

Meeting Summary
Wood Supply Working Group Kick-Off Meeting
Analysis of Small-Diameter Wood Supply in Northern Arizona
June 4, 2007, Northland Pioneer College, Holbrook, Arizona

Introduction and Agenda Review

Tom Sisk: *Welcoming*

Sisk (Professor, Center for Environmental Sciences and Education at Northern Arizona University (NAU)) welcomed members of the Working Group and the public to the kick-off meeting. After mentioning recent and ongoing forest restoration studies wherein a consensus of public opinion had been reached, Sisk encouraged the group to consider ways in which they could take the next step of joining economic development with forest health. The working group draws from the perspectives of numerous organizations, interest groups and industries, and Sisk remarked that this diversity of opinion and interest makes for a radical approach to the forest restoration process in Arizona. In addition to the efforts of those involved, Sisk also stated that the large base of spatial science and research the group has to draw from may better reveal specific areas on the landscape where economic stabilization and forest restoration can exist harmoniously.

Sisk then turned the floor over to Haydee Hampton (Research Associate, Center for Environmental Sciences and Education at NAU), the Forest Ecosystem Restoration Analysis (ForestERA) Project Manager leading this collaborative effort.

Haydee Hampton: *Agenda, contents of workbook, and Wood Supply Team introductions*

Hampton presented the agenda for the kick-off meeting, went over possible dates for upcoming working group meetings, and explained sections of the workbook to those members present. She encouraged Working Group members to review materials included in the workbook. If members wish for information/documents to be included in the workbook for subsequent meetings, let Hampton know. Members requested that reference materials be made available online, and Hampton agreed to make these available on the ForestERA website (http://www.forestera.nau.edu/project_woodsupply_documents.htm). Hampton explained that the Working Group operates using a fishbowl method, meaning that stakeholders not on the Working Group are always welcome to submit comments for consideration both during meetings and between meetings by phone, email or post as detailed on the Wood Supply web pages.

Hampton introduced members of ForestERA's Project Team not present at the Working Group kick-off meeting: Brett Dickson (Ecologist), Yaguang Xu (Spatial Analyst, GIS Developer). She then introduced Jill Rundall, GIS Specialist, ForestERA; Jada Ach, Scribe; Rosemary Romero, Meeting Facilitator; and Gary Snider, Forest Economist and Doctoral student in the School of Forestry at Northern Arizona University.

Rosemary Romero: *Group Introductions*

Romero coordinated Working Group member introductions.

Working Group members present at meeting (in order of presentation):

- 1) Scott Higginson, Executive Vice President of NZ Legacy/Snowflake White Mountain Power, Renergy
- 2) Elaine Zieroth, Forest Supervisor for Apache-Sitgreaves National Forest
- 3) Diane Vosick, Associate Director of the Ecological Restoration Institute
- 4) Steve Gatewood, Director of the Greater Flagstaff Forests Partnership
- 5) Shaula Hedwall, representative of the U.S. Fish and Wildlife Service, Ecological Services
- 6) Sarah Lantz, Urban Wildlife Planner for Arizona Game and Fish Department (Region II Flagstaff Office)
- 7) Keith Pajkos, Timber Staff for the Arizona State Lands Department Forestry Division
- 8) Larry Stephenson, Executive Director of the Eastern Arizona Counties Organization (ECO)/Economic Environmental Counties Organization (EECO)
- 9) Edward Smith, The Nature Conservancy
- 10) Kim Newbauer, Representative of Coconino National Forest
- 11) Jerry Drury, Timber Staff Officer for Kaibab National Forest
- 12) Pascal Berlioux, President and Chief Executive Officer of Arizona Forest Restoration Products, Inc.
- 13) Ethan Aumack, Director of Restoration Programs for Grand Canyon Trust
- 14) Bill Greenwood, City Manager for the Town of Eagar
- 15) Rob Davis, President/Owner of Forest Energy Corporation/Future Forests
- 16) Todd Schulke, Forest Programs Director for the Center of Biological Diversity

Working Group members not present at meeting:

- 1) Robert LaCapa, Forest Manager, DOI BIA Fort Apache Agency Branch of Forestry
- 2) Chuck Peone, Fort Apache Timber Co.
- 3) Paul DeClay, Tribal Forester, Forestry Department, White Mountains Apache Tribe

Meeting observers:

- 1) Jessica Covey, FEC
- 2) Bob Baltes, BDA
- 3) Mary Beth Prior, BDA
- 4) Carol Boyd, Stewardship Staff Officer, Coconino National Forest
- 5) Paul Ferris, City Planner for City of Winslow
- 6) Tammy Mazzetti, Grant Forest Products

After introductions, Romero outlined the logistics of the meeting. She stated that it is her role to help move the conversation forward during this public process.

Steering Committee Presentations

Steve Gatewood: *Inception of This Process*

Gatewood spoke of how this collaborative process began and focused on the central question of what forest restoration projects generate in terms of wood supply. Gatewood repeatedly stressed that such a partnership calls for community-based forest restoration and utilization. He asked the Working Group to consider how to generate information that seeks to determine the available supply. He posed several additional questions for consideration, such as the following: What is the available supply? How much is available for utilization? What if the need exceeds the supply of these restoration projects? How will large users affect small users? Before coming to a resolution in this process, these issues need to be considered.

According to Gatewood, another major issue to consider during this process is the long-term product supply, of which he begged the following questions: What happens to growth, and how much of that growth can we rely on in the future? If we are successful at restoring fire-adapted ecosystems, how does that change future wood volumes? In conclusion, this group needs seek out ways of estimating the long-term supply.

In order to come closer to restoring Arizona's forests, this wood supply analysis must move forward so that industries have the information they need to determine supply.

Todd Schulke:

Schulke spoke on the need for a landscape-scale approach to the restoration or Arizona's forests. His two major questions for the group centered on the need for forest restoration efforts to pair successfully with economic development: what are the high priority areas in Arizona in terms of risk, and how will we pay for such work? It is time to merge these ideas of ecological restoration with economics, Schulke said, because paying for such restorative efforts will be critical.

Schulke says that he is confident in a landscape-scale approach to forest restoration. The success of such an approach has already been documented (Signal Peak Assessment Project) which uses LANDFIRE data, further convincing Schulke that such an approach to forest restoration is important.

Schulke also expressed confidence in the collaborative process adopted by this Working Group. The key for making such a collaborative process run smoothly is to find a zone of agreement between the members' diverse goals and interests. In conclusion, Schulke was excited about such a community-based approach to forest restoration that economizes on an economically sound approach to Arizona's ecological needs.

Diane Vosick:

Vosick spoke on obstacles that the Working Group may encounter when trying to develop a feasible restoration plan. The pace and scale of the group's work is not commensurable to the problem, she said, and therefore a better zone of agreement is

needed. She said that Arizona's economy would not survive unless we restore forest health.

Speaking on the economic side of the issue, Vosick stressed that people are a part of the landscape; so much of rural Arizona depends on tourism, water and other environmental services. Coming to a consensus on a restoration plan that runs concurrent with these economic values will be of the utmost importance during this collaborative process. Vosick hopes that this process, along with the Statewide Strategy, will provide lots of momentum for changing Arizona environmental policies. It will be important in the next 6 months, Vosick asserted, to seek out a solution that the entire group agrees is a good solution.

Elaine Zieroth:

Zieroth spoke on the tool of stewardship contracting, which may be an outcome of this process. She provided the group with background information on Stewardship contracting, noting that such contracts are based on authority passed by Congress; the Forest Service and the Bureau of Land Management engage in long-term contracts where goods can be traded for services. In sum, under such contracts wood fiber can be traded for work needed on forests (thinning, restoration, etc.). If the wood has more value, the industries can pay for the restoration activities themselves. She added that the value of products alone might now be enough to generate work in some areas, which makes such pairing of restoration with economic development so important.

Zieroth posed several questions for the group to consider in regards to stewardship contracting: What treatment do our forests need? What is left in the forest, and what is the economic value of that? Is entering into a 10-year contract enough to stimulate the industry, or should we be thinking more long-term?

She commented on the success of stewardship contracts, citing the Vincent Fire as an example. This fire recently burned into units thinned under such contracts and went right to the ground; groups were able to put out the fire almost immediately. In addition to fire risks, Zieroth listed drought and climate change as other factors to consider when determining zones for contracting. Markets for smaller material, such as the products of the Apache-Sitgreaves Forest, need to be developed. To do this, we need to pick up the pace, she said, and look for both large industries and community-based industries for support.

Rob Davis:

Davis encouraged the group to consider ways to better utilize forest restoration products. Wood that remains on the ground after such restorative efforts (i.e. thinning) should not be considered waste, Davis argues, but a valuable resource. The value and cost of such a supply needs to be recognized.

There is a need, Davis said, to find people and industries that can pay for such efforts. After seeking out larger consumers to work under larger contracts, money can be put into smaller industries. Davis said that if they can't find industries to pay for restoration

products, then that restoration is not going to happen. While working with this group, Davis feels that the following questions will be necessary to answer if this process is to move forward: What is an appropriate landscape size for such efforts? What can be done in those prescribed areas? What is the available supply? What industries fit our resources economically and volume-wise? What projects will work for the long-term? Only when these economical questions can be answered will there be hope for Arizona's forests, Davis says. We are looking for a policy, Davis says of the group's mission, and if the community and state want to move forward on this then that is the reliability of the supply

Romero summarized questions and ideas remarked upon thus far in presentations: addressing community needs, seeking out an appropriate industry, estimating available supply, and accounting for needs of wildlife. She encouraged the group to untangle this complexity – to think about where members can find a zone of agreement.

Wood Supply Analysis Goals and Objectives – Presentation by Gilbert Zepeda: Zepeda (Director of Forestry, Forest Health, Cooperative Forestry, and International Forestry, Southwestern Region, USDA Forest Service) began his discussion by remarking on what he considered to be the central priority of forest restoration discussions: to restore functionality of fire-adapted forests. We must ground ourselves in that goal, he said, by seeking support across districts and forests.

Much of Zepeda's presentation focused on the efforts of forest restoration projects as they affect WUIs (Wildland Urban Interfaces). Until we are able to reduce the risk of uncharacteristic fires in communities, we're never going to be able to let fire run its natural course across the landscape in an effective way, he said. One possible solution is to perform strategically placed thinning treatments in these areas. With Zepeda citing the original estimate of WUIs at 2 million acres, he stresses the need to assess risk factors in those areas first and foremost. Treatments of WUIs are expensive, however, usually necessitating mechanical treatment. Funding for such efforts is therefore a key question.

The challenge lies between the need to restore 17 million acres of unhealthy forests in Arizona and the costs which would be associated with such a plan, Zepeda said. According to cited figures, to treat WUIs and non-WUIs would cost an estimated 1.5 billion dollars; Zepeda remarked that in no way would we be able to make such a dent without considering creative alternatives.

In an effort to reduce those costs, Zepeda encouraged the Working Group to consider private investment in excess biomass, noting, however, that such investment should be seen not as the end-all goal, but as a by-product of restoration efforts. The goal is to restore fire-adapted ecosystems – not to benefit industries, not economic development. This goal must be achieved at a faster rate and in a larger way.

Zepeda stated that he admires such a collaborative effort between diverse stakeholders and spatial scientists. This broader approach to forest restoration has always been missing

in previous studies and figures, and Zepeda stated that unless there's a collaborative effort in coming up with the necessary gross and net amounts of woody material, this could end up being just another study. All critical players that have a stake in Northern Arizona must have a voice in what comes out of this. In terms of agency capacity, Zepeda mentioned that those supporting restorative efforts for Arizona forests have lost a lot of institutional capacity in the last couple of years; the restoration needs exceed what such groups are capable of working on. If this group comes to a conceptual agreement of what large-scale restoration looks like while considering the support of biomass in a sustainable way, then there will be less of a need to run mechanical treatments. If such solutions are reached in this study, Zepeda believes that support can be garnered at the national level to build institutional capacity for facilitating such efforts.

While fire risk poses one of the largest threats to forest health, Zepeda urged the group to also consider such risk factors as drought and climate change. What are the long term consequences of these elements to forests? Unless we build resiliency in the system to the threat posed by fire, climate change will only exacerbate the current negative state of forest health.

Zepeda remarked that while Stewardship contracting is not an end-all, it is obviously a part of an overall restoration priority. Such contracts can be a tool we can use when appropriate, offering assurances to industries and communities. Zepeda concluded by asking the group to think about the high priority areas throughout this collaborative process. Focusing on key risk areas will lend more structure to restorative investments. When groups fail to look at high priority areas, then they are not employing a landscape-scale approach to the problem of forest health.

Q: Are you looking at applying stewardship contracts in different ways? Setting up a regional stewardship contracting program?

A: This is a business plan the Forest Service considers a central priority, Zepeda said. Do we invest in a lot of small contracts? One large one? On a regional scale? He is looking at it in multiple scales and is concerned that by going with one huge contract, the smaller guy would be aced out. Depending on local needs and type of utilization that's taking place, Zepeda said, there is a need for an array of industries. Zepeda also noted that the Working Group's activities do not satisfy the public process requirements that are initiated when a stewardship contract is officially considered by the Forest Service.

Q: Are the results of this process being institutionalized in any way?

A: Zepeda said that the issue of institutionalization is an ongoing discussion. When the initial proposal came forward, that was a concern. This study will hopefully be a springboard for looking at that zone of agreement across larger audiences. He stated that the Forest Service has no preconceived notions of what would come out of this study, nor is the Forest Service planning to use this information to analyze proposals from any one particular industrial user. At the beginning, the Forest Service questioned whether or not they should be involved in the Working Group dialogue. Zepeda wishes this process to be

a community-based approach without any preconceived notions coming from the Forest Service. Without a zone of agreement and a broad idea of what the available supply is, he doesn't think we can make the gains that we wish to make as a community at-large.

Tom Sisk: *The importance of a landscape-scale perspective in forest treatment planning and a review of previous collaborative landscape assessments in the analysis area (PowerPoint Presentation)*

Before beginning the PowerPoint presentation, Sisk wanted to make his role as a member of ForestERA clear to the Working Group. He stated that his aims are to help this process and to clarify three key elements of this group's aim: the idea of landscape, the collaborative process, and the scientific tools that can be utilized for reaching a consensus on risk areas and supply.

ForestERA uses a landscape-based approach to forest restoration analysis and planning, and in the following PowerPoint presentation (which can be downloaded from the ForestERA site), Sisk wishes to outline the benefits of such an approach. His portion of the presentation delved into how spatial analysis can determine priority areas, how such an analysis can be crafted to benefit the work of the Working Group, and what role Forest ERA can play in providing such an analysis.

Note: Power Point slides from this presentation are available at the Wood Supply Analysis Documents web page at:

http://www.forestera.nau.edu/docs/June04_07_Wood_Supply_Kick-off_Mtn_TDS.pdf

The first few slides defined what it means to approach forest restoration at a landscape scale. Sisk stressed that all analysis and planning should be conducted at scales that capture the key process that shape our forests, and there is therefore a need to conduct the planning and analysis on a larger scale. Such a large scale is able to assess such important determining factors as fire, wildlife habitat, and the utilization of supply. He noted that this group is taking the first swing at this utilization issue, emphasizing the fact that utilization needs to be a piece of the restorative process.

Fire, Sisk noted, is obviously a factor that determines what the landscape is. We just can't determine the precise size of the landscape at risk, Sisk said, but we must instead think of it as dynamic.

Q: For some people it is difficult to grasp what you mean when you say "landscape-scale." It is difficult to communicate that with people because people want something to hold onto specifically.

A: Tom responded to this question by saying that one cannot distill "landscape" into a specific acreage. As a public speaker on this issue, Sisk acknowledged that he must work to try to communicate to the public what, exactly, this means. He insisted, though, that the group must not get away from thinking about this process at a landscape-scale.

An issue for this group, Romero noted, will be how to distill this term and relay it to a broader audience. We must learn to give them enough information so that they may better understand this group's goals.

Sisk responded by saying that since this group is operating in a collaborative way, the goal for understanding what is meant by "landscape-scale" will be to give people the space to define this notion in their own terms.

When presenting the slide titled "Science-Based Public Process," Sisk emphasized the need to identify and prioritize landscape features in critical need of attention. He discussed examples of tools that ForestERA has been developing and noted that in addition to the available science, people play a key role in assessing regions of high risk. Not every place on the landscape has the same risk, Sisk noted, and by involving people in scientific assessments, we can get an idea of where the risk is the highest.

The greatest risk to forest health, Sisk said, is unnatural wildfire, but he also mentioned other notable risks for consideration: insect outbreaks and erosion-prone watersheds. ForestERA has been working on developing ways to rank landscapes according to vulnerability to these factors, in addition to the risk of fire.

Once risk has been assessed using GIS assessment tools, ForestERA can identify treatments on a map as well. Landscape constraints are taken into account, allowing for the determination of appropriate restorative treatments. Sisk says this type of spatial approach to forest restoration collapses traditional one-size fits all approaches, paving the way for healthier forests.

The GIS tools ForestERA has at their disposal can also predict possible effects/outcomes of treatments. Maps are available that show how a specific treatment would change the fire hazard or to reveal how different wildlife habitats could be improved or affected. On the flip-side, there is currently no data to reveal how treatments would affect small-diameter wood supply.

In conclusion, Sisk encouraged the group to feel confident about such a landscape-scale approach to restorative efforts. Even though the Working Group is comprised of stakeholders with different desires, he said, their goals merge in regards to forest restoration projects. Such goals reveal the "sweet spot" where restoration meets economic development.

Q: I thought the objective was not to develop a proposal, but to develop techniques and analysis. Is this the basis of a proposal? A plan to get this amount of wood?

A: Sisk answered by saying that it's not up to him to answer that question due to his technical role in the project. His role is to support the working group. There is no decision mandate. Sisk did say, however, that he hopes that this process will form a foundation for those decisions, but he did not comment further since he sees his role as more of a facilitator than a decision-maker.

Haydee Hampton: *Description of Wood Supply Analysis objectives, methods, analysis area and time line (PowerPoint Presentation)*

Hampton followed Sisk in discussing the scientific basis needed for such restorative efforts. She began by discussing the Wood Supply Analysis goals and objectives included in ForestERA's contract with Region 3, emphasizing the necessity to build agreement on the type and location of forest restoration treatments and estimate the wood supply following collaboratively developed treatment scenarios.

Note: Power Point slides from this presentation are available from the Wood Supply Analysis Documents web page at:

http://www.forestera.nau.edu/docs/June04_2007_WoodSupplyAnalysis_HH_GS.pdf

She also explained that ForestERA will be developing a prediction of the actual area and intensity of treatments versus the area and intensity planned. These factors often differ due to site-specific information not considered in coarser-level planning processes.

Hampton reviewed a map of the Wood Supply Analysis area, emphasizing that the reason we can move forward so quickly in this project (only a 7-month timeline) is that ForestERA has conducted landscape assessments of most of the ponderosa-pine dominated regions in the analysis area. ForestERA has already collected data for and supported two major collaborative processes in the White Mountains and Western Mogollon Plateau. The darker green areas on the basal area map, she noted, denote the presence of ponderosa pine and are the focus of the analysis.

On the slide titled "Build Agreement on the Type and Location," Hampton outlined the logistics involved in such a collaborative process. Hampton explained that the Working Group will meet a total of 6-8 times in Northern Arizona and that the public is always encouraged to attend. Announcements for meetings were sent to about 250 stakeholders. In choosing a location for this meeting, the Wood Supply Steering Committee recommended Holbrook as a good central location located conveniently on an interstate highway. Hampton asked the Working Group for input on locations of future meetings. Some members responded that it was a good central location. Other members thought that meetings should take place in various locations inside analysis area, including Flagstaff and Show Low, so that a greater number of stakeholders could observe.

Hampton then outlined a meeting timetable and explained methods for mapping wood volume layers. ForestERA will be using imputation methods, which link multiple vegetation layers and plot data to common descriptors of vegetation states. Uncertainty estimates will also be provided. Layers used in previous assessments and that will be soon available for the Wood Supply Analysis area from Region 3 include dominant vegetation and cover type, forest canopy cover, and mean tree diameter class.

Hampton then posed the question of which diameter-size ranges would be the most important for the analysis. Is it enough to have 2 DBH classes? Or is it 4 or nothing? She noted there is tradeoff as accuracy will decline as more classes are added, so it's important to assess which classes are most useful and necessary. A member of the Working Group noted the four potential classes shown on Hampton's slide (<5in, 5-9 in, 9-16 in., >16 in. DBH) were fairly standard. Others commented that a 12 in. cutoff, in place of or in addition to a 16 in. break, would also be of interest.

Sisk then responded by saying that ForestERA is breaking new ground in identifying these classes because it is a difficult task to map size-class information. He stated that it is their goal to come up with the best layers for these forests, and this was their first chance to get an initial reaction from the group.

Hampton then delved into how ForestERA develops their vegetation inventory for mapping basal area and other forest structure metrics. She stated that their inventory is based on a stratified random sample and will target under-represented vegetation states in new acquisition. ForestERA is compiling ground plot data from other sources, such as Forest Inventory Analysis (FIA) and Forest Service spatial data, for use in this Analysis and reviewing spatial data from LANDFIRE, Southwest ReGAP, and Region 3 Forest Service.

For more information on the Wood Supply Analysis, Hampton suggested visiting the ForestERA Wood Supply web pages: www.forestera.nau.edu/project_woodsupply.htm. The web pages contain a project summary, meeting information, a list of Working Group members, project updates, a link to a map server and information on how to participate.

Gary Snider:

Gary Snider concluded the presentation (slides 21-23) by discussing existing wood utilizers, framing the issue in terms of supply and demand (for small diameter wood). The demand side of the equation must be considered, Snider noted, meaning we must take wood harvesters, processors, and users into account. Snider will be gathering information on current levels of wood used and existing contracts, as well as capacity, from those on the demand side to include in a database.

Snider mentioned that Arizona forests are currently experiencing a lot of growth, but the question is how much and for how long? Growth affects buying estimates, and in an attempt to begin dissecting these issues for better understanding, Snider said he would put together an annotated bibliography of methods and assumptions, and then make recommendations on best methods. Finally, in order to assess the impact of fine-scaled changes to treatments when they are actually carried out versus planned, he will be reviewing past studies on this issue and interviewing two ID teams from different regions of the study areas.

Gilbert Zepeda:

Following lunch, Zepeda took the floor to share his thoughts about the collaborative process and to clarify for the group how the Forest Service would respond to such dialogue. This study, he remarked, is a result of an unsolicited proposal which can be a source of information to us as we evaluate proposals from wood utilizers. He explained to the Working Group that the Forest Service was not currently soliciting recommendations for restoration plans, so it is a delicate balance as to how this group should engage in this dialogue.

Zepeda asked the group to consider what would be an appropriate means and venue to bring forward recommendations once they reached a consensus. Since the Forest Service funded this study, he stressed that it is important for the group to consider the following question throughout the process: identify what restoration means and what the by-product of those efforts would be in terms of amounts. He further went on to say that the Forest Service will use the information generated from this study as a source of information born from the most contemporary science we have available which is set in a framework that represents a zone of agreement.

Q: Do you see us as making recommendations?

A: This group is not being paid to do a study, Zepeda answered. The information that results in this process will be a tool for the Forest Service to consider, but since the Working Group was not paid by the Forest Service to conduct such a study, FS is not obliged to implement the group's recommendations.

Q: Would getting something in writing help if we wish to later solicit the Forest Service to consider our recommendations? Could a letter or notes from meeting, etc. save time?

A: Sure, Zepeda answered. We could work on drafting a letter with Harv's consent.

Setting the Scene

Shaula Hedwall:

Hedwall, representative from the Fish and Wildlife Service, talked on the issue of wildlife considerations for a regional wood supply analysis. Along with Sarah Lantz from Arizona Game and Fish, she presented a Power Point presentation (which can be viewed on the Wood Supply Analysis documents web page) which delved into how wildlife considerations should be taken into account in this analysis. Her main question was this: how can we incorporate wildlife issues into these treatment plans?

The outline of Hedwall and Lantz's presentation is as follows: USFWS and AGFD Missions, laws and guidance, wildlife/forest treatment goals, and wildlife considerations for forest treatments. Hedwall and Lantz noted that the missions of their respective agencies are quite similar: to provide leadership for sustaining fish and wildlife across the board, not just endangered species.

Hedwall outlined several applicable laws and guidelines that both organizations use as a means of protecting wildlife, including the Endangered Species Act, the Bald and Golden Eagle Protections Act, and the Migratory Bird Treaty Act. Both Hedwall and Lantz stated that while there is no Forest Practices Act in the state of Arizona, both agencies still highly recommend the conservation of species' habitats.

Hedwall concluded her segment of the presentation by saying that FWS works hard to maintain, enhance, and restore habitats. They take a very comprehensive look at the habitat for multiple species' needs in these areas. She feels that the Working Group can fulfill both the supply goals and these FWS goals in creative ways. She encourages the group to consider the effects of widespread analysis and treatment on multiple habitats.

Sarah Lantz:

Lantz continued the PowerPoint presentation by encouraging the Working Group to take a multi-species approach to the question of forest restoration during this process. She proposes a mosaic approach when this group begins implementing treatments. According to Lantz, a mosaic approach would simulate a pattern that most closely resembles the diversity of habitats and wildlife needs.

Regarding the placement of treatments, Lantz listed several key habitat areas where treatments should not take place when considering the needs of wildlife: riparian corridors, canyon rims, steep slopes, north-facing slopes, seeps, springs, tanks, known movement corridors, and known nest sites.

Lantz asked the Working Group to think about what they considered to be the definition of WUIs. Such definitions mean a lot for wildlife as many species live and thrive in such areas. Restoration projects must take that into account before implementing treatment plans in those areas. While Lantz and Hedwall agree that strategic placement of treatments in WUIs is important for this group, they stress that the group must also consider wildlife habitats on equal grounds with other factors such as restoration, economics, and small diameter wood supply.

Q: How do you envision bringing your perspectives into this process?

A: Lantz responded by promoting a mosaic approach to restoration where different treatments would be implemented next to each other. Implementing treatments at different times and assessing species' responses to restoration treatments are other ways that wildlife considerations could be taken into account. Hedwall added that treatments should be modified to account for wildlife habitat.

Participants engaged in the ongoing dialogue by saying that there are two obvious places where the concerns of these wildlife agencies can enter the process. What places in the landscapes could be designed for wildlife? Can we design new types of treatments to fit wildlife needs? Lantz emphasized that she does not want the group to consider wildlife as a constraint to treatments but as a part of what the picture has to look like. Hedwall

remarked that the group should also consider how wildlife will be affected by specific treatments. Participants also remarked that there are prescriptions that can be placed in the WUI that provide for the needs of both wildlife habitats and healthy forest stand structure.

Jim Probst:

Probst (Hydrologist, Apache-Sitgreaves National Forest) encouraged the group to consider the effects of restoration and treatment efforts on soils and watersheds. In terms of watersheds, he addressed two main concerns: high erosion hazards on steep slopes that account for 33% of the project area, and matters of soil sensitivity when determining where to implement treatments.

Probst's advice for large-scale treatment implementation is to avoid restorative efforts during the wet harvest and to consider the impact of roads, landings and skid trails on the landscape, especially near watershed areas.

In conclusion, Probst hopes the Working Group will consider distance from private land, slope gradation, water proximity, and erosion hazards when assessing areas where treatments may be necessary.

Data needs for developing treatment scenarios: Tom Sisk began by discussing the timeline involved in gathering necessary data for reaching a consensus regarding wood supply and restoration needs. Previous analyses have looked at this entire area, he noted, which makes it possible for ForestERA to merge data into products that will be useful for this Working Group. He reminds the group that they are not starting from scratch in terms of research. A goal for the group, he said, will be to prioritize layers of spatial data. Layers available for analysis include basal area, stand density, canopy cover, and wildlife habitat.

His second slide outlined how wildlife habitat can focus efforts. A landscape-level analysis can result in strategizing how species-specific information can be utilized to focus restoration efforts. Sisk cited spatial research regarding the spotted owl and goshawks, illustrating how the Working Group could develop treatment scenarios to minimize the effect of treatments on wildlife.

Haydee Hampton: Hampton stressed that many GIS layers are available for this project, and data is already available for the Working Group to consider. Using spatial data made available to the group in the work book, Hampton reviewed several layers for this region of focus.

Some members of the group were concerned with the presentation of such data of which they have no technical expertise. They remarked that due to their lack of knowledge in the arena of spatial data, they were hesitant to participate in that aspect of the conversation. Sisk reassured the group that the presentation of this data is merely to inform them of what's available and that the goal of ForestERA is to get the group to the level where they can understand such data.

Hampton ended her presentation by informing the group that their spatial data will soon be available online due to a grant received by NAU's Geospatial Research and Information Laboratory (GRAIL). ForestERA will provide groups with various layers as they are created throughout the period of the meetings.

Wrap-Up Discussion (facilitated by Romero):

One group member found the phrase "type and location" to be too vague in the goal: "Build agreement on the type and location of forest restoration treatments". He went on to say that if the group cannot agree upon the operable acreage, then they were never going to find the total potential as a resource. On this point, another participant stated that treatments are linked to acreage – the approach ForestERA is proposing seems to include both the treatment approach and a number of acreage approach – from a methodology perspective he didn't see any disconnect between ForestERA's proposal and those who want a specific acreage amount.

Several members of the Working Group stated that it would be helpful to add more detail to the goal: "Build agreement on the type and location of forest restoration treatments." One participant reminded the group that the central priority is to restore fire adapted ecosystems, and that any estimate of wood supply available for industry use should be based on restoration by-products. She suggested the following steps as part of an iterative process to reach this goal:

1. Identify acres available and appropriate for restoration
2. Identify the restoration goals for those acres
3. Prioritize and assign treatments by size and location to reach the restoration goals
4. Estimate the volume of supply of those acres given these treatments.

Consensus would need to be reached at each step in this process.

The observation was made that these steps were the same as what ForestERA presented. Another participant suggested a similar plan:

1. Identify specific areas that are available and appropriate for restoration
2. Build agreement on forest restoration types for various locations
3. Develop a spatial layer that captures this information.

One participant recommended that we should only consider mechanical treatment in this study. Another countered that we need to consider what happens to areas without mechanical treatments as these will either have Wildland Fire Use or prescribed burning and that this information will be important in placing treatments strategically at the landscape scale.

One participant proposed working through multiple scenarios instead of attempting to arrive at just one scenario that the Forest Service would then have to work with. Some members of the Working Group felt uncomfortable with taking out the phrase "building agreement." One scenario has much more weight than multiple scenarios, they stated, and the group should not begin watering down that goal before even entering the process. Another member stated that the group needs to examine multiple scenarios – not a one-size-fits-all recipe, but a way of assessing problem areas and problem solutions. Sisk responded by saying that arriving at a consensus is the most powerful way to build agreement. The goal of the group is to try to find the sweet spot

upon which they can build agreement. Another Working Group member stated that this is a process, not a restoration plan. Ultimately the need of this group is to develop a map of at-risk places and general treatment plans for those places. "Treatment" was defined as an action that would happen in a specific place. "Treatment Scenario" was defined as consisting of multiple treatments of various types across an analysis area.

A member of the Working Group suggested that the group adopt a filter which would assess how much acreage is available for treatment. There is a need to narrow it down to something more practical, she said, because treatment types are tools. Another group member agreed that acreage and treatment need to go together. He suggested that the group go through each area and progress accordingly with each layer to determine availability. A member of the group expressed concern with such a desire for specificity of acreage and supply. Stakeholders who want certainty want it for political or economic reasons, he said. They want to go to their investors with those figures.

One member of the group stated that this analysis is already tied to a specific purpose, linked to a commissioned study – concerned with an issue of process – fulfill purpose of the study first and foremost – should be acknowledgement, we're only looking at step 1. People from industry need to know right away so they can go out and start working with this supply information. ForestERA staff emphasized that they must deliver an estimate of wood supply under one or more scenarios – hard for us to give estimation on supply without a scenario – we aren't trying to say how much should be taken out, but it involves the goal of restoring the forests – the supply is a by-product of the restoration. Another participant stressed that the focus should be on mechanized treatments, however another reasoned that all types of treatments should be considered. Another participant asked what's going to happen to the acres that aren't treated? Recognizing the reality that fire will play out one way or another will influence treatments.

Public Comments

A stakeholder observing the meeting encouraged the group to be more specific in regards to the goals and objectives. There need to be specific ways to tackle those goals and objectives.

Meeting Locations: Haydee Hampton noted that half the group was closer to Flagstaff while most of the remaining participants were in the White Mountains regions. The group thought the Holbrook location worked well, but hoped that other meetings could be held in Flagstaff and other parts of project area, perhaps Show Low. ForestERA will work on organizing the location in order to accommodate as many people as possible; keeping in mind that the Holbrook location will not be available for the next meeting. The dates of the meetings were organized as follows with locations TBD:

- ❑ Wednesday, July 18
- ❑ Friday, August 17
- ❑ Monday, September 17
- ❑ Tuesday, October 9
- ❑ Monday, October 15
- ❑ Monday, October 29
- ❑ Friday, November 16