



4FRI Stakeholder Group Meeting

Wednesday, March 22, 2017, 9AM-12:45pm

Coconino National Forest Supervisor's Office

1824 South Thompson St., Flagstaff, AZ 86001

Teleconference line: (712) 775-7031, code: 439290611#

9:00 Introductions

Attendance: Matt Millar, Travis Woolley, Bryce Esch, Neil Chapman, Sue Sitko, Ethan Aumack, Travis Bruner, Joe Miller, Nate Rees, Steve La Falce, Henry Provencio, Matt Cole, Mark Nigrelli, Robert Sanchez, Steve Best, Wendy Jo Haskins, Patrick Moore, Steve Horner, Marlon Banks, Dick Fleishman, Annette Fredette, Gregg Smith, Laura Jo West, Heather Provencio, Neil Bosworth, Shaula Hedwell, Steven Flora, Buzz Ivceck, Stephen Reidhead, Allen Reidhead, Scott Russell, Art Babbott, Steve Rosenstock, Rob Nelson, Paul Watson, Tom Mackin, Pascal Berlioux, Jay Smith, Jim Parks, Patrick Rappold, Jason Whiting, Teki Sankey, Dan Kipervaser, Alicyn Gitlin

Phone: Bob Siedler, Todd Schulke, John Suther, Rob Davis, Jamie Clark, Randy Fuller

9:05 Approve minutes from the February 22nd SHG meeting — Whiting - Approved

9:10 Review action items from the February 22nd SHG meeting — Whiting

Action Item	Lead	Status
1. Sending out preliminary alternatives for the Public Workshops	Fredette	In Process
2. Finalizing the dates and locations and publicizing for the Public Workshops	Pettit/Sitko	Complete
3. SHG develop ideas to garner stronger attendance at the upcoming public workshops	SHG	Complete

9:15 Call to the Public – None

9:20 Drone Use and Goals – Summerfelt & Sankey

Teki Sankey with Northern Arizona University specializes in remote sensing and geospatial data analysis, which she uses to monitor and study forest restoration activities as they relate to snow-pack accumulation and fire-risk reduction and how these items change over time.

Using MODIS data, which is a form of time-series data that provides daily-images, Teki and researchers are able to collect decade-long archives and analyze snow-cover over time, and determine the effects had on treated regions vs. untreated regions of the forest. Analysis of this data shows treated sites consistently experiencing snow cover persisting into April, and the number of snow-cover days significantly increased compared to untreated sites.

Purchasing remote sensing data is expensive, so Teki and her team at NAU utilizes drone and powerful image-sensor technologies as an alternative means of collecting remote-sensing data from specific treated vs. untreated sites, in the form of high-resolution images. These drones can be pre-programmed with specific flight patterns, so they don't require manual flight. This provides unique research opportunities but the equipment is expensive and the regulatory framework for drone use is still developing.

UAV Devices -

NAU Fixed-Wing UAV: Has a small image sensor that has 4-spectral bands (camera records images using 4 colors), which makes the UAV lightweight and able to fly for longer periods of time. It uses remote-controlled waypoints, takes high quality images, and flies in a zigzag pattern to collect data from predetermined polygons of treated vs untreated land. The machine can estimate tree-canopy heights, canopy-covers, tree-densities, and tree diameters. This data can be used to generate a 3D model of forest canopies.

NAU OCTOCOPTER UAV: Utilizes a hyper-spectral sensor that has roughly 270 spectral bands, and a 3D imaging device called a LiDar sensor. This increases the weight of the drone and decreases its flight-time abilities. It collects very high-resolution data that can be used to collect and monitor the unique spectral signatures of different plant species and cover types on the ground. This device collects data that can be used to monitor plant-moisture levels, and can classify species, pre- and post-treatment. The drone and sensor costs roughly \$50,000.

Hyper-spectral data paired with LiDar data, can be used to estimate tree canopy size and diameter which can then be used to estimate total above ground biomass and carbon accumulation growth. These technologies can estimate bare-ground elevation fairly accurately compare it to snow-cover elevation which provides information on snow-depth in various locations. This tech allows researchers to move to near real-time monitoring. The drone and image sensor costs about \$120,000. The LiDar sensor costs nearly \$30,000. Interested parties can pay NAU an instrument-maintenance fee to be able to borrow and operate these devices.

If we can derive these measurements accurately in these small-scale areas using the UAV technology, then we can upscale that to satellite data that covers the entire state or region.

Kipervaser – Views this technology as one with the potential to answer many historically tricky questions the MPMB has set out to answer (concerning spatial patterns, heterogeneity, etc.). Policy concerning drone use needs to catch up to technological developments that are occurring. Currently the Forest Service has no policies governing drone use on FS lands.

Miller – Asks whether the team at NAU is utilizing drone data concerning crop management, and Teki verifies the technology's ability to perform this type of monitoring but says NAU isn't currently using the drones for this purpose.

Provencio – Another application for this technology can be in the sales administration, DxP realm.

9:50 Mexican Spotted Owl Update – Hedwall, US Fish and Wildlife Service

Shaula Hedwall is with the US Fish and Wildlife Service and works closely with the FS and other entities studying Mexican Spotted Owls.

Population Monitoring – The Rocky Mountain Bird Observatory is the contractor implementing the monitoring efforts of the owls. This occupancy monitoring was piloted in 2014 and researchers are still establishing a baseline of data, so no trend-data is available yet. They're implementing some acoustic devices in remote locations to see if they can increase their sample sizes across the board by using audio recorders to detect occupancy. This monitoring was set up to look at the species range-wide, so information on how the owls are doing in specific locations is unavailable. They're currently working to expand the range of study into Utah.

Habitat-Monitoring - Researchers are also looking at habitat trend over time, performing a Macro-Habitat analysis. They're working with FIA and other partners to develop an appropriate schematic to monitor and study these habitats. They're getting closer to being able to carefully monitor this.

Research into how forest restoration management practices effect owl population and habitat is underway. Data on the current states of specific treatment plots have been collected, but treatments haven't yet occurred to prompt the effect data.

Hedwall and other owl research cooperators are planning a Spotted Owl & Fire Symposium in Albuquerque in September. They're going to be presenting the most current data they have on the effects of fire on the spotted owl habitats and populations, and will conduct a panel discussion at the end. They're hoping to have forest ecologists discuss the underlying forest ecology related to sustainable owl habitat. Information on the symposium will be provided to the SHG once solidified.

How can the SHG be helpful in the planning process of this in the RIM country? They're currently looking for opportunities to work with the group concerning spotted owl habitat. If the SHG could come to a better agreement on what desired conditions are prior to a Record of Decision being made, so as to prevent them from locking themselves in specific forms of treatments that might not be ideal of varying PACs, that could prove helpful in help all parties meet desired outcomes.

Berlioux – What reactions from the species in terms of adaptation to post-fire conditions in the Wallow area have been observed? As a recovery team they hypothesized that high-severity fire in owl habitats is unsustainable. High-severity fires can contribute heavily to the reduction of viable owl habitats. Some are discussing the idea of making the Mexican Spotted Owl a poster-child for high-severity fire management.

10:20 USFS Update – 4FRI Board, Coordinators

Scott Russell – The 4FRI board is coming together in an efficient manner after about a year of planning and construction.

- Review – Public Meeting Flyer & Press Release

Over the last month, they've drafted a press release for the media and a flyer that SHG can print and display in areas they think will get adequate foot-traffic, in order to spread the details of the public workshop dates and locations. Please post colored versions of these fliers.

Workshop Dates: Thursday, April 13th in Payson / Tuesday, April 18th, in Show Low

Miller - Bulletin board real estate is very effective. Joe suggests printing fliers on an 11x17 glossy page so that it will pop from the rest of the information on bulletin boards. He also encourages strong personal networking.

Fredette – The structure of the workshops will consist of brief introductory presentation that lays out the alternatives and the issues, and a discussion on the connection between the two. Then the attendees will be broken into small table groups to answer some guiding questions, in order for the FS to gain some feedback on what the public wants to see from these projects. They will be putting this information up on BC and their website so people can review it before the meetings.

Fleishman – suggests a project-area map be added to the flyer.

Operations Update (Fleishman): Mechanical operations have started back up again. Some areas closer to the rim are still snow saturated. Fire treatments should be starting back up soon. Grassland wildfire in Kendrick Park on the Coconino forest occurred.

Planning Update (Fredette) – They're currently finalizing the significant issues with deciding officials. They're also discussing the preliminary alternatives to put some outlines together for the public workshops, which are being discussed with the regional office.

Grazing Concern Update (Fredette) – their strategy is that they want to carry forward the same design features they implemented on the first EIS concerning the grazing objection which included additional science, monitoring requirements, some effects analyses from historic grazing, and design features concerning coordination between fire and grazing.

Kipervaser – Has been working on processing agreements for the MPMB to do their various surveys. He's put together a white paper on his work recently done with USGS on drone use to test out what can be learned using this technology and what it would take to make that possible for the FS.

10:40 Break

10:45 Vision 17 – IWG & USFS

Vision 17 is a plan constructed to address how implementation of the first EIS can move forward and be successful. The IWG endorses the plan unanimously. Steve Reidhead presents the plan on behalf of industry, while Scott Russell co-presents on behalf of the Forest Service. This is their plan to bring to scale the restoration happening across 4FRI.

We haven't seen the investment on the west-side to change the game and the capacity of industry to implement the acres we want to get done. This strategy requires large investment in

order climb the value-chain concerning wood products and bring the industry capacity here that's needed to accomplish the projected acres treated. A challenge is faced in figuring out how to implement the industry driven model, which determines the industry responsible for implementation of the things the collaborative group wants to accomplish. The east-side industry has shown that the acres that have been implemented have been done at a cost that the industry can bare.

There are enough acres in need of treatment to support the current GEP contract with additional acres left over for potential new industry.

The Strategy (20 Points) –

Introductory points involve meeting current existing obligations. Point #4 involves devising a new RFP for 200-500k NEPA ready available acres to encourage industry's ability to sustain itself. This isn't intended to foster another large-acre contract, but to invite many varying proposals for a chance to gauge which are most appropriate and which will help us achieve goals effectively. Points 6-7 involve continuing the good work that's being done and expanding the work in comprehensive restoration. Points 8-10 acknowledge the efficiencies necessary to prepare the work in order to operate at the scale discussed. There is a lot of emphasis on the FS moving to DxP as their primary operating designation, and to take a look at how they can achieve efficiencies related to preparation. Points 11-15 discuss the existing planning measures in place. 16-17 deal with economic facilitation. These are items they can look at to facilitate the economics of restoration getting done. Point 18 concerns resources allocation and funding maintenance. Points 19-20 work to attract qualified bids and proposals for a new RFP.

The idea of devising a new RFP for the first EIS might result in one, many, or no awards. They're hoping to have the RFP ready by Sept. 2017 and hope to have awards made by Dec. 2017.

The IWG and USFS is looking for SHG support of the broad concepts presented in the Vision 17 strategy.

Aumack – Ethan supports the idea of putting forward an RFP before the end of the year, and appreciates the collaboration occurring to compile the strategy.

Miller – This project effects a large recreation and outdoor industry in addition to the timber and biomass industry, and this requires consideration.

Mackin – Tom believes marketing drives the success of this strategy, and wants to ensure we have the appropriate scale of market to attract the appropriate scale of industry. Reidhead and the IWG doesn't currently recognize a problem with the existing market.

Campbell Global offers support for Vision 17.

Aumack – Puts forth the motion that we as a SHG endorse this plan and in doing so charge the SC in putting out a letter that would formally convey our support at the state level with our congressional delegation and key folks in DC, in an expedited way. **Motion passes with no objections.**

Vision 17 was co-presented by the 4FRI Industry Workgroup (Steve Reidhead) and the 4FRI USFS Team (Scott Russell). Strong support was conveyed by the stakeholders for the Vision 17 strategy. A proposal by Grand Canyon Trust was unanimously supported by the entire 4FRI Stakeholders Group to task the two co-Chairs, in connection with the Steering Committee, with publicly conveying the stakeholders group endorsement and support for the Vision 17 strategy to key elected officials and forest service representatives at the state, regional and national level.

11:45 Working Group Updates – All

- Planning WG (10 min) – Berlioux

SPLYT field trip taking place on March 30th which is expected to be the last field trip on the SPLYT issue. The group hopes to reach resolution and agreement afterwards. There will be another field trip to address the Dwarf Mistletoe issue on the east-side. A field trip on water resources is in discussion.

- Industry WG (10 min) – Worsley

The IWG thanks the FS for their work on Vision 17.

- Communications WG (10 min) – Sitko

Sue distribute the first look at the April newsletter and suggest Vision 17 go on the cover page.

- MPMB WG (10 min) – Esch

MPMB is compiling agreements, with help from Dan Kipervaser, regarding surveys they're planning to move forward with. MPMB is issuing a letter of support to Margaret Moore on a project she's conducting.

- Comprehensive Implementation WG (10 min) – Bruner

CIWG is moving forward with work on the T-Six Spring Restoration Project and are currently researching other potential spring restoration projects. The AZGF is working with Natural Channel Design and the FS on the design elements of the project so that it can hit the ground in 2017, which will include some cattle and elk enclosures and some road obliteration. In looking for other spring restoration opportunities they've found that some obstacles exist. Dick and Kip are working on designing a database that will show which projects are being done. Tom Mackin is putting together a SHG team-building activity.

12:35 Stakeholder Disclosures – All

Berlioux – On April 11th, an Industry Round-table meeting is taking place in Holbrook. It will be a forum for industry to meet and discuss technical operations details.

Horner – Campbell Global is soliciting interest from contractors for restoration services that are related to the TNC stewardship agreement.

Miller – On April 27th, the AZGF dept. and Trout Unlimited will co-sponsor the 8th annual Native and Wild Trout Conference at the AZGF headquarters.

Sitko – The Master Stewardship Agreement has been signed.

Smith – Upgrade to their lumberjack mill are underway and there is an early to mid-may start-date for the sawmill.

12:40 Review Action Items

Action Item	Lead	Status
1. Update Workshop Flyer with a Project Area Map	Sue Sitko	Complete
2. The co-Chairs, in connection with the steering committee, are tasked by the Stakeholders Group with drafting a letter of endorsement and support for Vision 17 and conveying to state, regional and national recipients in an expedited way	SC, Bruner, Whiting	Complete
3. Find alternative location for Show Low Public Workshop	Sue Sitko	
4.		

12:45 Adjourn

04/26/17 SHG meeting information:

Wednesday, April 26, 2017, 9AM-TBD
 Arizona Game & Fish Region 1 Office (Pinetop)
 2878 E. White Mountain Blvd., Pinetop, AZ 85935
 Teleconference line: (712) 775-7031, code: 439290611#

Future Agenda Items:

1. Industry Economics around Restoration USFS & AZSF
2. DC Travel Discussion