term and long term effects (science based not value laden) + info about conditions where they were successful and where they weren't. Could be used to :
 - Select appropriate treatments for a specific postfire course of actions
 - Identify gaps in information that could guide future research
 - This could be one followup project for this community of practice in NM and SW

Inter/Intra Agency Coordination

- ✓ Reach out to county officials to use postfire planning + 2 dots
- ✓ Interagency preseason meetings (this whole comment got 2 dots)
Identify what authority each have, where it stops, who else can help
Soil and water conservation districts
Silver jackets in AZ? Similar to New Mexico
Expand on www.afterwildfirenm.org
- ✓ Preseason meeting:
Multiagency involvement and discuss funds available. This is what Silver jackets is about.
AZ silver jackets webpage <http://www.nfrmp.us/state/state.cfm> (Anne added this hyperlink this since there was a question about AZ engagement)
- ✓ USFS BAER does not consider impacts to other lands downhill, but the USFS lands are the source of those impacts!
- ✓ How do we keep BAER leads and agency postfire leads in contact? This event was the first time they were all in the room together at one time

Integrating short and long term management objectives

- ✓ Long term objectives should address the postfire effects beyond 3 years
The public from the local community should engage in the objective setting process
- ✓ People must be able to simultaneously think both long term and short-term objectives, and be able to envision the success and/or failure and through monitoring be able to adapt management actions
- ✓ Both strategies (long and short-term(?)) return landscapes to prefire configuration and accept change depending on the recovery trajectories of veg. within the burned area. Recovery is a long term process and we need patience and more research on natural recovery trajectories
- ✓ Practices that are known to introduce non-native species should, by policy, be the exception rather than the rule, e.g., straw mulch seeding.
- ✓ Research: Mary (Stuever, NM State Forestry) talked about the grand tree planning experiment after the Rodeo- Chedeski. What are the results of this tree planting effort, was soil loss reduced, has it increased natural regeneration? How? What are the lessons learned for where to plant vs not plant?

- ✓ Add long term recommendations to BAER report + dot
- ✓ Still need long-term studies; studies that span spatial scales landscape to plot
Why some divergent responses after high severity fires + dot
- ✓ Maintain site potential/productivity rather than focus on recreating the prefire configuration
+dot
- ✓ Does the need to keep soil on a burned hillside trump worries about postfire plant community composition?

Great Ideas

- ✓ Example: On Rx burn (Forest Guild) use volunteer PIOs to help spread the word about postfire effects, BAER and funding sources
- ✓ This group of folks should convene in person/conf call during the preseason before fire activities begin and work together so any new science and technology can be shared as well as policy updates from agencies
- ✓ Develop interactive geo-spatial internet site (e.g., DLCC Conservation Basin) to enable this learning network to facilitate sharing of lessons learned and best management practices among agencies, managers and academic community
- ✓ Expand BAER mandate to allow for larger downstream effects- rethink current scope
- ✓ Policy that enables longer term budgeting (i.e., 3-10 years) of BAR treatments, more consistent with our knowledge and science regarding the longer term process of ecological restoration + 4 dots
- ✓ A result of the workshop would be to build a postfire triage that can be explained or organized before fire season- and implemented after.
What funds, how soon, what advice, when?
Less agency specific guidance + dot
- ✓ Develop a “Drinking water plant operator’s guide for postfire conditions” – Pete Robichaud + dot
- ✓ Establish pilot projects for prefire community engagement – Taos? + 2 dots
- ✓ BAER decision support system!

- ✓ Community fillable govt. (?) form have info typically needed for postfire response- GIS data
Also food banks, clergy, fire depts. + 3 dots
- ✓ (see Bruno if questions) Increase the role of the CWPP group/team in prefire postfire planning,
esp. in places without another existing collaborative. + dot
- ✓ Mother Nature does a better job than we can in most cases
- ✓ I would like to see our “network” develop a culture that avoids the mindset:
“What I saw is ‘this’” (A practice works/doesn’t work; invasive plants come/ don’t come) and
therefore “‘this’ occurs everywhere” + dot
Yet on the other side of the coin, we need the narratives, the stories told of lessons learned, the
nuances of the wide variety of experiences, the sensitivity of how fire impacts at so many levels
- ✓ Engage UNM and other universities in helping fill the gaps
 - In research –scientific/engineering disciplines
 - In community outreach- community and regional planning, environmental
communication programs.