

DRAFT - SUMMARY

FIELD VISIT

LAKE TAHOE WEST RESTORATION PARTNERSHIP

Wednesday, October 4, 8:00 am to 5:00 pm

All meeting materials are publicly available on the Lake Tahoe West website <http://nationalforests.org/laketahoewest>. For questions please contact the program manager/facilitator Sarah Di Vittorio at sdivittorio@nationalforests.org or (530) 902-8281.

Field Visit Synopsis

The Lake Tahoe West Restoration Partnership (Lake Tahoe West) met collectively in-the-field to view areas of concern and discuss management strategies within the context of the recently completed landscape resilience maps. The group visited four main sites: (1) Meeks Meadow overlook, (2) D.L. Bliss State Park, (3) Barker Pass Vista Point, and (4) an Aspen Restoration Mechanical Treatment Site on National Forest land in Barker Canyon. Members presented findings and posed questions to the group throughout. Chairman Neil Mortimer and other representatives of the Washoe Tribe of Nevada and California participated and offered comments on the cultural significance of the region. The overarching theme of the October 4 Field Visit was to answer the following questions: (1) What are we looking at, (2) What would it look like if it were more resilient, and (3) How would we get there? Much of the discussion focused on the need for more management across the landscape and the potential to use fire as a management tool. Throughout the day the group also examined the landscape with reference to the Landscape Resilience Assessment maps and learned about some of the research efforts that will be carried out in Phase 2 to help inform development of the Landscape Restoration Strategy.

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This meeting summary paraphrases individual comments and suggestions. Statements do not indicate consensus of the group unless they are preceded by the word "AGREEMENT". Statements are not attributed unless spoken by one of the organizing or participating agencies, or by a presenter.

1. Welcome and Opening Remarks (at Meeks Meadow Overlook)

The meeting began with opening remarks from Sarah Di Vittorio of the National Forest Foundation (NFF), who reviewed the agenda and ground rules, and led introductions.

There were no interested party comments.

2. Meeks Meadow Overlook

Forest Schafer of the Tahoe Fire and Fuels Team oriented the group to the Landscape Resilience Assessment (LRA) Version 1 maps. Mr. Schafer reviewed the overall goals and process of the LRA and demonstrated outputs with a display of the *Resilience to Fire* map of the Lake Tahoe West (LTW) region.

Following Mr. Schafer's presentation, Chairman Mortimer spoke on the cultural values of the Washoe Tribe and how it pertains to conservation efforts in the region. Chairman Mortimer emphasized the importance of being mindful of the generations that have come and gone, as well as those that will come in the future. Family is a key element of the Washoe culture, and the entire area is a cultural heritage site for the Washoe Tribe.

Brian Garrett, of the US Forest Service (USFS), briefed the group on the recent history of management surrounding Meeks Meadow (a footprint of about 300 acres). Mr. Garrett highlighted an area where a prescribed fire had gotten slightly out of control on a mountainside above Meeks Meadow. Meeks Meadow was thinned in the 1980s. However, further management actions were not taken afterwards, and conifer encroachment has since continued. A dense ticket of young lodgepole pine has regrown in place of the previously thinned areas.

Devon Eckberg, a graduate student at the University of Nevada at Reno, presented on research being done on the hydrology of the Meeks Meadow area. The research group has placed a total of 7 wells in 2 different transects to examine water height above and below the meadow. The research will assess relationships between potential management actions and water quantity

Discussion followed:

Regarding clarifying comments for the LRA Version 1

- Q: When you say "resilience to fire," do you mean tree mortality?
 - Mr. Schafer: The *Resilience to Fire* metric combines many things. For example, tree density, proximity to human access, etc.
- Cultural indicators are not yet included in the assessment due to lack of information. The group would like to work with the Tribe to develop cultural indicators.

Regarding the cultural importance of Lake Tahoe ecosystems to the Washoe Tribe

- How important are the meadows to cultural heritage? How important is Meeks Meadow vs. other small meadows in the region?

- Meadows, all of them, were incredibly important to the Washoe Tribe, and served as campsites for the tribes. There are certain plants found in these meadows that are culturally significant. Each group or family had their own meadow and would trade unique plants from each. Meadows also serve as natural fire breaks. However, years of conifer encroachment and fire suppression have led to a significant reduction in the amount of meadow ecosystems in the region. The Tribe has a strong desire to protect and restore meadows ecosystems.
- Q: The group would love to have input on Washoe cultural values to be included into the assessment.
 - The Washoe Tribe is working on providing this. Input will come from the Tribal Elders. This information is not written down anywhere as is passed down orally. The group is currently working on building a rapport Tribal Elders to obtain information.

Regarding Meeks Meadow hydrology

- Q: Do you expect to see a spike in water flows when vegetation goes into dormancy?
 - Yes, this is likely
- Q: What is the relationship between resilience and water quantity?
 - More water quantity is good for the meadow – it will prevent further conifer encroachment and discourage fire.
 - That said, there are other factors that go into determining vegetative makeup. Water quantity is not the end-all-be-all.
- Q: What is our knowledge of fire frequency – current and historic?
 - Fires happened every 5-20 years.
 - There was a cultural burning of the meadow by the Washoe Tribe – they were land managers too.
- Q: Are there any irrigation ditches in the meadow?
 - The answer to this question was not known.

Regarding management strategies for Meeks Meadow moving forward:

- Q: How do we set the trajectory for what we want?
 - Many participants expressed that part of the answer has to be fire.
 - Fires offer a natural “reset.”
 - Fires can put charcoals in the soil which allows phosphorous to be held onto.
 - Channel sinuosity (of the stream running through the meadow) is important.
 - Raises water level, slows runoff.
 - Discourages encroachment.
- Q: If fire is part of the answer, how do we affect public opinion to get people comfortable with fire?
 - Modeling could be part of the solution. If we have information to support it, that will lay the groundwork for discussion with the public.
- Q: How would the different agencies manage this same situation in Meeks Meadow?
 - Doing some things differently is ok – monitor what works.
 - Doing the same thing all at once creates homogeneity, which is not good.

- Most important is establishing priorities and areas of common agreement.
- Q: On the *Resilience to Fire* map, the meadow was red/orange (less resilient), why?
 - There are a high number of trees per acre.
 - It is near human presence – the wildland-urban interface (WUI).
 - At the same time, it contains an under-represented proportional indicator: early seral stage.
 - In this case, this is not where we want it.
 - This underscores the importance of looking at each area individually when developing management strategies.
- The group noticed a lack of “color” in the valley from deciduous trees including aspens and willows.
 - Aspens are underrepresented and are important to conserve where possible.
- As far as a management strategy is concerned, the Washoe Tribe does not envision clear-cutting the encroaching young lodgepole pines. It would probably not be publically acceptable. The Tribe would instead like to see smaller-scale, targeted cuts.
- The group expressed concern that keeping actions small might not be the best strategy.
 - We might not get a measurable response to treatment, which can be counterproductive.
- Q: How important is fire?
 - The Tribe would likely be supportive of fire as a management strategy.
 - It is what was done historically.
 - However, we probably are not at the point where we can do prescribed fire in the meadow. It would require a lot of preparatory mechanical treatment before it would be safe.
 - Mechanical removal is likely the only option right now in Meeks Meadow.
- Q: Has anyone thought about focusing first on the areas that were thinned in the 1980s?
 - Younger trees will not be as big of a public concern if removed.
 - The official NEPA decision is to remove as much encroachment as possible and use prescribed fire after.

3. D. L. Bliss State Park

Dan Shaw, of California State Parks, presented on fire management strategies being conducted within D. L. Bliss State Park, a very popular park in the Lake Tahoe Basin. The group viewed a burn site along the road that was being prepped to be treated with prescribed fire the following week (10/9). One of the challenges for the State Parks is that they cannot sell timber to subsidize management operations. Subsequently, fire is a tool for ridding of treatment byproduct. They use smaller scale fires in the interest of safety and public concern. Part of the issue is that one out-of-control burn can ruin the rest that were done successfully, so caution is always a priority. That said, with fire being an inevitable occurrence, the question becomes - how can we plan for these events? And how do we make our communities safer?

Discussion followed:

- State Park fires are small on a landscape scale: ~65 acres.
- D. L. Bliss Park was one of the few areas not clear cut in the late 1800s.
- Even though this area might survive a regular fire, it might not on a large scale 97th percentile fire. This is especially important due to its location in the Wildland Urban Interface (WUI).
- Q: Is treatment cost significantly different for single-entry/first-entry vs. repeated/multiple prescribed fires?
 - The first entry is the most expensive – there are more fuels to remove, the forests are more difficult to move through.
 - Initial entry and hand-thinning is about four times the cost of re-entry and prescribed fire.
 - Cost depends on a number of factors. For example, mechanical thinning is cheaper than hand thinning.
- Maintenance is part of the process and should be built into the plan.
- Cale Pete, of The Washoe Tribe, made a point that the assessment should take into account the removal of natives from the land.
 - The Washoe Tribe had their own land management tactics.
 - The Tribe is working to build relationships with the Elders so that they can tell us more about those management practices, culturally significant plants, and more.
- Does anything change with scale from 60 acres to 5,000 acres in management cost and strategy? Are there economies of scale?
- It is possible that we cannot mechanically treat our way out of this, and that natural fire is needed.
- The group expressed desire to revisit D.L. Bliss site post-fire (next summer).

4. Barker Pass Overlook

Mr. Garrett opened with remarks on the Barker Pass ecosystem and those like it in the Lake Tahoe Basin. As is the case elsewhere, higher elevations harbor different ecosystem characteristics and species. For example, red firs are some of the more dominant species, and fires occur less frequently than in lower elevations – every 50-70 years. Therefore, restoring and managing these ecosystems demands a different approach. At the same time, the vantage point allows for a unique perspective to think about the question: how does LTW region fit into the larger scale of its surrounding landscapes?

Longxi Cao, of the USFS Rocky Mountain Research Station and Chinese Academy of Sciences, presented on his work examining “ghost” roads in the Blackwood Canyon watershed. Ghost roads are legacy roads left over from the logging era, since overgrown. In many cases they are difficult to recognize on the ground. Knowing where these roads are is important, because in order to manage these areas it may be desirable to reopen some of them to access treatment sites. This comes with its own complications, however, as these sites may have to be treated legally as sites of historical significance. In addition, reconditioning and reopening the roads will change the existing erosion profile within the watershed. The result is potentially notable effects on water quality, changes in stream profiles, and changes in sediment and soil loss. The

modeling work of Longxi Cao and Matthew Lesiecki, also of the USFS Rocky Mountain Research Station, predicts how erosion rates may change if each of the observed ghost roads were opened, informing strategies to minimize erosive impacts (measured through changes in soil loss), while increasing forest access for management purposes.

Discussion followed:

- There is potentially more soil loss than being accounted for because the baseline does not account for existing ghost roads.
- Q: Can we look at how much the ghost roads would impact erosion post-fire?
 - It is possible to do this, with some assumptions.
- Q: How did you verify ghost roads?
 - Ghost roads were verified using historical maps, and by identifying branching from existing/known roads.
 - Contacting agency archeologists was suggested. It is possible that some of these ghost roads may even originally have been Washoe trails.
- The model can also be used to predict effectiveness of potential mitigation tactics.
- This work could help inform other indicators such as resilience to flood.
- Some of these ghost roads were likely not built strategically to minimize impact.
 - We may want to use stretches of ghost road, and relocate some stretches by cutting new roads.
- Q: Would it be possible to use this to model tradeoffs of opening roads and fire management costs?
 - It would be difficult to model tradeoffs; there are many factors that go into it.
- Q: Has the Interagency Design Team thought about management of higher elevation species like red firs?
 - The Interagency Design Team has been busy working on the indicator assessment but is now moving on to thinking about some of these questions.
- There is a lot of variation within the LTW region, even within red fir territories – we may want to have different strategies for different areas.
- There may be certain species such as western whites and hemlock that we want to treat differently based on future climate change projections and what we anticipate to persist through these conditions.
- There is no data of trees per acre by species, but we can make assumptions based on what we know/observe.

5. Aspen Restoration Site

Mr. Garrett presented on recent aspen restoration work done at a 30-acre aspen restoration site within Blackwood Canyon, with the overarching question: did we do enough to foster resilience?

Discussion followed:

- Problem - Firs are still overshadowing aspens and releasing seed.
 - If left alone, the aspens could be choked out in 15-20 years.
- Q: Is the aspen stand worth saving? Is it more important than other resilience categories?
 - Participants generally indicated agreement with the idea that aspens are critical to the overall resilience of the landscape.
- Q: Can we think about using fire when it would naturally occur – in the summer/fall instead of winter?
 - State Parks has done some of this, conducting burns in the spring/fall.
- Q: Is soil moisture taken into account in the analysis of Stream Environment Zones (SEZs)?
 - Soil moisture concerns are taken into account in every mechanical treatment operation.
 - Aspens are a primary indicator for Tahoe Regional Planning Agency (TRPA) SEZ.
- These stands may be more resilient than anticipated - the “point of no return” for aspens may be further away than we think.
- Q: What are some concerns with prescribed fire in dense, untreated forest?
 - Some potential concerns are: large amounts of fuel, potential escape of fire into unwanted areas, and negative effects on water quality.
- Once you get to a sight and see it you may have a different strategy than you originally planned – it also depends on what is around the treatment area. You may notice things you did not before, especially if only using LiDAR data and LRA metrics.
- Q: What is the 10-20 year strategy for LTW to have a resilient future?
 - We want to set up a future management trajectory for the next 50-100 years.
- Q: What is the effect of piling and burning fuel on the surrounding ecosystem?
 - Matt Pascal has done research on the ecological impacts of piling and burning.
 - Bigger piles can hurt aspen.
 - There is still a regulation against machine piling in SEZs.
- Participants generally agreed that it would be good to see a greater quantity and intensity of aspen Restoration work.
- Q: Can the diameter limit of 30” for cutting tress be changed?
 - It may be beneficial to increase this limit in certain areas. This is something that the LTW project will explore.
 - Tree size depends on the individual tree; age based limits might be ideal.
- Chairman Mortimer made a point to respect, and not over-utilize or over-manage the area. At the same time, Chairman Mortimer recognized the need for fire as a management tool.

6. Closing Remarks

Ms. Di Vittorio provided closing remarks and thanked everyone for attending. Special thanks were given to those who presented and to Chairman Mortimer and the Washoe Tribe for the valuable input they provided.

There were no interested party comments.

7. Attendees at the SSC and SCC Meetings

Organizing and Participating Agencies

CTC – California Tahoe Conservancy

NFF – National Forest Foundation

RWQCB Lahontan – Lahontan Regional Water Quality Control Board

State Parks – California State Parks

TFFT – Tahoe Fire and Fuels Team

TRPA – Tahoe Regional Planning Agency

USFS – U.S. Forest Service

Stakeholder Participants

1. Maureen McCarthy
2. Mollie Hurt
3. Tricia Maloney
4. Roland Shaw
5. Sue Britting
6. Doug Barr,
7. Tim Rochelle,
8. Ben Fish

Washoe Tribe

9. Cale Pete
10. Neil Mortimer
11. John Waipeha

Staff and Scientists

12. Daniel Shaw, State Parks
13. Jason Vasques, CTC
14. Sarah Di Vittorio, NFF
15. Forest Schafer, TFFT
16. Brian Garrett, USFS
17. Kim Carr, NFF

18. Evan Ritzinger, NFF
19. Stephanie Coppeto, USFS
20. Whitney Brennan, CTC
21. Jen Greenberg, CTC
22. Jane Freeman, CTC
23. Longxi Cao, RMRS
24. Matthew Lesiecki, RMRS
25. Devon Eckberg, UNR
26. Natalie Davenport, UNR
27. Chris Anthony, TFFT
28. Mike Vollmer, TRPA
29. Nadia Tase, TFFT
30. Tamara Sasaki, State Parks
31. Jonathon Long, PSW
32. Sam Evans, UCB
33. Tim Holland, UCB
34. Christine Albano, DRI
35. Angela White, PSW
36. Jessica Riconscente, USFS

Appendix: Field Visit Map

See the following page for a map of field visit sites.

Lake Tahoe West Partnership Stakeholder Field Trip October 4, 2017

