**April ACCG Monitoring Workgroup Meeting**

**Wednesday, April 12, 2023**

**8:52 AM**

**Attendees:** Gwen Starrett, Byron Krempl, Zac Croyle, Chuck Loffland, Linda Diesem, Megan Layhee, Helen Loffland

**ACCG Monitoring Workgroup 2023 Goals**

1. **ACCG Monitoring Workgroup Field Tours**
   * Caldor Fire Field Tour (Summer 2023)
   * Revisit Three Meadows and Thompson Meadow Field Day (Late Summer 2023)
   * Western Aspen Alliance Field Tour
2. **Need to assess monitoring progress in 2022 and monitoring needs for 2023**
   * Review monitoring projects that were completed in 2022 and plan for Summer 2023 field season
3. **Landscape Scale Monitoring**
   * LiDAR now available – consider training to familiarize ACCG monitoring group with data and consider using it to tackle landscape scale analysis
   * Have transitioned towards more landscape-scale indicators so might need to incorporate this into our strategy
4. **ACCG Monitoring Spatial Database**
   * SLAWG tool – how to incorporate landscape-scale monitoring / indicators from SLAWG into ACCG monitoring
5. **ACCG Monitoring Report** 
   * Status report on all monitoring work including lessons learned (this might be a good step to complete prior to the 2023 field season and the field tour)

* Caldor Fire Field Tour - maybe we should lean on SOFAR to help plan this field tour
* It might be good to think about planning field tours during a time when there isn't a general meeting scheduled or cancel it for that month to encourage participation
* Thompson Meadows- Field Day or Visit – need to plan this as a field day
* Western Aspen Alliance Aspen Field Tour - perhaps reaching out to the full group to see if they are interested in hosting the Western Aspen Alliance field tour
* Not time in April meeting so maybe May meeting might be a better topic for the May meeting
* Reach out to the planning meeting – Chuck
* The landscape scale monitoring and spatial database might be addressed with the FPP Phase 2 Planning – the monitoring workgroup can be on hold for any work that might need to go into this
* Next week at April general meeting - Scott Conway will be speaking on Vibrant Planet and Landtender and at May Meeting Planscape would be presented and this could be a good place to learn about these two decision support tools and there use for project planning

**2023 Field Work**

* WCB - thinning might still happen - variable density work may or may not happen but wouldn't be until 2024 - potential grant funding needs to be explored since there is no funding for post monitoring implementation.
* Building monitoring planning grants moving forward - so that this can help inform the treatments – adaptive management.
* Funding grants usually run out before monitoring tends to happen.
* UMWRA Block Grant - this could be a funding source - could monitoring be included this - use adaptive monitoring to help inform - more opportunity for this work - 10-15% of this funding allocated to monitoring.
* Arnold-Avery - completing the post treatment monitoring in 2023
* Panther should happen this year – there might be some transportation challenges as Panther Creek crossing not passable
* Three Meadows - No post monitoring transects following the hydro treatments – maybe include for 2024/2025 field season



**Climate Engine** - DRI and USDA FS to take satellite data from vegetation to assess changes - ACCG helped with training on this process (<https://app.climateengine.com/sierrameadows>)

* The training that ACCG participated in is located on our Box folder (https://usfs.box.com/s/ost0pcvf2cd73vvtgma34to3viuue2fn)
* Subset of data for Sierra Nevada Meadows
* Can look at a variety of climate parameters to evaluate restoration in meadows
* Some thoughts at this point that Gwen had on this analysis:
  + We don’t have enough post-restoration data. Recommend reanalyzing in 2025.
  + The post-restoration data falls within the confidence intervals of the pre-restoration data, although elevated above the regression line for pre-restoration.
  + The unrestored meadows – Deer Valley looks pretty similar during the two periods. Onion Valley shows a similar trend as the restored meadows.
  + We should consider whether there is another factor correlated with the time period of restoration that could improving vegetative vigor. I see in the literature the term ‘global greenness’, that vegetation is responding to global warming. How/do we need to address this in our data analysis.
* Confidence intervals might change with a shorter period of time - if precipitation has changed less data could be clean it up
* How should we select this climate range? Or should we just look at 5 years?
* Revaluate which controls are being used to compare restoration treatments
* Maybe Long Valley or Anderson Meadow might be a good comparisons which haven’t been treated
* Might explore the NDWI as an alternate variable

**Finalizing Website Additions**

* The awesome table was a great idea but was once a certain number of visitations is met it wants you to pay
* Alternative is the google data studio which we have decided to switch over to
* Embed this table into the website with a similar approach to the Awesome Table
* Complete final few tasks for the website additions
* Once Megan finishes the final task she will share the website with us and we will view and approve at our next meeting

**Task List:**

All

* Review Caldor Field Tour in June and begin to think about rescheduling dates
* Need to review the Aspen Monitoring Plan for the WCB Project

Becky

* Will reach out to Gina to see interest of SOFAR taking on the lead for the second field tour – Caldor Fire (also CFSC will be coordinating a field tour so could be a good venue);
* Update the monitoring database and draft up plan for this field season;
* Suggest recommending analysis in 2025 for all meadows using climate engine (done);
* Check on climate engine website - why is it not working (done)
* Share the conifer removal data that Kirsten put together - point towards this link (done)
* Resend the post fire symposium bullet for the website
* Pull together the spatial database for presentation in May
* Continue to merge all monitoring spatial data into one place
* Determine whether the Forest Service can house the spatial database on our ArcGIS Online

Chuck

* Bring the Western Aspen Alliance proposed field tour to the planning meeting to determine level of interest

Helen

* Will look into potential effects of changes in phenology and how this might affect the NDVI - no hurry on this task - 2025 revisit this analysis

Gwen

* Think about more years for restoration prior to Climate Engine analysis and consider the controls before finalizing this document
* Finalize this and add to the Box for a final report

Megan

* Will share a write up of the Google Studio methods
* Will share final website for review at May meeting

**Topics for Next Meeting**

* Ten minutes for final website changes
* Caldor Fire Field Tour pre-planning
* Ten minutes - aspen monitoring plan
* Review Gavin’s presentation on CSO and discuss at April meeting (<https://usfs.box.com/s/7oqv92jfb0m3jgajrs7i2puorehv9cyh>)

**Ongoing Task List**

**All**

* Share relevant papers or talks that might be important to share with the group

**Becky**

* Redo the transects aspen in Martin Meadows and the rest of the Caples – quantify browse pressure in these areas (working with Chuck on this)
* Summarize Long Fire data – is this something that Saba could tackle
* Summarize Caldor field tour summaries with Derek
* Summarize Foster Firs Data (Becky W. will complete this task)

**Caldor Field Tour (hold for later this Summer)**

* Think about rescheduling for the Spring
* Check in with engineering to determine road conditions
* Review Caldor Field Trip stop locations and determine relevant speakers for each topic
* Complete all tasks for finalizing Caldor field tour
* Review the Management Recommendations and the Field Trip Notes and provide feedback
* Review Caldor Field Trip stop locations and determine relevant speakers for each topi
* Loop in CFSC and circulate the advertisement for the Caldor Fire tour
* Get support from the Eldorado FLT for a field tour on the Caldor Fire (this might have to happen again since we will have new leadership)
* ACCG Participation on Caldor – encourage participation

**Future Agenda Topics**

1. Another interesting project Virtual fencing - UC Extension - in Caldor Fire - interest to ACCG - relatively new technology for grazing allotments - topic for future meeting
2. Helen to present approach to aspen monitoring; invite others to this meeting – March/April
3. Finalize website updates for the monitoring workgroup – March/April
4. Caldor Fire Field Tour and preparation presentations – June
5. Review status of monitoring projects in database and create 2022 report
6. Continue planning for Caldor Tour (e.g., adding topics like meadows with Karen Pope’s information)
7. Meadow Monitoring Field Event (September)
8. Review map of Karen Pope’s meadow model for Caldor area and discuss at a monitoring meeting how to use this to assess meadows and aspen
9. Landscape scale monitoring – RSL/MARS is willing to help us evaluate a landscape to evaluate treatment effectiveness by pulling information together; Chuck suggests submitting Phase II as a project for evaluation
10. Landscape Scale Assessment – circle back to reporting and how we can tackle assessing at a broader scale – maybe LiDAR will help us with this? (linked to part 2 of SLAWG been postponed) a. Think about how we can use the LiDAR as a monitoring tool and start looking at outputs b. Presentation on LiDAR products once it is available for the ENF (maybe have Van and UW folks to talk about the LiDAR outputs for the ACCG)
11. Need to address monitoring in plantations both the variable density PCG and the variable density planting – will we continue this
12. Monitoring Strategy - review the strategy and see if there is something else we might need to pursue (ongoing) a. Track key issues and make sure we are monitoring them

b. Is there any new information gained that can be applied to management?

9. CA Forest Observatory – could be a good topic for our group (this might be a great SLAWG topic as well)

11. Summarizing data now that we have data – what projects need a report out? a. discuss how information is being presented/translated and if we can improve that

12. 2023 symposium to cover monitoring projects on the Stanislaus

13. Meadow monitoring protocol comparison, Kyle– field visit of monitoring workgroup for late summer

14. Short presentation to appropriate audience re: need for monitoring funds post-project (up to 10 years post).