

## DWRF Stakeholder meeting 3/1/2022

Notetaker: Mike Remke

In Attendance: Danny Margoles (DWRF), Mike Remke (FLC), Anthony Culpepper (MSI), Molly Pitts (Colorado Timber Industry Association), Jimbo Buickerood (SJCA), Laura Hann (MSI), David Casey (USFS), Logan Davis (DFPC), Mike Preston (Water Committee UMU), Bill Baker (Retired Forest Ecologist), Derek Padilla (USFS), John Rader (SJCA), Emma Reinemann (USFS), Bob Milford (Pagosa Area Trails), Duncan Rose (TU), Cassidy Goering (FLC student), Mike Battaglia (RMRS), Chris Garner (MCD), Emily Lockard (CSU Extension), Ryan Cox (CSFS), Andrew Slack (CFRI), Steve Garcher (Dolores County Commissioner), Chris Alanis (USFS), Kenar Houghton (USFS), Josh Braun (NRCS/NWTF), James Dietrich (Montezuma County), Logan Davis (DFPC), Rich Landreth (Cortez), Samantha Downing (WAP), Dana Guinn (MSI)

Danny – Operating Principals

- Review operating principles. Ground rules and meeting agreements.

Danny – Agenda

- Introductions
- Updates by program area
- Focused on monitoring and DWRF resilience metrics
- Salter EA Monitoring Plan

Stakeholder Updates by Program Area

- Collaborative Forest Landscape Restoration Program
  - Danny –
    - CFLRP desired conditions passed by CoCo
  - Jimbo – Project evaluation for CFLRP
    - 3 years ago applied to CFLRP. Now we are accepted, and funding is approved for \$3 million/year.
    - We have a charter for a governance structure that articulated a need to develop a process to evaluate projects fit for CFLRP funding across SJNF
    - The projects and Places committee is tasked with this process and tool
      - Desired conditions were an initial step to provide guidance to what we wish to evaluate for CFLRP
    - In process: developing review and evaluation tool for the fit of CFLRP projects based on congressional mandate and application submitted by stakeholders.
      - Working with USFS – many projects already in the pipeline for FY2024 that are being approved this spring and hoping to review these initial projects using this new tool
    - Process is open and transparent for input expertise as well as cheerleading

- James confirmed Jimbo covered topics well
    - Danny encourages folks to sit in on CoCo meetings and participate in P&P or S&M meetings. Reach out to Danny to get on email lists.
- Regional Conservation Partnership Program (NRCS)
  - Danny –
    - Conversations with MCD about RCP through NRCS to fund private lands wildfire mitigation work.
    - Consulting with NFF to learn about successful project in Chaffee county
    - DWRF to be a partner on submission that will be led by MCD
- Rapid Risk Assessments
  - Danny –
    - Conversations about rapid risk assessments with landowners around Summit Lake
      - Structure and surrounding fuel assessments
      - Primary a communication tool to educate land owners
    - Plan to start in April – If you want to support and participate volunteer with Danny (he needs more emails in his inbox)
- CO Strategic Wildfire Action Program update
  - Danny –
    - Adams Ranch and Ute Mountain Ute – a need for an updated forest management plan which is currently ~20 years old.
    - Considering an internship program with tribe to complete plots
    - CFRI engaged in COSWAP related monitoring
      - Initial phases, follow ups coming (once Danny gets through the emails in his inbox)
- Snowtopography update
  - Mike R. –
    - Snowtopography is up and running
    - Biweekly sampling –
      - Lizard Head, Chicken Creek and House Creek
    - Quantifying albedo with CSAS
- Wildfire mitigation for landowners workshop
  - Danny –
    - Wildfire awareness with Fire Adapted, CSFS, WAP, NRCS, NWTF
    - Saturday the 22<sup>nd</sup> (Summit Lake)
- CSFS BMPs
  - Ryan –
    - Best Management Practices monitoring from CSFS
      - Evaluate water quality.
      - Improve logger education programs
      - Random sampling – fuels treatments and timber harvests of 6 project areas, 2 private, 2 federal, 2 .....
- Danny –

- Aspen Wood Products, pellet mill is somewhat operational
  - Some snags (every forest needs a snag) but getting up and running
- Funding - Danny –
  - Funding: FRWRM – forester funding automatically rejected due to technicality; reworking to put into AIM grant from Coalitions and Collaboratives
  - Community Wildfire Defense Grant – conversations initiated by Montezuma County
  - Upcoming Opportunities
    - NFF matching award program RFP coming out soon
    - CWCB – Wildfire Ready Watersheds Program
  - Upcoming Conferences:
    - CO Wildland Fire Conference in April
    - Cross-boundary Landscape Restoration Workshop in May

Danny, Anthony and Laura: Monitoring and Desired Conditions Synthesis:

- Overview - Danny
  - Co-produced by MSI, DWRF, and USFS
  - Monitoring agreement for Lone Pine/DWRF
  - Link-up monitoring with desired conditions
  - Goals
    - Context, report, reflect, develop
  - Context:
    - Lone Pine EA: 202
      - DWRF = collab partner, have had pre-implementation monitoring.
      - Tours, pres/discussion
    - Salter EA: 2022
      - Pre-scoping, tours, discussions, science conversations, process review
      - Expectations and commitments document
    - Project & monitoring: DWRF desired conditions development
    - 3<sup>rd</sup> party monitoring is ongoing
- Lone Pine – Anthony
  - Lots of people have been involved in developing monitoring (Mike Remke)
  - Interesting process... how do you monitor across a 70,000-acre analysis area
  - Lone Pine has several proposed treatment types:
    - Commercial thinning, plantation thinning, salvage, single tree selection
    - Included treatment areas that are linked to Ponderosa Pine Partnership in Haycamp Area

- Where are there like treatments and similar stand conditions and temporal sequences: Brumley/Fader, Wolf Den, Glade Canyon, etc...
        - Ended up with many points in many places
        - Despite COVID challenges, 200+ plots led by Mike Remke and Emily Swindell
      - The presentation will focus on BEST
    - Single tree selection and large tree retention areas were developed, but plots generally did not cover this new treatment area except for in the BEST area
    - Adjusting monitoring plan to improve communications and efficiency with implementation timing
      - Some plots are now outside of the implementation area... can they still be used?
      - Can monitoring incorporate prescribed fire treatments?
      - Better QA/QC plan
      - Data management within the collaborative comms folder.
    - Overview of on-the-ground-monitoring
      - Site photos, overstory, regen/shrub cover, grass/forb cover, ground cover, insect and disease/fire injury to trees, cone presence, canopy cover, invasive species
  - Laura-
    - Data collection considerations and challenges
      - Human error, post-treatment adjustments, differences in methods, missing variables, seasonality, only pplot level data
  - Questions – Mike Battaglia – How are you dealing with adjusting plot locations when plot locations are placed on top of plot location? Do you have suitable controls, they are really important? Best are if they would have been cut and then they are pulled out of implementation to serve as a control.
  - Questions – Jimbo – To Mike B. How many controls? Mike B. – Balanced design is best and changes over time is hard important to do repeat measures.
  - Questions – Bill B. – Mike R. presented that adequate controls were missing, have these concerns been addressed? Do we have the power to make interpretations? Anthony – not quite there because there is not a high density of plots. It depends on the scale on the question you are trying to answer. Laura- Power tests could be useful but do we have adequate pre-data? What is the on-the-ground capacity? Anthony – We should consider these questions moving forward. Mike R – Missing controls still, low sampling density is given the variability of landscape across Lone Pine – but BEST has controls and high sampling density
  - BEST –
    - Dave Casey –
      - BEST = Beetle Eradication Sanitation Treatment

- Different BA treatments
      - A focus on treatments to get different BA targets
      - - No marking (control), 70 BA target, 90 BA target
      - This area is included in the Large Tree Retention Area (no trees >20" can be cut) which limited ability to hit BA targets
    - Lots of maps. Check out Dave's nice maps.
    - Individual tree mark (leave tree mark)
    - Cut as one big unit despite smaller treatment blocks.
  - Anthony-
    - High density of plots in BEST (there is a map but we could not see it because Danny is a Google sheet novice)
  - Danny –
    - DWRF desired conditions
      - Emerged out of LP and Salter monitoring
        - Completed in Fall of 2020
      - Collaborative vision for DWRF PP forests
      - Tie DC to monitoring activities
      - Perennial thanks that flow like waterfalls off steep mountains to many talented authors
      - Format
        - Desired conditions, ecosystem parameter, desired trends, indicators, and sources of data to analyze trends
  - Anthony –
    - Pre and Post data from BEST for desired conditions 1-11
    - Desired Condition 1- Tree Species
      - Tree species composition that promotes ecological resilience
        - Trends: retain or restore historical species/ecotypes/genetic diversity and those associate with climate related trends (HRV and FRV)
        - Retain and enhance rare or uncommon species composition when feasible.
          - Captured indicators:
            - % composition by species tree density
            - Tree density by species
            - Canopy cover by species
            - Abundance by SI, BA and recent disturbance history
  - Laura –

- Reductions in both ponderosa and oak canopy cover
      - Future trends: Retention of less common. Retention of ponderosa. Potential further decrease of pondo because of beetle
- Anthony
  - Desired condition 2 – Shrub species
    - Mosaic of forest understory shrub composition, density, and size that promotes ecological resilience
- Laura
  - Oak taller than 4.5 ft had the largest reductions
  - Increase in small shrubs in 90BA, rose and service berry
- Anthony
  - Desired condition 3 – Grass and Forb Species
    - Mosaic of forest understory grass and forb composition, density, and cover that promotes ecological resilience
- Laura –
  - Substantial reductions in shrub cover
  - Increase in both graminoids and forbs in 70 BA
  - Lots of photos taken
    - Shift from bare ground to forbs
- Anthony –
  - Noxious and Invasives
    - Mosaic of forest understory composition, density, and cover that has reduced noxious or invasive plants, promoting ecological resilience
- Laura-
  - Increase in photo documentation of cheatgrass.
  - Need a way to quantify
- Anthony –
  - Desired condition 5 – Tree density and basal area
    - Stand scale – a complex mosaic of tree density and basal area that promotes ecological resilience
- Laura
  - Reduction in basal area
  - Goal for variation, average should be close to the target, but plots should have variability.
  - Check out Laura’s nice photos on examples of BA ranges.
  - Some variability is naturally occurring, was not made by forest service action
- Anthony –
  - Desired Condition 6 – Tree Sizes
    - Stand scale- complex mosaic of tree sizes that promotes ecological resilience

- Laura –
  - The majority of removed trees were medium-sized, large trees were retained.
- Anthony –
  - Desired condition 7 – Tree ages
    - Stand scale – complex mosaic of tree ages and increased old growth that promotes ecological resilience
- Laura –
  - Large trees were retained
- Anthony –
  - Desired condition 8– Snags
    - Stand scale – complex mosaic of snags and down wood that promotes ecological resilience
- Laura-
  - Snag abundance was maintained for large snags. 1.4 snags per acres
- Anthony –
  - Desired condition 9 – Forest Floor
    - Stand scale, complex mosaic of forest floor conditions that promote ecological resilience
- Laura –
  - See Laura’s nice photos on cover types
  - Quantifying total cover of each cover type.
  - Results: Decrease in litter and duff, increase in bare ground
  - Increase in coarse woody debris
- Anthony –
  - Desired Conditions 14 – Insects and Disease
    - Insects and disease disturbances – Increase resistance and resilience to bark beetle outbreaks.
    - Related to other desired conditions, see Anthony’s slides later because my fingers are tired from typing
- Laura-
  - Large beetle-infested trees were removed
  - Introduction of small-medium infested trends
- Anthony
  - Desired Condition 15 – Fire disturbance
    - Increase resistance and resilience to fires
    - Indicators: fire rotations and fire-caused tree mortality.
  - No fires have occurred so no data
- Anthony
  - Some data gaps exist
    - Within stand spatial heterogeneity
    - Landscape patch sizes and structure

- Landscape scale stand ages
  - Habitat fragmentation
- Partial coverage –
  - Species level data for grasses and forbs
  - Cover and abundance for invasives
  - Tree ages
- External data
  - Site index and disturbance history
  - Old-growth criteria
  - Insect overflight data
  - Fire history
- Integration with other efforts
  - CFLRP monitoring
  - Snowtopography
    - House creek snowtopography site is adjacent to Salter
  - Soil disturbance
    - Chicken creek soil disturbance monitoring (also has snowtopography site)
  - Others TBD
- Danny –
  - Next steps for Salter EA monitoring
    - Present: reviewing current monitoring
    - March: Identify questions and gaps
    - Developing Salter monitoring plan
    - Filling in gaps
    - Monitoring Implementation
      - House Creek and Carlyle in Salter start pre-implementation monitoring in 2023
      - Lone Pine... continued.
- Questions: Steve Garchar—Are older, larger diameter trees less susceptible to beetle kill relative to other sized trees? What is the average life-span of a snag?
  - Andrew Slack – Growth trends and defense trends confer resistance. Happy to share a protocol to quantify post treatment trends
  - Remke – fast growing trees that have reduced growth in last 10 years are the most susceptible
  - Casey – lightning-killed snags persist longer. Beetle killed snags rot out from bottom and topple over sooner
  - Jimbo – Riding the snag train (whoop) – is there a deficiency based on the data Laura presented? Headwaters recently presented the importance of snags in terms of bird diversity. Is



the minimum number of snags on the landscape based on a low starting point?

- Casey – 2 snags per acre from the forest plan. Wildlife biologist are not concerned. Lightning killed trees have been cut off of roadsides, an attempt to keep these by painting a W
  - Jimbo – adding wildlife signs to w trees
  - Anthony – data shows there are snags but they are not that common despite high plot sampling density
  - Danny – there are lots of ways to think about wildlife importance for snags.
- Question: Mike Battaglia: This was informative. Very much appreciate the presentation. Should we write up comments?
- Danny – yes. Write up comments and email danny, his inbox is empty.
  - Anthony – rip it apart.
  - Question: Bill – we could have a group science feedback session.