SUMMARY | Rim Fire Technical Workshop #1
December 18, 2013

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This meeting summary paraphrases individual comments and suggestions from workshop attendees. Statements do not indicate consensus of the group.

1. Welcome and Opening Remarks

Barnie Gyant, Deputy Regional Forester for Resources, expressed the desire of the Forest Service to approach the challenges posed by post-fire recovery in the Rim Fire area in a collaborative way, and to broaden the agency's past focus on salvage into a broader vision. He posed the following questions:

- How do we set the stage to we prevent other Rim Fires from occurring?
- What are the effects of sediment on aquatic systems?
- If/when we plant back, depending on whether a seed source is present, what do we plant back?
- How do we incorporate climate change into those decisions?
- It will be some time before there is large woody debris back on the ground, so what do we do to address this need?
- Riparian areas need recovery as well, and how do we approach that?

He concluded by emphasizing that we will design the planning for post-fire recovery as a group, and that today will be an open dialogue, and the Forest Service is here to listen. He explained that this is the primary opportunity to those present to share their thoughts with the Forest

Service, and that the Rim Fire is a personal priority for him in 2014. He expressed his commitment to helping to provide direction to the Forest Service as this collaborative effort moves forward.

2. Overview of Landscape Considerations-Topical Recommendations: Vegetation, Fire, Wildlife, and Riparian Zones

Dorian Fougeres, Center for Collaborative Policy CSU Sacramento, introduced the workbook provided to each of the participants as a key material for the workshop (see Workbook). He explained that the group identify key high-level goals, and then focus on where those goals identified can best be implemented on the landscape, and treatments that will best address those priorities identified. He introduced the four presenters to follow, covering the following broad areas: Vegetation, Fire, Wildlife and Riparian.

Malcolm North, Forest Service PSW: Vegetation and Rim Fire Recovery (Follow this link to view a copy of the Powerpoint presented for this item: http://www.sierranevada.ca.gov/our-work/snfci-home/m_north-vegetation-ppt)

Malcolm presented some general ideas regarding vegetation and how that might inform what happened in the Rim Fire. In the context of the Rim Fire, he identified the two big actions as salvage and reforestation, and suggested looking at those as opportunities. He began his presentation with current and desired conditions, suggesting that if current conditions are left alone, seeding and successful regeneration of the trees is going to be very spotty in the high severity patches, with massive potential for high rates of shrub growth.

He suggested promoting support of pine seedlings as much as possibly by reducing fire extent and severity until trees are large enough to naturally resist fire. Projections show it will take 40-65 years for trees to grow to a point of fire resilience. After that period, managed wildfire and prescribed fire may be the most effective means of increasing fire resistance.

He discussed one of the concepts in ecological theory, disturbance regimes inherent on the landscape. In terms of management actions, he posed the question of how they can be measured against historic disturbance (temporal, spatial and biological legacies?). He noted that in frequent fire forests, it is not clear how long coarse woody debris persisted and that in the Rim Fire, the green trees may be the most important biological legacies. How best to retain and minimize impacts to individual patches of live trees is a key issue.

He suggested that green trees in low and moderate severity patches within the high severity blocks are important nuclei for tree regeneration and provide contrasting habitat, and that one approach is to protect those green stands with network of "Fire Management Features and Areas" rather than fuels treatments within those patches. Ecological literature suggests the importance of fuels treatments at the correct places, but that those treatments should not be put in place among green stands.

He noted that the recent Forest Service vegetation resilience project was well done, and to quote it, "When considering reforestation, topography, and fire severity patterns are crucial."

As a general approach, he recommended varying density and species with topography. Two planting strategies should be considered and contrasted: Foundational forest: low density of widely dispersed regeneration; and Nucleation: safe sites invested with planned re-entry and maintenance. He concluded by saying that planting the way we have done in the past is something that we want to revisit, and managers should consider different planting strategies.

Maria Benech, Stanislaus National Forest – Summit RD (Standing in for Shelly Crook): Fire and Rim Fire Recovery (Follow this link to view a copy of the Powerpoint presented for this item: http://www.sierranevada.ca.gov/our-work/snfci-home/m_benech-vegetation-ppt)

For some time before the Rim Fire, the Forest was already working on a restoration strategy for that landscape. Goals and objectives moving forward include:

- Maintenance of reforestation treatments through re-entry
- Compare the homogeneous forest and plantations with groups and gaps.
- Re-entrance and treatment of overstocked areas where trees survived
- Heterogeneity as the key moving forward and something to promote and/or retain.
- Reintroduction of fire as an ecosystem process that reduces the negative effects of fire and lessening severity in the long-term

She concluded by mentioning the general desire to utilize fire as a process in the system over the long-term, and asking how much fire and mortality can we live with?

Ryan Burnett, Point Blue Conservation Science: Wildlife and Rim Fire Recovery (Follow this link to view a copy of the Powerpoint presented for this item: http://www.sierranevada.ca.gov/our-work/snfci-home/r_burnett-habitat-ppt)

He began by explaining that for many types of wildlife, high-severity burns have value, and suggested that managing for mosaics will promote and restore heterogeneity. He defined Value High Severity as a level that "supports the most unique bird community compared to surrounding green forest, and promotes recovery of fire-suppressed disturbance-dependent

resource such as aspens and hardwoods. He suggested that we should be thinking about high-severity areas and the effects on fungus, flowers, shrubs and snags.

His recommendation is to evaluate where best to manage for these resources and allow natural processes to dominate. He suggested lining up high-severity resources we want to retain vs. keeping whatever high-severity area remaining after salvage and reforestation.

He described the Black-Backed Woodpecker (BBW) is an emerging indicator. They are nesting in very small trees, and are strongly selecting for high snag density areas. One thing that is missing for BBW is a spatially explicit habitat suitability model for the Rim Fire. He identified opportunities to build that model and identify places where the BBW would thrive, and set those places aside.

Recommendations for High-Severity areas:

- Leave large blocks of un-salvaged areas (>200 acres)
- 100 square feet of snag basal area per acre
- > 5000 feet elevation
- CWHR M&D stands of size class 4, 5, 6
- Lodgepole, fir, Jeffrey pine, mixed conifer
- Retain some adjacent to green forest or in areas with patchy effects
- Retain in areas of high beetle activity (may conflict with silviculture mindset)

Manage for mosaics

- Retain high severity patches adjacent to green forest
- Prioritize resiliency of remnant green forest in and surrounding burn area
- Limit replanting in mixed severity areas with smaller patch sizes.
- Ensure restoration treatments are compatible with use of prescribed and managed fire
- Consider poking holes and intensively managing stands
- Reforest in variable density clumping with unplanted areas interspersed.
- Reinforce heterogeneity with fire

He concluded by reminding the group of the need to keep some level of emphasis on climate change and its associated impacts, and consider type conversion from pine to hardwood or chaparral.

Jonathan Long, Forest Service PSW: Riparian Areas and Rim Fire Recovery (Follow this link to view a copy of the Powerpoint presented for this item: http://www.sierranevada.ca.gov/our-work/snfci-home/jlongriparianppt)

He opened with the question of how recovery efforts could incorporate landscape scale riparian area considerations, and suggested that generally, riparian areas are resilient to wildfire. Hydrologic effects of high soil burn severity are one of the larger impacts. Long-term productivity and resiliency of riparian habitats must be considered as well.

He identified one of the key hydrology concerns as minimizing undesirable hydrologic connectivity while restoring natural hydrologic connectivity. He suggested that target erosion treatments would both protect road systems and reduce impacts from roads.

He identified the following watersheds with high soil burn severity: Reed Creek, Bear Creek, Jawbone Creek, Corral Creek, Granite Creek. He explained that the Forest Service is already looking at values at risk and vulnerability of channel erosion and incision processes.

He shared two key riparian habitat concerns: avoid disrupting natural recovery of riparian deciduous communities; and evaluate recovery of stream functions to guide grazing management. He also said that guidelines from wet Pacific Northwest forests do not translate well to drier more fire dominated systems, and that it has been found that large woody debris plays a relatively minor role in riparian recovery.

He concluded with the following points:

- Understand that functions vary within the landscape, including gradient, channel type, stream order, flow regime, aspect, disturbance history.
- Do not expect simple, effective standardized prescriptions, formulas or procedures.
- Deliberately experiment to promote social learning and landscape heterogeneity.
    - There is little research on long-term effects of post-fire riparian treatments.
    - Experimental salvage treatments, and possible thinning of riparian areas with high tree dead density, including reduce future fuels, increase light, moderate near term woody debris loading, encourage steadier long-term input of woody debris.
    - Experimental planting treatments, such as replanting conifers where they were previously dominant. Identify high productivity areas to speed recovery of large trees. Target high terraces for example.
- Identify other channel considerations, such as collecting rock material to inhibit incision and promote wetland development in low gradient reaches.
- Monitor and evaluate opportunities to treat incising channels, eroding stream banks, and large debris jams where there are values at risk.

Mark Schwartz—UC Davis: Exposure to Changing Climate (Follow this link to view a copy of the Powerpoint presented for this item: http://www.sierranevada.ca.gov/our-work/snfci-home/climate-change-ppt-mschwartz)

3. Tabletop Session 1: Recovery Goals: Report-Outs and Plenary Discussion

Recurrence in Concepts

- Create a landscape that is compatible with the frequent occurrence of natural fire and managed use of fire.
    - Using treatments or any entry to also achieving fuel reduction; be strategic in where we place them
    - Fuel reduction to maintain green component, allow fire back onto the landscape, and maintain those features into the future.
- Create a landscape mosaic across space and time.
    - Acknowledge the importance of where what we leave, in terms of snags and downed wood, and how those affect the health of riparian zones.
    - Use what we have left on the landscape as we plan treatments.
    - Look beyond just specific treatment units to all that would be desired across the entire landscape.
    - Salvage logging is one path to recovery but it needs to be tied to desired future conditions.
- Climate Change;
    - All actions should consider the changing climate and that management should be steered by adaptation to a changing climate.
    - Align future vegetation with climate change, and aid future adaptation through strategic plantings.
    - Resilience of the conifer forest may be low due to climate change, and thus may warrant a more aggressive approach to restoration and management.
- Green tree retention
    - Green tree retention is key and is emerging as a focal point. Reintroduction of fire will be beneficial if the fuels allow it, as the chances of fire spreading from those areas is reduced.
    - Retain and enhance the remaining green tree stands, focusing on densities and classes that are in shorter supply, and focusing on those as seed sources and key tools in reforestation.
    - Green patches must be protected. Retain burn/bird habitat and have that be part of the decision made as part of the larger strategy and NEPA.
- Local engagement and economy
    - Link the local community and the broader community to planning and implementation, because we need community support to accomplish all these things.
    - Local community support for managed fire and a higher tolerance for smoke impacts will be key if fire is to ever become the management tool many desire to be.

- Rim Fire can serve the very important purpose of an experimental landscape where we can learn and adapt.
    - There are information gaps use the Rim Fire Landscape as an opportunity to quantify and qualify treatment approaches and outcomes. Monitoring may not be a recovery goal but if we do not learn from this, it will be a lost opportunity. Information gaps also persist around coarse woody debris and its association to riparian areas.
    - Learning from this event is important to maximizing the knowledge and understanding gained from this event.
    - It is realistic to expect adaptive management for the next forty years, and whatever we want to accomplish, we must consider the reality of available funding in both the short and long term.
- Other
    - USFS needs to commit the Rim Fire Resiliency fire and fuels report, which is a living document, to be considered and used throughout all the planning, and incorporate GTR-220.
    - "More sniper, less shotgun."—be focused in our approach.
    - Maintain and restore resiliency to the landscape, and utilize burn areas as an opportunity to build-in resiliency as a restoration aspect.
    - Consider some form of decision-tree approach to prioritize goals, as some may be in conflict or necessary on parallel tracks.
    - Forest products are a key part of the equation and economics in terms of restoration. In some instances, forest products may be a by-product of any restorative activities.
    - BAER work has made major contributions.
    - Many areas have brown needles in the trees still and those will assist in some form of recovery in terms of erosion protection. Marginal survival of trees should be considered for multiple values.
    - Actions that may be determined as appropriate now must be taken into context of all future desires and long-term priorities.
    - Focus on generating a long-term restoration strategy to be sure that ten years out we don't lose sight of the goal.
    - Protect soil and watershed values
    - Cultivate a road network which maintains high water quality
        - Concern over how any of the new or temporary roads may stress the burned watershed, and how they will or will not detract from overall restoration.

Participant Comments on the themes identified include:

- There is a need for large vs. small burn treatments. If we are just looking at Forest Service lands we would need to treat 15,000 acres per year just to maintain current conditions. It was suggested that we all remain realistic and conscious of available funding and resources required to accomplish this.

- Create a long-term restoration strategy in which we are not afraid of the future consequences of a wildfire. We have the tools to anticipate what types of vegetation, future climate, etc. we will have. We can begin to shape current conditions into desired future conditions.
- It is important to consider impacts to stream systems; in a severely burned watershed the long-term effects on streams are profound. Avoidance is often seen as the best course of action but that is an assumption we need to question.
- Consider rethinking how we accept risk and mortality, and in the future we may need to accommodate more mortality. Long-term planning will be essential to any affective recovery. This is a 100-year project.
- What are we protecting green trees from? In a sense, they have been treated, and we should go in and protect those areas as a priority as opposed to fencing them off and ignoring them. Potential for fire on this landscape is high and as such, remaining green trees must be protected in order to retain that seed source.
- Nucleation concept has a flipside, which is the green trees and the opportunity to reintroduce fire. They are likely safe to burn now.
- There is a lot of scientific evidence, which supports the notion that we return fire to the system. Realistic consideration elevates that conversation beyond this room to higher levels of government. There is certainly room for doing more. One example where the conversation should be elevated is the issue of smoke from managed or prescribed fire.
- Some participants in deep conversations with air regulators to help them understand fire as a process and its inevitability in our system. The air regulator community is grappling with very tough issues in their regulatory framework.
- All fires aren't the same and all fire regimes aren't the same. This fire crossed many ecosystem types (lodgepole, mixed conifer, chaparral, hardwood). There should be an intermediate strategy of not just treating and walking away but continuing work in an ongoing fashion. There should be an initial plan and a final target that is place-based.
- We must consider shrubs as part of the heterogeneity equation. Regarding the concept of resiliency, we have not considered the social context. What is possible is really determined by how much public support is garnered.
- Consider the possibility the low to moderate burn areas are perfect. A lot of hard work has been done by the fire itself, and perhaps they are in the condition that one would expect.
- Long-term channel incision is something we may want to target more heavily. Short-term impacts will be there but must not lose sight of the long-term effects.
- Words convey different actions to different people. This venue is about developing objectives, which become the tools that achieve the goals. Some have an adverse reaction to the terms protect or conserve as they can be perceived as limiting.
- Though not exactly associated with the objectives here, we have to be very cognizant of the no-action alternative. There will be about 100K acres of no-action. How does that influence the acreage we will be working on? Ten months from now this group will be in the same place talking about low and moderate severity burn as there will be a substantial amount of new dead trees. The Forest Service will have to deal with the

paradox we face with owls and goshawks. There are some green areas that are PACs and are intact or partially burned, and we need to identify how to best preserve them.

4. Update: High-Fidelity Imaging of the Rim Fire

Carlos Ramirez provided an overview of high fidelity imaging available of the Rim Fire area (see PowerPoint presentation). The have a baseline LIDAR survey for the entire burn and a two-mile perimeter along the edges. There are many different parties involved, including UC Davis, JPL, NASA, USGS, several universities. Carlos suggested that if we think about the opportunity to experiment with the landscape, we can use these data as a background for identifying areaswhere refugia are expected to persist. He provided this information to give a context for the maps to be used for the discussion to follow. (See map PDFs)

Follow this link to view a copy of the Powerpoint presented for this item (coming soon):

Follow this link to view a copy of the Climate Modeling Presentation (coming soon) Justin Augustine, from Center for Biological Diversity, presented two maps developed by CBD, in which they took CWHR data, forest type Data, and fire severity data to dictate BBW habitat, and overlaid that with the salvage units. The second map has ponderosa pine and douglas fir as a forest type. This shows when Ponderosa pine and Douglas fir are included versus when they are not.

A map exercise followed in which participants used pens to mark the maps to show group where target areas were identified.

5. Tabletop Session 2: Primary Areas for Achieving Goals: Report-Outs and Plenary Discussion

The following are some common themes and key points identified by participants:

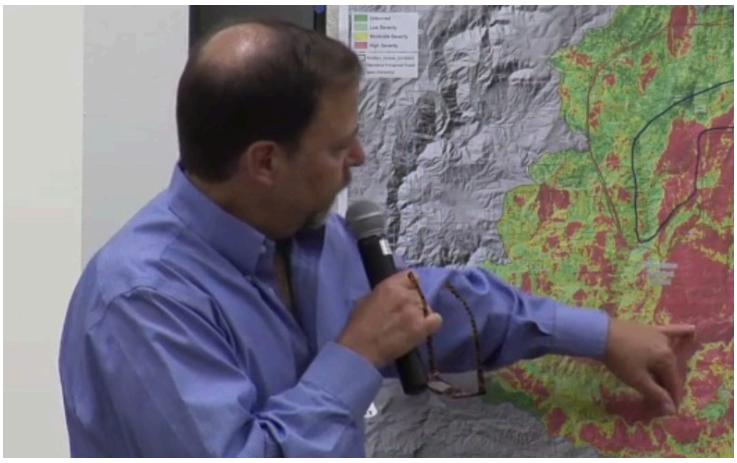
- Northern area is a common area of discussion. Clavey River area is inventoried and roadless, a perfect place to think about a return to fire.
- We need to look at the fire return interval, identify frequencies and severities, and determine what the links are, such as topography, other features. It is hard to know how much we can draw from historical patterns. Could use further detail on how maps [used in this exercise] were developed.
- Don't put plantations back in areas that burned at high or moderate severity and the associated frequency. We are not going to change this, so we shouldn't focus on those areas-- it will burn again.

- Severity could be affected by the level of salvage logging.
- Idea of active management and reforestation of areas you do choose is good. Active philosophy is decades, not every square acre, but really a commitment over time of resources put into re-entry and treatments over several years.
- [Referencing the high severity map] Information from modeling can become the basis for decisions. Use caution in that respect. Area near Cherry Lake/Hells Mountain has burned at high severity twice. Local forests who know the ground-level reality should be consulted.
- Park-side pattern is about the same, so what burned hot in other fires burned at high severity in Rim Fire. Ackerson Fire is a good example. High-severity patches are starting to come together and form larger groupings of high-severity fire.
- Area on the west of the fire was harvested heavily in the 50's and 60's and what was left pre-1987 were large plantations underlain by bear clover and manzanita, so what happened there was not a huge surprise. Decisions that are being suggested here require a much deeper look. There has not been much talk about the reestablishment of forests. Some suggestions and strategies may be premature.
- An example was given for two characteristic places on the landscape for getting forests back on the landscape. We want to see those manage in a way that promotes heterogeneity. Caution urged when we think about what resources, funding, and infrastructure will be available to replant.
- Consider the remaining green, healthy stands as something we want to protect. If there is no forest in a space now, do we want forest back? Is there a seed source? If there is not a seed source, then what do you do? And when you do something, do you do it the way it's always been done or do you do something different?
- What habitat do we want 50 years from now? We know PACs, furbearer, deer and other habitats were affected. We must keep looking forward and driving on toward the goals we arrive at.
- Focused on three goals: establish frequent fire disturbance regime, create/maintain mosaics of habitat in space and time, and create/maintain intermixed forests.

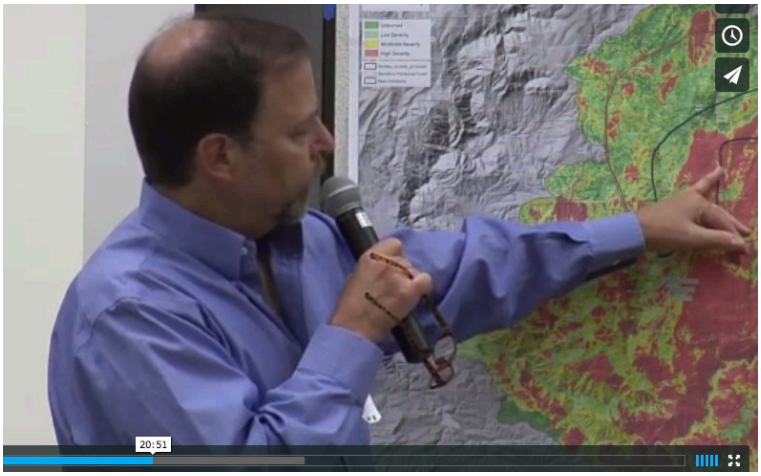
- Used two maps (resiliency team identified areas for strategic management of fire) which met goal of wanting to reintroduce fire. Emphasis on places on the landscape with some degree of mosaic post-fire.
- [Based on fire severity map]. Northern portion contained most of the larger trees and didn't burn at high severity. There are places where reforestation will not be possible due to soil and moisture conditions, so maybe consider oak species for propagation. Pilot Ridge is an area where there would have to be some way of treatment and will likely require mechanical treatments before any fire is used. Tuolumne Deer Herd is a consideration, and some removal is being done to allow deer movement.

- Largest trees are in the Clavey watershed which has been a protection priority. Fires were ignited in that area during the Rim Fire suppression.
- Looking for evidence of places where there was high departure from historic fire return interval. If we want to identify areas where a reentry fire could occur that is a consideration. Retaining snag forest for wildlife values as a general objective. Areas where BAER rehab is being done the dozer lines will be effective fuel breaks for a while. Tribal considerations should be brought forward, especially in areas where fire was used historically for cultural purposes. Looking back to tribal records could inform the effort to reestablish cultural values.

- Identification of what appeared to be clumps of green tree retention. Also looked at areas to put up a stand against a moving fire, including along ridge tops and the top of south facing slopes where you might be able to put up a fight against a fire and manage the land appropriately for that.



- Looking at the area to the north where the larger trees are, there is also a nice distribution of mixed severity joining bigger blocks of high severity, which could be an area to focus on achieving habitat/mosaic conditions. Could also consider looking at spotted owl PACs, and use areas around those as sample units for different levels of treatments to observe the response of spotted owls to controls and varying levels of salvage. Embedded within those sample units could be woodpecker response, planting strategies.



- Starting with ignition areas (recreation) and suggested continuous burning in the chaparral. Building on what others said, the entire northern area should be entered to take out whatever fuel is needed then turn it over to prescribed fire. Increase heterogeneity in high severity through pockets of salvage and pockets of planting with

aggressive follow-up using herbicides and other prescriptions.

6. Tabletop Session 3: Recovery Treatments: Report-Outs and Plenary Discussion

The following are some common themes and key points identified by participants:

- Discussions to this point have not included much about grazing; clearly, the forest is going to have some challenges handling the grazing allotments within the burn area. Do we have closures to grazing? It will affect sensitive riparian areas; but there is a possibility that cows could control shrubs in upland areas. Grazing leases have been long-standing; will they need to be modified? If grazing is not excluded from an entire watershed we need to look at how to develop off-stream water sources.
- Some participants expressed concern that there is a high risk of environmental damage from livestock entering riparian areas, and is not a very useful tool beyond shrub control.
- In riparian habitat and sedimentation, one of the techniques available is contour felling along the creeks above stream channels.
- Fire breaks have been discussed on the landscape, particularly in areas with frequent recurrence of fire. Where do we want to maintain fuelbreaks?
- We need to identify what to do with streams and riparian areas in terms of planting conifers.
- We need to identify the distribution and abundance of snag patches that will be retained on the landscape for the benefit of wildlife, including spotted owl and black-backed woodpecker.
- View of planting has changed quite dramatically since the last time big fires went through this area. So how do we plant and where do we plant? Consider doing some experimental plantings in an effort to understand climate impacts.
- Herbicides – how do we use them, and where and how? They can be a useful tool in certain short-term situations.

- Consider the hardwood component of the forest, not just along streams, but also the blue oak woodlands at the lower elevations.
- Identify how to address the relationship between snags and green stands.
- Should we plant in the lower elevations? If so, what do we plant? Should we try novel assemblages of species in an experimental way? One option is to plant what was there before.
- Set up an experimental design to engage in research on all of these topics. What does that experimental design look like? How broad can it be?
- Utilize the map developed by CBD as a starting point for identifying key areas for black-backed woodpecker to inform salvage work; at lower elevations be sure to give consideration to other species. In order to assess impacts or opportunities for BBW we may need to do a habitat suitability model.
  Make salvage decisions part of a landscape strategy vs. an assessment of where the most logs or best access are.
- Salvage will be the first and major impact on the landscape; each time salvage is proposed, define the objective. Economic objectives are in the forefront but also include other goals.
- Salvage is generally shown occurring in continuous blobs and there are concerns about live trees or low to moderate severity attributes would be protected.
- Establish fuelbreaks not only on ridgelines but also on road systems. Consider maximizing the economy of the hazard tree reduction EA by expanding it to include biomass and other materials to assist in fuelbreaks.
- Meadow ecosystems could be an opportunity for restoration given a likely rise in the water table in some places. Channel incision is a concern and there are many approaches to addressing that degradation.
- Pruning could improve resilience to surface fire.
- Support natural regeneration in the conifer areas if seeds are still viable.
- Encourage oaks as a means of supporting wildlife and spacing plantings to reduce pressure on oaks.
- Mixture of planting strategies would be appropriate to get variability, such as dense planting in some areas with active management, low density planting, and opportunities to plant in areas that are not salvaged.
- Build upon existing green tree islands to serve as connectors or nuclei. Snag retention is key, and a consideration of the interface between burned and green forests will help to add value to each. Buffer green forests with snags.
- Retain snags and large downed wood, based on wildlife benefits and other considerations.
- Replant to cultivate a mixture of species and elevation distribution. Be aware that there may need to be replanting for non-conifer species like hardwoods and shrubs that may not regenerate for a lack of seed source or other reasons (black oak, blue oak , alder and others).
- Exotic species should be kept in mind and monitored. Summary Observations from the Day/ Next Steps for Working Together and Closing Remarks

7. Summary of Observations from the Day

- It's important to talk about treatments and how to do things, but we must be careful not to lose sight of the economics and consider the lack of resources available to implement these ideas.
- The Rim Fire has gotten a lot of attention, but in reality, it is an indicator or representative of the greater Sierra Nevada Landscape. This should serve as a jumping off point for the entire region to acknowledge that this is coming to other parts of the region.
- SPI has been doing contour tilling and ripping, which the USFS does not have the ability to do. IF there is a co-benefit from a planting perspective, it should be discussed.
- It is worth considering the question of whether there is a compelling reason to spend the money inside the Rim Fire area where damage has occurred, as opposed to outside of it.
- The Rim Fire boundary keeps our focus there, but if you look at the amount of green forest it is really contiguous landscape. Consider taking the boundary off and look at the area holistically. This would be a unique approach. While the NEPA has to have a boundary, there could be opportunities to expand the area under consideration generally.
- In looking at salvaged vs. un-salvaged areas and the fuels management issue, we need to be clear that we are meeting the objective. Much of the information we have either comes from the southwest or the pacific northwest. There could be a situation where there is higher hazard post-salvage when compared to an unsalvaged area. Having a closer look at those fuel conditions would be worthwhile.
- The incredible high value of large material, which is often the focus of economic interests, is important in an ecological context too. Salvage logging has been vilified in some instances, but on the other hand the quantity of wood that is now in many of these areas is so much higher than the natural range of variability, if the goal was to retain more or less or what would have been there historically you are at least moving back toward a process that reflects the historic range.
- The ability the group has shown to be able to sit down together, embrace what happened, and address the issues that led up to the fire is a huge victory for all of us. We will further refine the work we have done today at the second Rim Fire Technical Workshop on January 23 or 31.

8. A Note on Photographs

Photographs included in this summary do not indicate that the individuals photographed agree with the statement with which each photographed is associated in the summary. These photographs are included in order to provide a context for the thematic statements captured in this summary.

9. Attendees

1. Greg Aplet, Wilderness Society
2. Maria Benech, USFS
3. Jan Beyers, USFS PSW
4. Jim Branham, SNC
5. Steven Brink, CA Forestry Association
6. Matthew Brooks, Yosemite National Park, USGS
7. John Buckley, CSERC
8. Dorian Fougères, CCP
9. Ryan Burnett, Pt. Blue Conservation Science
10. Brandon Collins, USFS PSW
11. Ann Denton, USFS
12. Peter Drekmeier, Tuolumne River Trust
13. Chris Fischer, USFS
14. Joann Fites-Kaufman, USFS
15. Pam Flick, Defenders of Wildlife
16. Marty Gmelin, USFS
17. Pat Manley, USFS PSW
18. Malcolm North, USFS PSW
19. Neal Fujita, San Francisco Public Utilities Commission
20. Mark Schwartz, UC Davis
21. Rodney Siegel, Institute for Bird Populations
22. Gus Smith, Yosemite National Park
23. Ed Smith, The Nature Conservancy
24. Scott Stephens, University of CA
25. Peter Stine, USFS PSW
26. Jessica Wright, USFS PSW
27. Bob Goodwin, USFS
28. Stanton Florio
29. Sarah Birkeland, USFS
30. Sherri Brennan, Tuolumne County Board of Supervisors
31. Sue Britting, Sierra Forest Legacy
32. Diana Craig, USFS
33. Nathan Graveline, CA Dept. of Fish and Wildlife
34. Barry Hill, USFS
35. Ron Hodgson, USFS
36. John Keane, USFS PSW
37. Jonathan Long, USFS PSW
38. James Munson, EPA
39. Craig Thomas, Sierra Forest Legacy
40. Angela White, USFS PSW
41. Joe Sherlock, USFS
42. Barnie Gyant, USFS
43. Mandy Vance, SNC
44. Brandon Sanders, SNC
45. Chris Dallas, SNC
46. Justin Augustine, Center for Biological Diversity