

Dinkey Project Planning Forum Proposed Action Briefing

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Meeting Framework

Dinke Overview in Brief

- 1** The Dinkey Project Planning Forum is a group representative of all the diverse interests in the forest: forestry, industry, habitat, wildlife, fire safety and landowners. (See Participant List)
- 2** The Planning Forum's goal was to develop a project (proposed action) in the area of the Sierra National Forest, known as Dinkey North and Dinkey South, a sub-set of the Kings River Project. The Planning Forum has agreed on how to implement the proposed action.
- 3** The purpose of the Dinkey North and Dinkey South project is to design and implement vegetative treatments that will help restore a healthy, diverse, fire-resilient forest structure by reducing stand densities and fuel loads while supporting a range of ecosystem functions over time.
- 4** The Planning Forum has developed the proposed action to implement the concepts identified in the general technical report developed by North et al (March 2009) entitled: "An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests." Heterogeneity is a key concept: avoiding even spacing of residual trees; protecting unique structures including wildlife trees, black oaks, snags and large logs, clumps of large trees, understory vegetation including shrubs and other hardwoods; and promoting pine. Attention to topographic aspect would yield unique conditions in canyons, slopes and ridges adjusted by whether these aspects are southerly, neutral or northerly facing.
- 5** Project implementation focuses:
 - a. Public and fire fighter safety
 - b. Management for fisher and owl habitat
 - c. Restoration of forest structure and fire resiliency

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Public & Fire Fighter Safety is concentrated in areas with summer homes, camps, and other buildings. The primary focus in these areas is safety and reducing fire hazard. The remainder of the project calls for treating ground and surface fuels, ladder fuels, and reducing canopy fuels sufficient to make crown fire unlikely.

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Management for Pacific Fisher and Owl Habitat and Restoration of Forest Structure and Fire Resiliency

- a. Increase fire resiliency in Protected Activity Centers for Spotted Owls.
- b. Increase fire resiliency Promote large tree density and structure in clumps. **Clumps** of trees are a grouping of trees identifiable by density, species mix, tree size or presence of snags. Clumps have an identifiable edge; they can be walked around.
- c. Create openings for brush and pine regeneration. Brush creates habitat for songbirds and other small wildlife. Pine regeneration assists in achieving the goal of diversifying tree species in the forest.
- d. Enhance pine by thinning around existing young and older pine
- e. Reintroduce fire as a treatment method.
- f. Reduce the risk of uncharacteristic wildfire to protect habitat.

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Dense Tree Clumps for Restoration & Pacific Fisher

- a. High Quality Fisher Rest Sites, composed of clumps of five or more large trees with high density, deep canopy and the presence of fisher rest structures (large legacy trees, cavities and rarely downed logs). These sites will remain untouched.
- b. Moderate Quality Fisher Rest Sites. These rest sites are not rare across the Dinkey project. They are characterized by the density of trees over 240ft²/acre and the presence of one or more suitable rest structures. To meet fisher objective, retain integrity of these areas by limiting removals to edges of clump, keep all snags that are not hazards. To meet restoration objective, promote heterogeneity, focus on retaining and promoting pine, and remove around edges of the clump to protect from fire and promote pine growth.
- c. Other Clumps. For the Restoration Objective, retain integrity and density of 240 ft²/acre in these clumps except when clumps have scattered pine, use decision priorities to promote heterogeneity. For Fisher Objective, retain large tree structure and density.

Step 1: Formed collaborative group representing key interests

PARTICIPANTS

Dinkey Project Planning Forum, Sierra National Forest

Sierra National Forest

- Ray Porter, Decision Maker for the Sierra Forest
- Ramiro Rojas, Sierra National Forest
- Terry Johnson, Natural Resources Manager

Air

- Scott Nester, Director of Planning, San Joaquin Valley Air Pollution Control District

Environmental

- Sue Britting, Sierra Forest Legacy
- Craig Thomas, Sierra Forest Legacy

Fire

- Rich Bagley, Highway 168 Fire Safe Council

Industry

- Glen and Kent Duysen, Terra Bella Mill

Landowner

- Ray Laclergue, Local Landowner
- John Mount, Southern California Edison

Governmental

- Kevin O'Connor, California Department of Fish & Game

Technical Resource People

- Sue Exline, Public Affairs Officer, Sierra National Forest
- Malcolm North, U.S.F.S., Pacific Southwest Research Station, Sierra Nevada Research Center
- Kathy Purcell, U.S.F.S., Pacific Southwest Research Station
- Craig Thompson, U.S.F.S., Pacific Southwest Research Station

DINKEY PROJECT Planning Forum: Sierra National Forest

Agreement to Participate

Approved 3/30/2009

Introduction

The purpose of this document is to clarify the process agreements for the Dinkey Project Planning Forum.

Goal

The goal of the planning forum is to develop an on-the-ground project or proposed action that addresses the agreed-upon purpose and need.

Intent

The project area, known as Dinkey South & Dinkey North, is part of the Sierra National Forest. The purpose of this planning forum is for the interested parties to develop a project, subject to environmental review, that addresses multiple stakeholder interests to the greatest degree possible.

As one party in the planning forum, the Sierra National Forest's interests will be represented in any agreement that is a consensus outcome. The Sierra will implement the agreement, consistent with existing legal policies.

Project Area Defined—The Regional Office has stipulated the project area. The group agrees to work within these boundaries.

Healthy Forest Restoration Act—This Planning Forum will likely be conducted consistent with the Healthy Forest Restoration Act, depending on the content of the agreed-to purpose and need.

Process Agreements

To hold a successful planning forum, the parties must agree to the procedures that the group will use as well as define individual behaviors or ground rules.

- ✓ **Everyone agrees to negotiate in good faith and hold to the agreement that is reached by participants.** All participants agree to participate in decision making, to act in good faith in all aspects of this planning forum and to communicate their interests in group

meetings. Good faith also requires that parties not make commitments they do not intend to follow through with, and that parties act consistently in the planning forum and in other forums where the issues under discussion in this forum are also being discussed.

- ✓ **Everyone agrees to address the issues and concerns of the participants.** Everyone who is joining in the planning forum is doing so because s/he has a stake in the issue at hand. For the planning forum to be successful, all the parties agree to validate the issues and concerns of the other parties and strive to reach an agreement that takes all the issues under consideration. Disagreements will be viewed as problems to be solved, rather than battles to be won.
- ✓ **Everyone agrees to focus on the present and future, and not dwell on the past.** Individual perceptions of the past change over time. While the past informs everyone's thinking and perspectives, the past cannot be changed. The purpose of this planning forum is to problem solve today about how to address the issues and concern for tomorrow.
- ✓ **Everyone agrees to inform their constituents about the outcome of the planning forum.** Time will be built into the planning forum for participants to inform and seek advice from their constituents about the discussions and the negotiated outcome.
- ✓ **Everyone agrees to attend all the meetings to the extent possible.** Continuity of the conversations and building trust are critical to the success of the planning forum. Participants are encouraged to turn off cell phones and focus on the issue at hand. Every effort will be made to accommodate the schedule of the participants. The mediator will coordinate the schedule for the planning forum.
- ✓ **Everyone agrees that parties can, at any time, request a caucus to meet with other members of its interest group.** During the course of a meeting, participants may find it helpful to meet privately with other members of its interest group, to consult with constituents outside of the meeting or to talk privately with other meeting participants. Participants or the facilitator can request a caucus. The facilitator will then work with participants to identify the best time for the caucus to occur. Participants agree to use caucuses as a tool to move agreements forward and explore topics of concern. The facilitator may attend and consult with parties during caucus discussions.

Decision-Making Guidelines

The group will strive for consensus in its work. The definition of consensus spans the range from strong support to neutrality, to abstention, to "I can live with it."

If a participant disagrees with the rest of the participants, s/he will be given an opportunity to "stand aside" and let the group reach consensus. This would still constitute a consensus agreement and outcome.

If the group cannot reach consensus, the facilitator will document areas of agreement and disagreement and forward to the Sierra National Forest and all other participants and the public. If unable to reach agreement, the Sierra National Forest will move forward as it deems appropriate.

Participation Agreements

The mediator and participants will work together to create a problem solving environment and to implement these agreements to that aim.

All ideas have value in this setting. We are looking for innovative ideas. The goal is to achieve understanding. Simply listen, you do not have to agree. If you hear something you do not agree with or you think is "silly" or "wrong," please remember that the purpose of the forum is to share ideas.

Be Honest, Fair, and as Candid as Possible

Help others understand you and work to understand others.

Avoid Editorials

It will be tempting to analyze the motives of others or offer editorial comments. Please talk about YOUR ideas and thoughts. Please avoid commenting on why someone thinks something.

Efficiency

People's time is precious; treat it with respect.

Be Comfortable

Please feel help yourself to refreshments or take personal breaks. If you have other needs please let a facilitator know.

Think Innovatively and Welcome New Ideas

Creative thinking and problem solving are essential to success. "Climb out of the box" and attempt to think about the problem in a new way.

Invite Humor and Good Will

Information

1. Participants will provide all pertinent information.
2. Tentative or sensitive information will be treated as such.

Media

If contacted by the press or an external party concerning the planning forum, participants are asked to:

1. Point out that they are not speaking on behalf of the group

2. Present their views only and conscientiously refrain from expressing, characterizing or judging the views of others
3. Avoid using the press as a vehicle for negotiation.

Participants reserve freedom to express their own opinions to media representatives, but not the opinions of others. The temptation to discuss someone else's statements or position should be avoided. Participants can refer media inquiries to group members for individual comments. The group may periodically develop joint statements to keep the public and media abreast of its efforts, agreements and progress. Members can speak freely about these joint statements that the group develops and approves.

The mediator will not speak to the media.

Role of the Mediator / Facilitator

The mediator will remain neutral and impartial toward the content of the dispute and issues under discussion. If a planning forum participant has a concern about bias, neutrality or performance of the mediator, s/he should first raise the concern with the mediator, and then the group. If unresolved, the participant should discuss the problem with the U.S. Institute for Environmental Conflict Resolution Program Manager Larry Fisher.

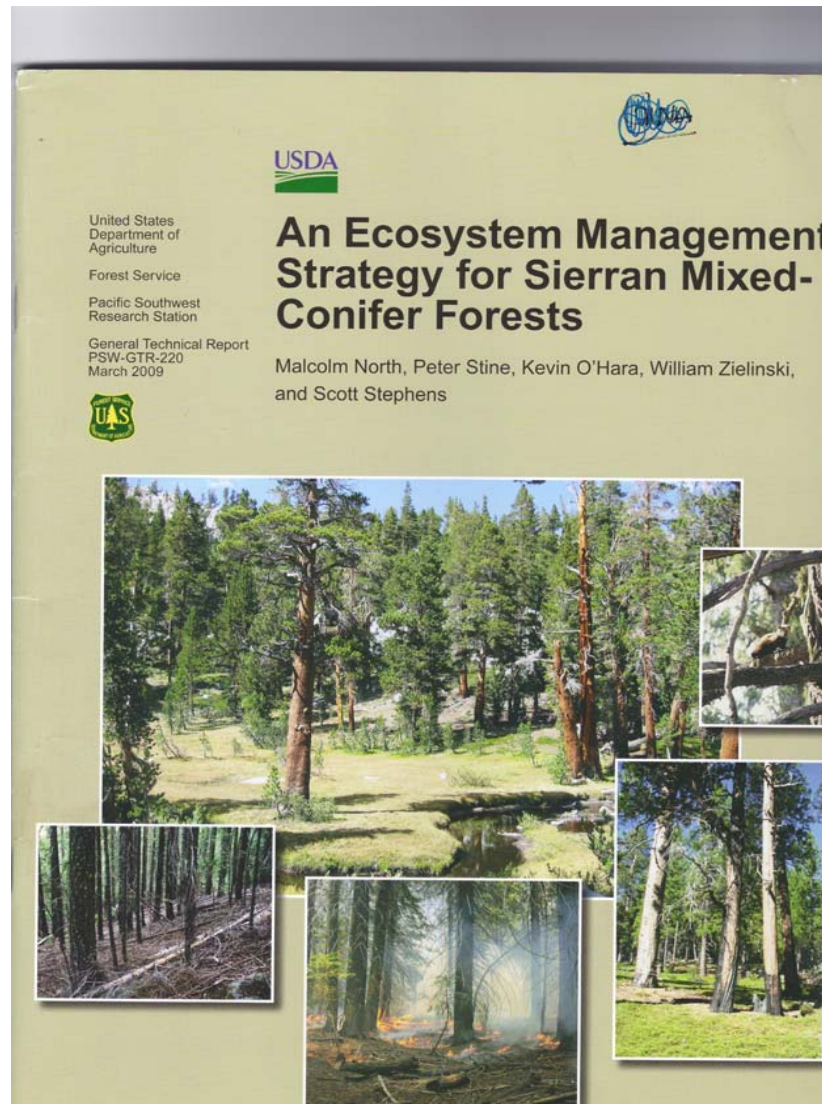
The mediator will:

- Formulate the agenda and desired outcomes for the sessions.
- Identify and synthesize points of agreement and disagreement.
- Assist in building consensus among participants.
- Work with members to enforce ground rules.
- Serve as a confidential communication channel for participants who wish to express views privately because they do not feel comfortable doing so in front of the large group.
- Advocate for a fair, effective, and credible process, but remain impartial with respect to the outcome of the deliberations.

Role of Technical Resource People

Several scientists and other specialists will participate as technical resources on an as needed basis. As technical resources, they will be available to answer inquiries and question based on their scientific understanding or specific expertise. They can also be called upon to make recommendations on the issue at hand. Researchers from the Pacific Southwest Research Station will not serve as technical consultants to the project and will not be asked to write meeting notes, project descriptions, or any other project-related documents.

Step 2: Adopted Ecosystem Management Paper as conceptual framework



Step 3: Developed Purpose & Need

Purpose and Need for the Dinkey South and Dinkey North Project

Version 7: Approved for Circulation 5-19--2009

The purpose of the Dinkey North and Dinkey South project is to design and implement vegetative treatments that will help restore a healthy, diverse, fire-resilient forest structure by reducing stand densities and fuel loads. The project would retain tree species and size classes that are the most drought tolerant, and more resistant to insects, diseases, and air pollution. Treatments would also retain tree species and size classes that have higher rates of survival after wildfire. Surface and ladder fuels would be decreased so the probability of crown fire ignition and fire severity are reduced. Where necessary and appropriate, the treatments will include the separation of crowns to reduce the spread of wildfire while protecting habitat for sensitive species. Tree mortality would be acceptable to support cavity nesting and denning structures and a range of ecosystem functions over time.

Treatments will be designed and implemented to incorporate the concepts identified in the general technical report developed by North et al (March 2009) entitled: "An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests."

Project purposes also include the resource outcomes within fuels treatment areas or adjacent Forest lands listed below:

- Provide large woody debris sufficient for fish and wildlife habitat while meeting desired conditions for wildland fire behavior, rates of spread, and flame height.
- Reduce wildfire hazards and severity to enhance habitat conditions to sustain sensitive species of plants and animals.

Forest health and resilience is promoted by increasing a forest's capability to withstand short-term impacts without causing long-term changes in the system's overall function. Some level of tree mortality is acceptable and is critical to providing habitat for sensitive species and ecosystem functions. Improvements to forest health and conditions should reduce the effects of uncharacteristic wildfire; increase forest resilience to insect and disease attack, climate change, air pollution, and drought; and provide for Pacific fisher and California spotted owl in the project area. Mechanical, hand, and prescribed fire tools will be used to meet goals that reduce the effects of uncharacteristic wildfire and increase forest resilience. To the extent possible, the projects will be conducted in an economically efficient manner with minimal outside funding.

Based on the above purpose there are the following needs:

- Existing conditions within the project area raise the potential for fire to spread rapidly within the Wildland-Urban Interface (WUI), communities, infrastructure, and other natural resources. Without treatment, hazardous fuels will increase annually, adding to an already high risk for uncharacteristic wildfire. Protecting adjacent landowners, private property, administrative sites, historic structures and recreation sites from the effects of uncharacteristic wildfire is necessary.
 - a. Protection from uncharacteristic fire includes the reduction of ground (understory) fuels and ladder fuels. Where necessary and appropriate, the treatments will include the separation of crowns to reduce the spread of wildfire while protecting habitat for sensitive species. These activities would occur to the degree that fire modeling and expert opinion believe it is necessary.
 - b. Protection from uncharacteristic fire includes the treatment of existing and treatment-created fuels.
 - c. Treatments should be conducted to protect public and fire fighter safety during a wildfire.
 - d. Projects will reintroduce fire as an ecosystem process.
 - e. Forest Service and other partners will support homeowner education and responsibility by providing Firewise Communities USA materials to the homeowners and businesses in the area and strongly recommend Firewise certification.
- **Measures:** Flame length, fire type (crown or ground/surface), torching and crowning indices, tree mortality, fuel loading, canopy base height, and Firewise Communities USA acceptance.
- Need to restore a healthy, diverse, forest ecosystem that is resilient to uncharacteristic wildfire, insect and disease, climate change, drought, and air pollution.
 - a. Treatments will be designed and implemented to incorporate the concepts identified in “An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests” (North et al, March 2009).
 - b. Frequent low-intensity fire historically controlled surface fuels and tree density. Today we understand the need to reintroduce fire as an ecosystem process. Prescribed fire and silvicultural treatments are needed to control and maintain the landscape at low risk from uncharacteristic wildfire effects

- c. Resilient forest structures may be created, in part, by managing tree density. Where overstocked conditions occur, as appropriate by size class, reduction of tree density would increase resistance of trees to insect attack, drought and air pollution. Where necessary and appropriate, the treatments will include the separation of crowns to reduce the spread of wildfire, while protecting habitat for sensitive species.
- d. There is a need to increase the proportion of shade intolerant pines and black oak, provide space for the growth of large trees and restore forest composition consistent with frequent low intensity fire. Tree species composition associated with frequent low intensity fire includes ponderosa pine, Jeffery pine, sugar pine, and black oak.

Measures: relative stand density at the clump (plot) and stand scale (as appropriate, by size class), tree mortality, proportion of black oak and pine.

- Need to protect denning, resting, nesting structures, and foraging habitat for pacific fisher and California spotted owl from both treatment effects and uncharacteristic wildfire.
 - a. Wildfire poses an immediate and imminent threat to fisher survival. This threat can only be reduced by decreasing the quantity and distribution of fuels. These treatments themselves pose a risk to fisher since they modify habitat, reducing its utility for an unknown time.
 - b. To meet the needs of fisher and spotted owl the proposal needs to implement prescriptions that leave or create denning structures, rest trees, clumps of dense trees of appropriate size classes, habitat connections, foraging habitat and a variable (heterogeneous) forest structure both horizontally and vertically.
 - c. Treatments need to meet the nesting, denning and foraging habitat needs of fisher and spotted owls.
 - d. Treatments need to reduce disturbance to fisher and spotted owl young during the critical fledgling and denning periods. One fisher den site has been located adjacent to the project area. Three Spotted owl PACs are located within and adjacent to the project areas

Measures: canopy cover, acres of habitat, relative effects on nesting, denning, and foraging habitat and structures, and monitoring of species responses to management.

- Need to prepare economical efficient projects that require the least outside funding to offset costs while not compromising other values. To the extent possible, the projects will be conducted in an economically efficient manner with minimal outside funding.
 - a. Economically efficient projects treat more acres and have the greatest potential for reduce both the effects of uncharacteristic wildfire and insect attack.

Measures: economic efficiency of project (cost and revenue), amount of outside funding required

- Need to reduce smoke production from wildfire.
 - a. There is a need to reduce hazardous fuels in order to lessen the risk of adverse effects to air quality and public health from wildfire.
 - b. Allow smoke from prescribed fire when conditions are right for air quality, public health, and forest conditions.

Measures: Emissions (tonnage), acres treated; ambient measures: ozone and particulate matter (during prescribed burns)

- Need to reduce the spread of noxious weeds.
 - a. Botanical surveys indicate that the noxious weeds are found in the project area. Noxious weeds can displace native plants, cause additional fuels hazards and reduce the cover of native plants. Fuels reduction treatments can result in the spread of noxious weeds.
 - b. Treatments should be implemented with concern to avoid the introduction or spread of invasive plant species.

Measures: relative disturbance of the various project activities, acres of weeds post-treatment, implementation of cleaning measures, monitoring (pre-treatment survey) and early treatment to contain introduced weeds.

- Need to reduce the impacts of treatment effects on watersheds over threshold
 - a. Watershed assessments indicate that one sub-watershed in the project area is over the threshold for cumulative effects. Treatments need to follow practices that reduce or eliminate further negative impacts on this watershed.
 - b. A restoration plan for the areas at risk from further watershed impacts will be developed as part of the decision.

Measures: relative effects of treatments on watershed, acres of over threshold watershed treated and restored.

Step 4: Identified variables to describe / define desired condition

	Variable The following variables were considered as the desired condition to be created through the proposed action	Ranges To allow for comparison across different topographical aspects, the group uses these ranges to establish relative conditions. Low-High = Lowest—Lower—Low—Moderate—High—Higher--Highest
1	Crown Base Height (CBH)	Low-High
2	Flame length / fire intensity	Low-High
3	Fuel Loading	Low-High low = less to burn high = more tonnage / more to burn
4	Fire Frequency / resilience How often can we return fire to this area?)	Short to Long Short = fewer years and Long = more years Shortest—Shorter—Short—Long—Longer--Longest
5	Canopy Cover / Basal Area	Low-High
6	Density (# Trees / acre)	Low-High
7	Brush Species (acres in Brush, tied to foraging habitat) Abundance Diversity	Abundance Low-High Diversity Low-High
8	Species Composition	Low-High

Step 5: Defined variables relative to one another by aspect (i.e. density would be higher in canyons than on slopes, etc.)

Mixed Conifer	Canyon Assumes Wet Conditions (except stand 386, which is dry)	Slope Assumes maximum clumping	Ridge Assume less dense, dry and hotter with clumping	
Northerly	Highest Canopy Cover & Density	<p>High Crown-Base Height</p> <p>High Flame Length</p> <p>Low Fuel Loading</p> <p>Short Fire Frequency</p> <p>High-Higher Canopy Cover / Basal Area</p> <p>High-Moderate Density (less clumping than south, more density than southerly)</p> <p>Moderate Brush abundance</p> <p>Low Brush diversity</p> <p>Species composition</p> <p>Less Pine</p> <p>Lowest Black Oak</p>	<p>Low Canopy Cover / Basal Area</p> <p>Low Density (consider wildlife and manage fire)</p>	<p>Highest Crown-Base Height</p> <p>Lowest Flame Length</p> <p>Lowest Fuel Loading</p> <p>Shortest Fire Frequency (4 years)</p> <p>More Brush abundance</p> <p>Younger Brush</p>
Neutral	Highest Canopy Cover & Density	Intentionally Blank	<p>Moderate Canopy Cover / Basal Area</p> <p>Lower Density</p> <p>Species composition</p>	
Southerly	Highest Canopy Cover & Density	<p>Higher Crown-Base Height</p> <p>Higher Flame Length</p> <p>Lower Fuel Loading</p> <p>Shorter Fire Frequency</p>	<p>Lowest Canopy Cover / Basal Area</p> <p>Lowest Density</p>	

		<p>Moderate Canopy Cover / Basal Area Low-Moderate Density (less density than northerly slope, greater clumping) Moderate Brush abundance Low Brush diversity Species composition Moderate-High Pine Low Black Oak</p>	
Lowest – Lower – Low—Moderate – High – Higher -- Highest			
Notes / Assumptions	<p>Dinkey Creek is a deep V with granite not riparian Specifics should consider fires on structures & facilities Stream management zones Wildlife: female fisher home range Definitions on GIS for Malcolm: What does neutral mean in canyon? Is it the bottom?</p>	<p>Northerly as compared to south: More fir / cedar More density Less fire intensity Long fire frequency Higher fuel load Less crown base height</p> <p>Definition of neutral? What change would we recognize</p>	<p>Specifics, consider defensive fire action Questions: how far down is ridge?</p>

Jeffrey Pine	Canyon	Slope	Ridge
Northerly	Same as mixed conifer	Same as mixed conifer	Same as mixed conifer
Neutral	Same as mixed conifer	Same as mixed conifer	Same as mixed conifer
Southerly	Same as mixed conifer	<p>Jeffery Pine is approximately 150 acres. Units 388 & 431 are atypical (cold & sandy mixed with loge pole pine) to other J Pine 2 other units are typical Canopy: low to moderate Slightly less density and canopy than southerly mixed conifer</p>	Same as mixed conifer

Step 6: Developed numeric values associated with variables for future conditions

Proposed Action Desired Conditions Numerical Values

	Variable	Lowest	Lower	Low	High	Higher	Highest	Note
Site Index =70	Crown Base Height	13 feet in WUI		15-25 feet depending on density				Discuss arrangement
	Basal Area (Sq Ft)	170 ft ²	186 ft ²	205 ft ²	230 ft ²	250 ft ²	270 ft ²	
	Trees Per Acre	24	27	29	33	36	40	
	Canopy Cover (derived from basal area)	44 %	48%	51%	56%	59%	62%	60% is good for fisher so % of site should be this
	Fuel Loading (dead and down material)	5-10 tons south, east, and west slopes		8 tons on ridges			15-20 tons north slopes and wet drainages	Emphasis on reducing duff (fine fuels). Reduce 90% duff & 60% woody (dead fuels)

Notes

- All the values above were attained assuming a site index of 70, indicating a level of productivity where a tree at 50 years old will be 70 ft tall
- Basal area is the stump area in square feet. This is important as it identifies how many trees a place can sustain
- A site index of 70 was chosen because it is the average in the Dinkey stands. The basal area was derived from what the basal area would look like on the landscape.
- No one knows if the desired condition is modeled at Teakettle. Teakettle was reconstructed and then “grown” backwards.

Average Desired Condition Simplified Table by Aspect with Numbers

These numbers represent averages for basal area, canopy cover, and trees per acre at some future time. They do not represent conditions immediately after treatment has occurred. The focus and goal of the proposed action is on the value of the habitat retained.

Mixed Conifer	Canyon Assumes Wet Conditions (except stand 386, which is dry)	Slope Assumes maximum clumping	Ridge Assume less dense, dry and hotter with clumping
Northerly	<p>270ft² basal area 62% canopy cover 40 trees/acre > 11 inches</p> <p>Highest Density & Canopy Cover</p> <p>Highest Fuel Loading</p>	<p>230-250ft² and 56-59% 33-36 trees/acre > 11 inches</p> <p>High-Higher Canopy Cover / Basal Area High-Moderate Density (less clumping than south, more density than southerly) Low Fuel Loading Species composition Less Pine Lowest Black Oak</p>	<p>205ft² and 51% 29 trees/acre > 11 inches</p> <p>Low Canopy Cover / Basal Area Low Density (consider wildlife and manage fire) Lowest Fuel Loading</p>
Neutral	Goes to either Northerly or Southerly	Goes to either Northerly or Southerly	Goes to either Northerly or Southerly
Southerly	<p>270ft² and 62% 40 trees/acre > 11 inches</p> <p>Highest Canopy Cover & Density</p> <p>Highest Fuel Loading</p>	<p>186-205ft² and 51-56% 27-29 trees/acre > 11 inches</p> <p>Low-Moderate Density (less density than northerly slope, greater clumping) Lower Fuel Loading</p>	<p>170ft² and 44% 24 trees/acre > 11 inches</p> <p>Lowest Canopy Cover / Basal Area Lowest Density Lowest Fuel Loading</p>
Lowest – Lower – Low—Moderate – High – Higher -- Highest			
Notes: Numeric values based on Site Index of 70; Stand Age=120			

Step 7: Held site visit and developed first draft of decision priorities

<p style="text-align: center;">Donkey Creek Decision Priorities (not yet a matrix)</p> <p>General Principles</p> <p>The Donkey Creek Project is implementing the landscape, ecological vision of the PSN, CTR, and the planning group's interpretation of the topographic-based design criteria including the slope position matrix we created in Sacramento.</p> <p>Heterogeneity is a key concept in the GTR and includes avoiding even spacing of residual trees, protection of unique structures including wildlife trees, black oaks, snags and large logs, clumps of large trees, secondary vegetation including shrubs and other hardwoods.</p> <p>The goal of this Decision Matrix is to balance the desire for a fire resilient, healthy forest (Quality – management actions will trend the project area towards a more appropriate species mix, density and age distribution) with the fisher's association with "maximum biomass" in the habitat modeling work of the Conservation Biology Institute (June 2008).</p> <p>A large-tree dominated forest with areas of higher canopy cover benefiting the Pacific Fisher (80% home range – 60 canopy cover, Zedler et al. 2004) and other rare, old forest associated species.</p> <p>None of these individual goals are meant to override the mutual desire for a healthy, fire resilient forest but instead are intended to provide ecological balance to marking crews as they implement prescriptions.</p> <p>Topographic Position Orientation</p> <ol style="list-style-type: none"> Orient to topographic position on maps where you are working (northerly canyon, southerly ridge, etc. from Zone maps in North et al.) Review principles for zones based on topographic matrix created in project description. <p>Tree Selection Guidelines related to micro-site priorities (Bayer draft) and additional ecological objectives.</p> <ol style="list-style-type: none"> Select White fir and Incense cedar, in general, over pine due to uncharacteristic departure from historic conditions, fire susceptibility, density etc. Remove hazards near structures and developed sites. Leave large trees for desired wood ecological requirements after filling unless triggering fish standards. Snag-retain all snags that are not hazards. Smaller well snags exhibit very high use in the project area. Retain (or create) snags where appropriate in project design. Avoid <p style="text-align: right;">1</p>	<p>Trees with less mistletoe or those with mistletoe in the lower third or where the mistletoe is found on the outer crown remain over those with high amounts of mistletoe and infections close to the bole or in the upper two thirds of the crown. Damaged or diseased trees should be removed prior to healthy trees. Maintaining trees with good form and growth is higher priority than spacing or target structure.</p> <p>7. Erosion Trees along stream banks remain to provide stability, prevent accelerated soil erosion, and provide habitat. Female fisher show high levels of use in Riparian Conservation Areas. Maintain high fisher habitat values in this zone. Higher levels of canopy cover, snags, large trees and secondary vegetation.</p> <p>8. Canopy position. Trees in the lower crown layers are retained to provide space for trees in the upper crown layers. Crown position is a strong indicator of a tree's ability to make use of old resources. Leave dominant and co-dominant trees in each cohort.</p> <p>Need to discuss with group</p> <p>9. Fuel ladders. Trees that provide fuel ladders to larger trees are removed to create conditions suitable for underburning and reduce the potential for leaching. Protecting larger trees from underburning maintains stand structures that will contribute to future habitat diversity. Canopy layering is reduced in the WUI by accumulating age classes (eg a 10" tree among 30" trees is removed to accumulate the 30" class). Maintain canopy layering in PACS and HRCAs outside WUI defences.</p> <p>Need to discuss canopy layering with group</p> <p>10. Openings. Promote the growth of young pine in some proportion of existing openings. Remove trees around opening to orient opening from southeast to southwest. Maintain 10-25% of openings in young brush age classes (< 15 years old).</p> <p>Need to discuss and cite best research numbers for historic condition</p> <p>11. Minimum clump retention- Identified for each stand or micro-site within a stand. This basal area identifies the basal area that will remain in any given clump or micro-site (control plot measure). Residual clump basal area will be higher for canyons and lower on stands dominated by southerly slopes and ridges consistent with desired conditions. Residual clump density works in combination with overall stand density to accomplish heterogeneity and desired condition. Tree numbers and BA in clumps needs to be determined.</p> <p>12. Residual Stand Basal Area. Stand basal area targets are used to identify the residual stand density.</p> <p>Need to discuss BA numbers with group Does this get us restoration of fisher habitat, snags and resiliency?</p> <p style="text-align: right;">3</p>
<p>marking that applies averages across unit areas, rather than provide an even distribution of snags while attaining ecological goals.</p> <p>4. Growth-Maintain dominant and co-dominant trees in each cohort. Avoid leaving suppressed or intermediate trees except to meet wildlife micro-site habitat. Wildlife habitat needs include being cover, canopy layers not "backed" underneath larger residual trees, "sketch" trees with broken tops, cavities, broken etc.</p> <p>5. Species selection criteria</p> <ol style="list-style-type: none"> Healthy Black oak are first priority, leave trees (defects are ok since fisher show heavy use of these structures). This is our target age class and consider snags facing positions of surrounding trees. Healthy sugar pine second choice, leaving sugar pine resistant to White Pine Heter Blast. Jeffrey Pine is third priority. Lodgepole is fourth priority. Incense cedar and white fir are given last priority. <p>6. Wildlife – macro and micro site considerations.</p> <p>The Donkey Creek project landscape trends for sound wildlife management strategies balance species needs (both sensitive and common) at a variety of spatial (microsite to foraging landscape) and temporal (intermediate to long-term population viability) scales (GTR p. 10). Approximately 80% of fisher roosting structures are generally trees >20" (from Sequoia NF, Zedler et al. 2004 data).</p> <p>Fisher select the largest individual trees in dense canopy stands. There is a low level of reuse of these roosting structures (Zedler 2008b), so many large trees are required. This behavior makes provision of adequate roosting habitat critical to fisher conservation (GTR p.10).</p> <p>Wildlife tree microsite characteristics include:</p> <ol style="list-style-type: none"> snags of various size classes and live defect trees and the largest trees in general with cavities, broken tops, canopies and "vulcanic lesions" components have high wildlife value. Decayed black oaks have disproportionate levels of use as habitat trees. (How to manage these?) Allow even-spacing? OR Thinning around them? Retain leaves next and roost trees (provide description, flagging). Retain potential nest and roost trees for a range of wildlife species (not identification trials). <p>Need to discuss: Bayer 14 maintain dense microsite conditions and canopy layering outside WUI defences and PACS.</p> <p>d. Marking in clumped distribution of large trees rather than an even-spacing distribution of large trees. This will trend stands toward a more homogeneous distribution of residual trees and will more resemble historic conditions (GTR p.5)</p> <p>6. Disease-Undesired trees (<20" with mistletoe, white pine Heter blast, and damage are discriminated against. Trees >20" with damage or rot remain to provide wildlife habitat.</p> <p style="text-align: right;">2</p>	<p>13. Spacing or residual stand density for trees <10" needs to be discussed by the group. See CTR comments p.5-6.</p> <p>Not all priorities are included in each portion of a stand. Some retention priorities apply to specific portions of stands (erosion), while others are used to retain structures or densities in micro-sites important for wildlife (fisher rest site guidelines).</p> <p>Important Land Allocation</p> <ol style="list-style-type: none"> California Spotted Owl 300 Acres PACS Treatments should be based upon ecological need although the current standards and guides allow treatment outside of 500' non buffer using forest-wide standards and guides for mechanical treatments in the Defense Zone. <p>WUI lands</p> <p>Defense zone–near homes, corrugated, other facilities the treatments should meet fish objectives. 500' root tree has further restrictions.</p> <p>Threat zone – treat surface and ladder fuels up to 12" where prescribed fire is not feasible with the goal of achieving ecological objectives.</p> <ol style="list-style-type: none"> California spotted owl Home Range Core AREAS (HRCAs) 600 acres around nest area of the best available habitat on the Sierra NF. <p>Desired Condition: At least 2 canopy layers, 24" trees in dominant and co-dominant trees, a number of large, very old trees (>40" dbh), at least 50-70% canopy cover, and higher than average snags and down wood.</p> <p style="text-align: right;">4</p>

Step 8: Discussed each unit and numbers for post-treatment condition Dinkey Proposed Action Unit Detail

Unit Categories

Defense

1. Defense Core Area (campground and houses) (6)
2. Not HRCA or PAC (5 units)
3. HRCA (5)
4. PAC (4)

Threat

5. PAC (3)
6. Not in PAC or HRCA (10)
7. HRCA (3) (Requires greater than 50% canopy cover on average)

Defense Core Area (Campground and Residences)

(Units 190, 245, 259, 296, 431 and 388)

AGREED

Remove:

- 80% of small trees (0-10 inches in diameter at breast height)
- 40% of medium trees (11-20 inches dbh)
- 20% of large trees (20-30 inches dbh)
- 0 very large trees (30 inches dbh and above)

- Human and Fire Safety are the core goal of this treatment.
- Fire: Would not sustain a crown fire
- Aesthetics of area also a concern.
- Flame length would not exceed 2 feet

PAC in Threat Zones (Units 129, 170, 197)

Site Characteristics / Constraints: Mechanical treatment to remove surface and ladder fuels; fire specialists do not allow prescribed burning in this area. Rare-to-never would large trees be removed.

AGREED

Reduce surface and ladder fuels to prevent torching. Use fuel modeling to determine how much reduction can occur. The 2004 Framework ROD can provide a general standard to interpret modeling results.

Promote priority species (pine & oak)

Threat not in HRCA nor PAC	Existing Condition	Proposal Post-Treatment	notes
Unit 150			Burn only
Unit 458	211 ft ² average basal area Site Index=90 Piece of rock & archaeological site		
Southerly Slope (78%)	Large trees Fisher den sites Fire: 200-220 ft ² Pine in one segment (200 ft ² in this area) Area dense w/fir Basal Area: 100-240 ft ²	Areas Dense with Fir Basal Area Range: 189-209 ft ² Floor = 140 ft ² Area with Jeffrey Pine (about 40% of this stand area) Remove little trees and Burn where possible Proposal:160-178ft ² Floor = 120 ft ²	
Canyon (about 15%)	Pine—Young Jeffrey Pine, trees small Basal Area: 139-160 ft ²	Thin to 55% of Normal or 80 ft ² to 120 ft ²	
Northerly Slope (2 %)	Limited to area near drainage	229 ft ² Floor 160 ft ²	
Ridge (5 %)	Open pine ridges	143 ft ² Floor 140 ft ²	
Unit 472	Avg. Basal Area: 180-240 Site Index=80		Available for burn
South-facing Slope 75%	Mixed Conifer-Fir Pine scattered with pockets of density	Mixed Fir: 180-200 ft ² Floor = 160 ft ² Canopy: 48-56% Mixed Pine: 153-170 ft ² Floor = 140 ft ² 27-29 TPA > 11 inches	<i>Canopy Cover is going to be about 40%.</i>
Ridge 25%	Open pine ridges	137-161 ft ² Floor = 100 ft ²	.

THREAT	Existing Condition	Proposal Post-Treatment
Unit 125	Site Index: 25-30 Rocky & Open	
Ridge: 31%	Mixed Conifer Pine	94-124 ft ² , Floor=60 ft ²
Northerly: 56%	Mixed Conifer Fir and Mixed Conifer pine mixed	Use Guidelines 143-168 ft ² , Floor=100 ft ²
Southerly: 13%	Mixed Conifer Pine and Jeffrey pine mixed	Use Guidelines 108-130 ft ² , Floor=60 ft ²
Unit 189	Basal Area: 160-210 ft ² Site Index: 60 Lots of rock Work center with homes nearby	
Canyon: 30%	Mixed Conifer Pine and Jeffrey pine	169-196 ft ² , Floor 140 ft ²
Northerly: 20%	Mixed Conifer Fir and Mixed Conifer Pine	150-196 ft ² , Floor-140 ft ²
Southerly: 50%	Mixed Conifer Fir and Mixed Conifer Pine	131-161 ft ² , Floor 120 ft ²
Unit 455	Basal Area: 180-240 ft ² Site Index: 80	
Canyon: 11%	Mixed Conifer Fir	258 ft ² , Floor 180 ft ²
Northerly: 64%	Mixed Conifer Fir	219-238 ft ² , Floor 160 ft ²
Southerly: 24%	Mixed Conifer Fir	180-200 ft ² , Floor 140 ft ²
Unit 474	Basal Area: 180-240 ft ² Site Index: 60	

Step 8

Canyon: 51%	Too steep to get in; small area that can be treated, which is Mixed Conifer Fir	230 ft ² , Floor=200 ft ²
Southerly: 47%	Mixed Conifer Pine Currently 152-179 ft ²	137 ft ² , Floor=140 ft ²
Northerly: <1%	Too steep to treat mechanically	
Unit 480	Basal Area: 160-240 ft ² Site Index: 60 Plantation: approximately 20 acres of little trees	
Northerly: 64%	Mixed Conifer Fir Mixed Conifer Pine	196-213 ft ² , Floor=160 ft ² 166-181 ft ² , Floor=120 ft ²
Southerly: 17%	Mixed Conifer Fir Mixed Conifer Pine	Fir: 161-179 ft ² (floor=140 ft ²) Pine: 131-152 ft ² (floor=120 ft ²)
Ridges 17%		122-144 ft ² (floor=80ft ²)
Unit 484	Basal Area: <160 ft ² (non-plantation is approx. 160 ft ²) Site Index: 60 Plantation in existence	
Canyon: 34%	Mixed Conifer Fir	No treatment outside of plantation 230 ft ² , floor 180 ft ²
Northerly: 36%	Mixed Conifer Fir	196-213 ft ² , Floor=160 ft ²
Southerly: 30%	Mixed Conifer Pine	137-152 ft ² , Floor-120 ft ²
Unit 217	Plantation in existence	Thin to maximize tree growth

DEFENSE HRCA	Existing Condition	Proposal Post-Treatment
Unit 225	Basal Area: 160-210 Site Index: 60	
Canyon 18%	Mixed Conifer Fir and Mixed Conifer Pine	196-230 ft ²
Ridges: <1%	Mixed Conifer Pine	122 ft ² , Floor-80 ft ²
Northerly: 71%	Mixed Conifer Fir and Mixed Conifer Pine	150-196 ft ² , Floor-120 ft ²
Southerly: 11%	Mixed Conifer Fir and Mixed Conifer Pine	140-179 ft ² , Floor-100 ft ²
Unit 237	Basal Area: 18-210 Site Index: 70	
Canyon: 6%	Mixed Conifer Fir and Mixed Conifer Pine	179-244 ft ² , Floor-160 ft ²
Ridge: 4%	Mixed Conifer Fir and Mixed Conifer Pine	128-153 ft ² , Floor-100 ft ²
Northerly: 38%	Mixed Conifer Fir and Mixed Conifer Pine	158-207 ft ² , Floor-120 ft ²
Southerly: 52%	Mixed Conifer Pine	148-189, Floor-120 ft ²
Unit 329	Basal Area: 180-240 Site Index: 70 Canopy Cover: Variable 50-78%	
Canyon: 19%	Mixed Conifer Pine	207ft ² , Floor-160 ft ²
Northerly: 63%	Mixed Conifer Pine and Jeffrey pine	158-176 , Floor-120 ft ²
Southerly: 17%	Mixed Conifer Pine and Jeffrey pine	148-161, , Floor-120 ft ²
Unit 353	Basal Area: 240+ Site Index: 70	
Canyon: 9%	Mixed Conifer Fir and Mixed Conifer Pine	207-244 ft ² , Floor-160 ft ²
Northerly: 26%	Mixed Conifer Fir and Mixed Conifer Pine	176-226 ft ² , Floor-140 ft ²
Southerly: 65%	Mixed Conifer Fir	148-189 ft ² , Floor-120 ft ²
Unit 1037	Basal Area: 160-180 Site Index: 80	
Canyon 11%	Mixed Conifer Fir	219-258
Northerly: 53%	Mixed Conifer Fir	169-219
Southerly: 36%	Mixed Conifer Pine	170-200

Threat HRCA	Existing Condition	Proposal Post-Treatment
Unit 461	Basal Area: 87-273 Site Index:80	
Canyon: 0%	Mixed Conifer Pine	
Northerly:<1%	Mixed Conifer Pine	186 ft ² , Floor-140 ft ²
Southerly: 68%	Mixed Conifer Pine and Jeffrey pine	158-170 ft ² , Floor-120 ft ²
Ridge: 32%	Mixed Conifer Pine and Mixed conifer fir	137-161 ft ² , Floor-100 ft ²
Unit 477	Basal Area: 136-344 Site Index: 80	
Canyon:30 %	Mixed Conifer Fir	258 ft ²
Ridge:12%	Mixed Conifer Pine and Mixed conifer fir	137 ft ² -161 ft ² , Floor-120 ft ²
Northerly: 58%	Mixed Conifer Pine and Mixed conifer fir	200 ft ² -238 ft ² , Floor-160 ft ²
Unit 1041	Basal Area: 129-220 Site Index: 80	Variable slope and forest type across stand
Canyon 20%	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	190-258 ft ² , Floor-120 ft ²
Ridges 2%	Mixed Conifer Pine	137 ft ² , Floor-100 ft ²
Northerly:53 %	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	180-238 ft ² , Floor-140 ft ²
Southerly: 25%	Mixed Conifer Pine and Mixed conifer fir	170-200 ft ² , Floor-120 ft ²

Defense Not HRCA or PAC	Existing Condition	Proposal Post-Treatment
Unit 154	Basal Area:168-220 Site Index:60	
Canyon: 45%	Mixed Conifer Pine and Mixed conifer fir	196-230 ft ² , Floor 140 ft ²
Northerly:48 %	Mixed Conifer Pine and Mixed conifer fir	166-196 ft ² , Floor 140 ft ²
Southerly: 3%	Mixed Conifer Pine	137 ft ² , Floor 100 ft ²
Ridges: 4%	Mixed Conifer Pine	122 ft ² , Floor 100 ft ²
Unit 188	Basal Area: 83-220 Site Index: 60	Large area of barren and thin soils
Canyon 8%	Mixed Conifer Pine and Jeffrey Pine	169-196 ft ² , Floor 140 ft ²
Northerly:75 %	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	150-196 ft ² , Floor 120 ft ²
Southerly: 17%	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	137-161 ft ² , Floor 100 ft ²
Unit 288	Basal Area: 137-267 Site Index:90	
Canyon 16 %	Mixed Conifer Pine	229-270 ft ² , Floor 160 ft ²
Northerly: 8%	Jeffrey Pine/Mixed conifer pine	178-195 ft ² , Floor 140 ft ²
Southerly:76 %	Mixed Conifer Pine	155-189 ft ² , Floor 120 ft ²
Unit 330	Basal Area: 249-327 Site Index: 80	
Canyon 10%	Mixed Conifer Pine and Mixed conifer fir	219-258 ft ² , Floor 160 ft ²
Northerly: 5%	Mixed Conifer Fir	219 ft ² , Floor 140 ft ²
Southerly:85 %	Mixed Conifer Fir and Jeffrey pine	147-180 ft ² , Floor 120 ft ²
Unit 457	Basal Area: 194-220 Site Index: 70	
Canyon <1%	Mixed Conifer Fir	244 ft ² , Floor 180 ft ²
Ridges: 23%	Mixed Conifer Fir	153 ft ² , Floor 120 ft ²
Northerly: 65%	Mixed Conifer Pine and Mixed conifer fir	158-207 ft ² , Floor 140 ft ²
Southerly: 11%	Mixed Conifer Pine and Mixed conifer fir	138-161 ft ² , Floor 100 ft ²

Defense PAC	Existing Condition	Proposal Post-Treatment These numbers reflect desire to maintain PAC stands above 60% canopy cover in Dinkey South and 50% canopy cover Dinkey North canopy cover
Unit 227	Basal Area: 199-221 Site Index: 70	
Canyon: 23%	Mixed Conifer Pine and Mixed Conifer fir	179-244 ft ²
Ridges: 20%	Mixed Conifer Fir	153 ft ²
Northerly: 1%	Mixed Conifer Fir	226 ft ²
Southerly: 56%	Mixed Conifer Pine and Mixed Conifer fir	161-189 ft ²
Unit 275	Basal Area: 53-221 Site Index: 50	
Canyon 7%	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	148-217 ft ²
Ridge:14%	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	106-136 ft ²
Northerly:70 %	Mixed Conifer Pine, Mixed conifer fir and Jeffrey pine	140-201 ft ²
Southerly: 9%	Mixed Conifer Fir and Mixed conifer pine	143-168 ft ²
Unit 371	Basal Area: 64-358 Site Index:70	
Canyon 7%	Mixed Conifer Fir	207-244 ft ²
Ridges: 3%	Mixed Conifer Fir	128-153 ft ²
Northerly: 7%	Mixed Conifer Fir	168-240 ft ²
Southerly: 83%	Mixed Conifer Fir	148-240 ft ²
Unit 386	Basal Area: 210-485 Site Index:70	
Canyon 29%	Mixed Conifer Pine	169-244 ft ²
Ridges: 1%	Mixed Conifer Fir	128-153 ft ²
Northerly:2 %	Mixed Conifer Fir	168-240 ft ²
Southerly: 67%	Mixed Conifer Fir/Mixed conifer Pine	148-240 ft ² Forest type split between pine and fir

Step 9: Held Site visit with researchers

Step 10: Refined decision priorities and developed proposed action

Dinkey Creek Decision Priorities

V10 dated 9/9/2009

General Principles

The Dinkey Creek Project is implementing the landscape, ecological vision of *An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests* (North et al, 2009), the PSW-GTR-220, and the Dinkey Planning Forum's interpretation of the topographic-based design criteria including the slope position matrix.

Heterogeneity is a key concept in the GTR: avoiding even spacing of residual trees and protecting unique structures including wildlife trees, black oaks, snags and large logs, clumps of large trees, understory vegetation including shrubs and other hardwoods.

A goal of the Decision Priorities is to balance the desire for a fire resilient, healthy forest (healthy = management actions will trend the project area towards a more appropriate species mix, density and age distribution) with the fisher's association with "maximum biomass" in the habitat modeling work of the Conservation Biology Institute (June 2008).

A large-tree dominated forest with areas of higher canopy cover benefiting the Pacific fisher (63% home range, > 60 canopy cover: Zielinski et al. 2004) and other rare, old forest associated species.

None of these individual goals are meant to override the mutual desire for a healthy, fire resilient forest, but instead are intended to provide ecological balance to marking crews as they implement prescriptions.

Topographic Position Orientation

1. Orient to topographic position on maps where you are working (northerly canyon, southerly ridge, etc. from zone maps in North et al.)
2. Review principles for zone based on topographic matrix created in project description.

3. In drainages & canyon zones, leave some overtopping and denser conditions. As you move away up slope, you have to separate age classes so they are clumpier and separated.

Tree Selection Guidelines related to Micro-Site Priorities and Additional Ecological Objectives

1. Select white fir and incense cedar, in general, over pine due to uncharacteristic departure from historic conditions, fire susceptibility, density etc.
2. **Hazards:** Remove hazards near structures and developed sites. Leave large trees for downed wood ecological requirements after felling unless triggering fuels standards.
3. **Snags:** Retain all snags that are not hazards. Smaller soft snags exhibit very high use in the project area. Retain (or create) snags where appropriate in project design. Avoid marking that applies averages across unit areas, rather clump and provide un-even distribution of snags while attaining ecological goals.
4. **Growth:** Maintain dominant and co-dominant trees in each cohort. Avoid leaving suppressed or intermediate trees except to meet wildlife micro-site habitat. Wildlife habitat needs include hiding cover, canopy layers not “stacked” underneath larger residual trees.
5. **Priorities for Retaining Species**
 - a. Leave all black oaks. All black oaks will be released (thinning to outer drip line and considering south-facing position of surrounding trees) unless it has high levels of rot and does not appear to have the ability to develop a callous over wounds. For such oaks, allow overtopping by conifers.
 - b. Healthy sugar pine second choice, leaving sugar pine resistant to White Pine Blister Rust.
 - c. Jeffery Pine is third priority.
 - d. Lodgepole is fourth priority.
 - e. Incense cedar and white fir are given last priority.
6. **Wildlife—Macro and Micro-Site Considerations**

The Dinkey Creek project landscape trends for sound wildlife management strategies balance species needs (both sensitive and common) at a variety of spatial (micro-site to foraging landscape) and temporal (intermediate to long-term population viability) scales (GTR p. 10). Approximately 88% of fisher resting structures are generally trees >20” (from Sequoia NF, Zielinski et al. 2004 data).

Fishers select the largest individual trees in dense canopy stands. There is a low level of reuse of these resting structures (Zielinski 2004b) so many large trees are required. This behavior makes provision of adequate resting habitat critical to fisher conservation (GTR p.10).

Wildlife tree micro-site characteristics include

- a. Snags of various size classes and live defect trees and the largest trees in general with cavities, broken tops, cavities and “witches broom” components have high wildlife value.
- b. Decadent black oaks have disproportionate levels of use as habitat trees.
- c. Retain known nest and roost trees (provide description, flagging). Retain potential nest and roost trees for a range of wildlife species (nest identification traits).
- d. Marking in clumped distribution of leave trees rather than an even-spacing distribution of leave trees. This will trend stands toward a more heterogeneous distribution of residual trees and will more resemble historic conditions see 15 below (GTR p.5)

7. Disease

Understory trees (<20”) with mistletoe, white pine blister rust, and damage are discriminated against. Trees >20” with damage or rot remain to provide wildlife habitat. Trees with less mistletoe or those with mistletoe in the lower third or where the mistletoe is found on the outer crown remain over those with high amounts of mistletoe and infections close to the bole or in the upper two thirds of the crown. Damaged or diseased trees should be removed prior to healthy trees. Maintaining trees with good form and growth is higher priority than spacing or target structure.

8. Erosion

Trees along stream banks remain to provide stability, prevent accelerated soil erosion, and provide habitat. Female fisher show high levels of use in Riparian Conservation Areas. Maintain high fisher habitat values in this zone. Higher levels of canopy cover, snags, large trees and understory vegetation.

9. Crown Position

Trees in the lower crown layers are removed to provide space for trees in the upper crown layers. Crown position is a strong indicator of a trees ability to make use of site resources. Leave dominant and co-dominant trees in each cohort.

10. Fuel Ladders

Trees that provide fuel ladders to larger trees are removed to create conditions suitable for underburning and reduce the potential for torching. Protecting larger trees from underburning maintains stand structures that will contribute to future habitat diversity. Canopy layering is reduced in the WUI by accentuating age classes (e.g. a 10" tree among 30" trees is removed to accentuate the 30" class). Maintain canopy layering in PACs and HRCAs outside WUI defense.

Clumps & Openings

1. Clump Retention and Promotion

Clumps of trees are a grouping of trees identifiable by density, species mix, tree size or presence of snags). Clumps have an identifiable edge, they can be walked around.

Residual clump density works in combination with overall stand density to accomplish heterogeneity and desired condition.

Residual basal areas post-treatment are defined in separate table based on topographic position, forest type and site index.

2. Dense Tree Clumps for Pacific Fisher and Restoration

Micro-sites is a topographic or localized forest feature that can be identified on the ground – meadow, stream, seep, canopy opening

These conditions provide opportunity for clumps:

- Presence of large cavities
- Presence of snags
- Large Oak (>18 inches) with some decadence
- Where large woody debris (24 inches in diameter, 20 feet long)
- Proximity to (approximately 300 feet) water...closer to water

- f. **High Quality Fisher Rest Sites:** These sites are found rarely across the Dinkey area and tend to be located on steeper slopes and near (<300 ft) water. High Quality fisher rest sites are composed of clumps of five or more trees > than 30" for conifers and oaks over 20 inches with a density greater than 240ft²/acre and the presence of fisher rest structures (large legacy trees, cavities and rarely downed logs). These clumps not only have high density but deep canopies. The size of the large trees, deep crowns, location near water, canopy cover, and along with rest structure(s) makes these sites particularly useful to fisher. Canopy is typically split between upper canopy and lower canopy layers. Treatments should be limited to the edges or removing limited layering to keep the dense character of these sites. These sites would rate out as better than 7 in fisher rest site guidelines or meet the concepts in Cedar Valley agreement.

- g. **Moderate Quality Fisher Rest Sites: Clumps of dense (~>240 ft²/acre) trees with large (>35") snags, legacy trees or suitable large rest structures (snags, damaged or disease trees > 20", oaks over 25 inches).** These rest sites are not rare across the Dinkey project. They are characterized by the density of trees over 240ft/acre and the presence of one or more suitable rest structures. Rest structures are typically large older legacy trees with large branches or a tree with a deformation that provides rest platforms. Higher value rest sites are found near water. Growing space (leaf area, canopy) is split between an upper canopy layer and a lower canopy layer. Canopy foliage composed of upper and lower layers can be stacked or more often found adjacent.
- i. **Fisher Objective:** Maintain > 240 ft²/acre or more in most clumps with structure. Leave clumps untreated near stream or meadow. Removals should be focused in suppressed and intermediate trees. These structures are particularly important near meadow and wet area micro-sties. Retain integrity of these areas by limiting removals to edges of clump- keep all snags that are not hazards.
 - ii. **Restoration Objective:** Promote heterogeneity, focus on retaining and promoting pine, removals around edges of the clump to protect from fire and promote pine growth
- h. **Lower Quality Dense Sites: High density clump (> 240 ft²/acre), trees > 24":** These clumps are composed of dense single layered trees generally greater than 24" DBH. While crowns are dense, canopy cover is found in mostly a single layer. This single layer of canopy is found high above the forest floor. While snags may be found in these clumps, the size of snags or decay class offers few resting platforms. While trees are over 24", live trees offer few resting platforms.
- iii. **Restoration Objective:** Retain integrity and density of 240 ft²/acre in these clumps except when clumps have scattered pine, use decision priority on "scattered pine." Removals should be focused in all cohorts 10" to 30".
 - iv. **Fisher Objective:** Retain large tree structure and density.
- i. **Lowest Quality Dense Sites: High Density clump (> 240 ft²/acre), trees < 24":** While these clumps are dense they have few fisher rest platforms. The nature of the tree size and the crown cover found in a single canopy layer make these areas of low value regardless of location or proximity to water.
- v. **Restoration Objective:** Promote heterogeneity across the stand by emphasizing a single canopy layer of the dominant cohort within a clump. Remove poor growing, suppressed, and intermediate trees. Removals will benefit

pine growth and future growth of residual trees. Remove trees through all diameter classes and cohorts 10" to 30". Restoration is associated with topographic zones and aspect.

vi. **Fisher Objective:** Develop future multi-storied stands following restoration objective.

3. Pine Clumps

Maintain and promote clumps in areas of pine where the 40% or greater of the basal area is made up of pine (clumps are typically 0.25 to 0.5 acres)

Promote the growth and health of the pine by thinning through the clump using the following ranges:

North Slope: 60-75% (*high-higher*) of normal basal area (for what land can support)

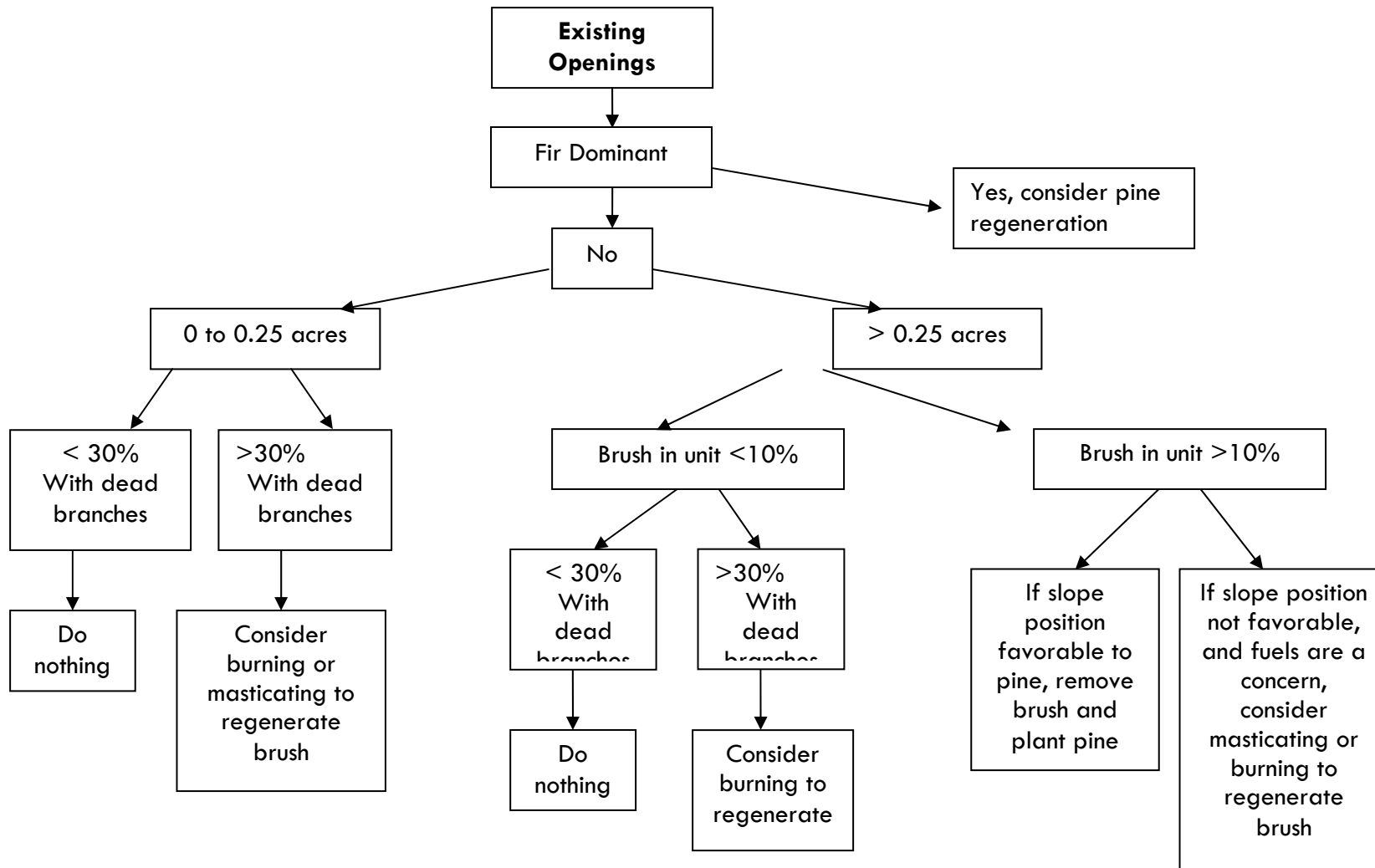
Canyon: 80% (*highest*) of normal basal area (for what land can support)

South Slope: 55-60% (*low-moderate*) of normal basal area (for what land can support)

This thinning activity may result in some pine as well as other species being harvested.

4. Brush

Maintain historic conditions of area in young brush age classes (less than 15 years old). Project area will maintain 10% of project area as openings covered with brush less than 15 years of age. fir dominant areas, regenerate pine in existing openings. This is not a uniform distribution and some areas may have 30% or more cover of brush.



5. Pine Regeneration and Planting

Promote the growth of young pine in small areas that have been previously planted or that currently support young pine. Plant additional pine in openings. Open and orient from southeast to southwest. For existing openings, remove trees to improve orientation and lighting to promote growth. Thin edge of regeneration sites to increase sunlight received. Thin within the existing planted pine clumps to give spacing to small trees.

Outside Clumps

1. Pine-Exclusive Area

Promote the growth of pine where pine is dominant (>50% of basal area is pine). These areas are more open than mixed conifer units.

2. Residual Stand Basal Area

Stand basal area targets are used to identify the residual stand density, see unit tables.

Important Land Allocations

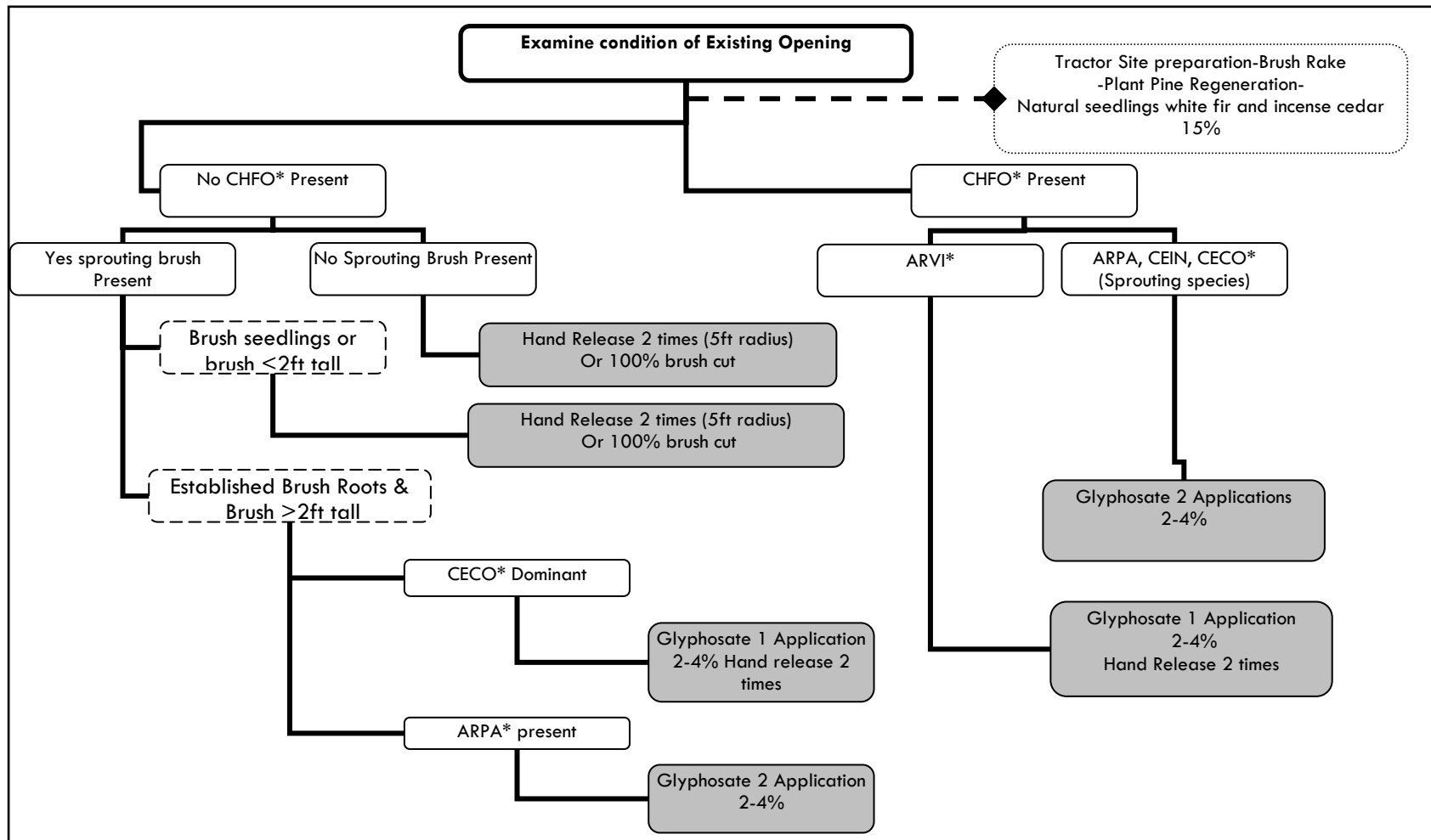
1. California Spotted Owl 300-Acre PACs

Treatments should be based upon ecological need although the current standards and guides allow treatment outside of 500' nest buffer using forest-wide standards and guides for mechanical treatments in the Defense Zone.

2. *PACs in Defense Zone*--near homes, campgrounds, other facilities the treatments should meet fuels objectives. 500' nest tree has further restrictions.
3. *PACs in Threat Zone*—treat surface and ladder fuels with the goal of achieving some fire resilience and meet habitat objectives.
4. **California Spotted Owl Home Range Core Areas (HRCAs):** 600 acres around nest area of the best available habitat on the Sierra National Forest.

Desired Conditions: At least 2 canopy layers, 24" trees in dominant and co-dominant trees, a number of large, very old trees (>45" dbh), at least 50-70% canopy cover, and higher than average snags and down wood.

Figure 1 displays the criteria used to determine the appropriate release treatment for reforestation.. Sprouting species are bear clover, green leaf manzanita, deer brush, buck brush, and whitethorn. The percentage range following glyphosate application indicates the application rate. *CHFO=bear clover, ARVI=white leaf manzanita, ARPA=green leaf manzanita, CEIN=Deer brush, CECO=whitethorn. Site preparation for planting is accomplished with Tractor with brush rake. Planting establishes Jeffrey pine and sugar pine. Natural seedling establishment of white fire and incense cedar of 15% is expected.



Residual basal Area for zone following treatment table 1.1									
ftype		Lowest	Lower	moderate	High	higher	Highest	Normal Yield	Lowest-highest
si 30 @ 90yrs	MF	124	138	153	168	183	198	247	74
	MP	105	118	130	143	155	168	210	
	JP	94	101	108	116	123	131	187	37
si 50 @ 90yrs	MF	136	152	168	184	201	217	271	81
	MP	115	129	143	157	170	184	230	
	JP	106	114	123	131	140	148	212	42
si 60 @ 90yrs	MF	144	161	179	196	213	230	288	86
	MP	115	129	143	157	170	184	230	
	JP	121	131	140	150	160	169	242	48
si 70 @ 90yrs	MF	153	171	189	207	226	244	305	92
	MP	130	145	161	176	192	207	259	
	JP	128	138	148	158	168	179	255	51
si 80 @ 90yrs	MF	161	180	200	219	238	258	322	97
	MP	137	153	170	186	203	219	274	
	JP	136	147	158	169	180	190	272	54
si 90 @ 90yrs	MF	169	189	209	229	249	270	337	101
	MP	143	160	178	195	212	229	286	
	JP	144	155	166	178	189	201	287	57
percent remianing	mixed conifer	50	56	62	68	74	80	100	30
percent remianing	Jeffrey pine	40	46	52	58	64	70	100	30
MF=mixed conifer fir < 15% pine species MP=mixed conifer pine > 15% pine species JP=Jeffrey pine >50% pine species note: this could depend on scale at which table is applied									
Plus or Minus 20 ft2/acre basal area or basal area facotor									

Step 11: Planning Forum approved proposed action

Step 12: Conducted briefings and went into environmental review

Step 13: Developing implementation plan

Meeting Framework

Dinkey Planning Forum Meeting Framework

Meetings	Topics	Date / Location
1	<p>Full Planning Forum Planning Forum Organization & Scope Discussed Agreement to Participate Discussed Draft Purpose & Need Identified Issues & Concerns Identified Background Materials Needed to Support the Group's Work</p>	<p>March 6, 2009 9:00-1:00 Sierra National Forest Clovis, CA 93611</p>
2	<p>Full Planning Forum Discussed Background Materials and Other Project Examples: What Tools & Mechanisms can be Applied to the Purpose & Need? Revisited Purpose & Need</p> <p>Outcomes: Agreed to develop project using Ecosystem Management Paper ● Approved <i>Agreement to Participate.</i></p>	<p>March 30, 2009 11:00-4:00 Sierra National Forest Clovis, CA 93611</p>
3	<p>Proposed Action Sub-Committee (1) Held preparatory conference call to plan meeting Defined variables for desired conditions by slope / aspect Held follow-up conference call presentation on Fisher habitat with Craig Thompson</p>	<p>April 21, 2009 10:00-3:00 Center for Collaborative Policy 815 S Street Sacramento 916-445-2079</p>
4	<p>9:30-1:30 Proposed Action Sub-Committee (2) Defining numbers associated with desired conditions by slope/aspect</p> <p>2:00-4:00 Full Planning Forum Finalize Purpose & Need Update on Developing Proposed Action / Project Scheduling & Work Plan</p> <p>Outcomes: Agreed to numerical values for desired condition based on topographic aspect. Approved Purpose and Need Statement to share with contractor preparing environmental document</p>	<p>May 21, 2009 Sierra National Forest Clovis, CA 93611</p>

Meeting Framework

5	Site Visit for Proposed Action Sub-Committee (3) Goal: Finalize Proposed Action by June 30 Visit Sites with some Markings Discuss Treatment Methods (conference call) Review draft text of Proposed Action	June 3, 2009 8:30-3:30 Dinkey Ranger Office Shaver Lake, CA
6	Full Planning Forum Review Draft Proposed Action Discuss Decision Priorities (Marking Guidelines) for Proposed Action Plan Site Visit	June 17, 2009 1:00-4:30 Conference Calling & Meeting (Video Conference Failed) Sierra National Forest Clovis, CA 93611
7	Proposed Action Sub-Committee (3) Held Conference Call to Prepare Confirmed Agreements to Date and Desired Condition Numerics Based on Topographic Aspect Discussed Process to Establish Ranges for Units after Treatment Began Negotiating Treatment & Associated Numerical Targets by Category and Unit	June 25, 2009 11:00-5:00 Sierra National Forest Clovis, CA 93611 559-297-0706
8	Proposed Action Sub-Committee (3) Negotiate Treatments and Numerical Targets by Unit	July 21 & 22, 2009 Center for Collaborative Policy 815 S Street Sacramento 916-445-2079
9	Planning Forum Decision Priorities Refined & Approval Proposed Action Sub-Committee Report	July 27, 2009
10	Site Visit	August 12, 2009 7:30-2:30
11	Subcommittee Meeting Integrate Lessons from Site Visit Resolve Remaining Issues Outcome: Agreed on Clump Quality and Quantity	August 21, 2009 10:30-3:00 Merced
12	Planning Forum Conference Call Receive Briefing from Proposed Action Subcommittee Review Decision Priorities	Wed, August 26 9:00-11:00 Conference Call

Meeting Framework

	<i>Tentative: Feedback on Draft Proposed Action</i>	
	Planning Forum Meeting Review Briefing Materials & Outreach Strategy Approve Proposed Action	Thursday, Sept. 3 1:00-4:00 Sierra National Forest 1600 Tollhouse Road Clovis, CA 93611 559-297-0706
	NEPA Begins: Scoping Process & Stakeholder Briefings	
13	Planning Forum Implementation Issues Report Back from the Briefing	TBA