

SUMMARY

STAKEHOLDER SCIENCE AND STAKEHOLDER COMMUNITY COMMITTEE WEBINAR LAKE TAHOE WEST RESTORATION PARTNERSHIP

Thursday, August 10, 9 am to 11 am

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

Webinar Synopsis

The Lake Tahoe West Restoration Partnership (Lake Tahoe West) Stakeholder Community Committee (SCC) and Stakeholder Science Committee (SSC) met on August 10, 2017, via webinar. The Interagency Design Team had as its goal the updating of stakeholders on progress on the Landscape Resilience Assessment (LRA). Topics of review included structural revisions made to the LRA based on July 6 stakeholder feedback; a preview of approaches to combining individual analyses for an overall assessment result; and a detailed walk-through of the status of the range of indicators under development. Stakeholders provided feedback on a variety of issues, including using the term “acceptable resilient conditions” to characterize what the group hoped to achieve on the landscape. The next meeting will in person on September 6, from 10 am to 4 pm, and will focus on advancing and possibly completing the Landscape Resilience Assessment, and reviewing the modeling architecture for Phase 2 (Landscape Restoration Strategy). The location is North Tahoe Fire Protection District, 222 Fairway Drive, Tahoe City, CA, 96145.

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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.

Action Items

1. IADT to update Indicators by Disturbance table based on August 10 feedback.

2. **IADT** to revise the definition of “acceptable resilient conditions” to acknowledge desire, as well as context-based acceptable outcomes, and reference to modeling.
3. **IADT** to further discuss construction and/or display of analyses with regard to the existing WUI boundary.
4. **IADT** to clarify how trees per acre incorporates early seral stage vegetation.

1. Welcome and Opening Remarks

Mr. Randy Striplin, Interagency Design Team (IADT) and Lake Tahoe Basin Management Unit (LTBMU), welcomed the group. Mr. Dorian Fougères, LTW Facilitator, reviewed the agenda, materials, and ground rules.

There were no interested party comments.

2. Structural Revisions to Indicators by Disturbance

Mr. Fougères walked the group through updates to the *Indicators by Disturbance* table of the Landscape Resilience Assessment (LRA) based on July 6 stakeholder feedback. Revisions included modifications to the sub-categories under landscape values and services (including possible inclusion of water quality as related to recreational contact), specification of the components of each landscape value, specification of what values any disturbance affects, and designation of human presence (e.g., noise) as a disturbance.

Discussion followed.

- Recreation would be significantly affected by air quality but less so bank stability. The indicator numbering for bank stability and air quality should be reversed, and recreation changed to “9, 13.”
- Mr. Casey Blann is happy to discuss further how snowpack changes affect mountain resorts.
- The revised table is an improvement over July 6.
- Insects and disease (fir engraver and mistletoe) are primary disturbances for red fir (a question noted in the table). During the last drought, there were areas where some red fir had 25% mortality caused by engravers, up to 60-70% mortality in some pockets.
- The revised table is an improvement. Down the road a challenge will be creating treatments and prescriptions that put this work into practice.
 - Mr. Fougères noted that the Interagency Design Team (IADT) had touched on this concern, too, that LTW will need to work carefully on this transition from planning to implementation, and that some National Forests had developed new marking guidelines and trained staff to implement innovative prescriptions.
- It would be helpful to reference the Forest Service General Technical Reports 220 and 237 for context, and note that the LRA is interpreting and advancing those concepts.
 - Indicators regarding fire and vegetation structure are using spatial data and modeling, including LiDAR and EcObject, to actually show how those conditions are laid out on and vary across the landscape. LTW is making the concepts in GTR 220 and 237 spatially explicit for the west shore.

- These concepts are difficult not just to plan for, but also implement, and LTW is using these powerful data tools to accomplish this. “The dream is real.”
- How is diversity of ecotypes (indicator #10) being used?
 - IADT staff present were not able to respond to this question. After the meeting the facilitator followed up with the lead staff (who was not present), who pointed out that we had shared in the meeting materials the memo on this (see document “R3 – LTW LRA – DC_5_6_10.docx”).
- **ACTION ITEM:** IADT to update Indicators by Disturbance table based on August 10 feedback.

3. Desired Resilient Conditions

Mr. Fougères asked for feedback on the draft definition of “desired resilient conditions.”

- One could just refer to “range of resilient conditions” in the label, instead of restating “range” in the definition.
- “Range” in the title helps convey that we’re not focused on a single target.
- “Desired” conditions are often qualitative descriptions of the landscape, not necessarily quantitative ranges.
- The assessment focuses on what we consider resilient, which may not necessarily be desired.
- One should not remove “desired,” because one could identify resilient conditions that aren’t necessarily desired, and the purpose of stakeholder and agency input is to clarify what people value.
- The Landscape Resilience Assessment identifies the values we care about.
- Suggest calling them “acceptable resilience conditions.” This is because the memo for high severity patch size noted that we might have both what we consider a desired range of conditions, but some exceedance of this might still be acceptable depending on the context (for example, so long as the extent of high severity didn’t cover the entire burn). As implement treatments we will need to know both what we desire as well as what we would accept.
- In this case, we could practically acknowledge what one might be willing to accept might be different from what one desires.
- The Executive Team gave the direction to not constrain ourselves in how we view the analysis and what might be possible, so we shouldn’t limited ourselves with definitions either.
- The modeling mentioned is specifically the LANDIS-II modeling, including climate projections, which goes out to 2100. This needs to be fixed.
- **ACTION ITEM:** IADT to revise the definition of “acceptable resilient conditions” to acknowledge desire, as well as context-based acceptable outcomes, and reference to modeling.

4. Indicator Status

Mr. Fougères referred participants to the *indicators Status* table. Discussion was interspersed throughout the review.

- The work looks to be coming along well. The idea of using a “resilience classification” that incorporated treated acreage (indicator #2) seems a nice way to handle that information. The approach doesn’t modify condition class but creates a metric of resilience.
- Regarding fire severity (indicator #1), why were 6’ flame lengths chosen?
 - Mr. Striplin: FSIM categorizes fire intensity levels (FIL) 1-6, each of which corresponds to a threshold flame-length. FIL 5 corresponds to 6-8’. FIL 4 might not be essential, though we felt that sometimes 6’ flame lengths might not always indicate torching and crown fire, but probably would scorch and kill a lot of the vegetation, like during the Emerald Fire. In other words, one can get lots of mortality and severe fire effects without crown fire.
 - Is duration considered? There is a lot of variability in this.
 - Mr. Striplin: FSIM doesn’t include residence time, one probably cannot derive this from FSIM.
 - Mr. Jonathan Long (Science Coordinator): If one wanted to add qualitative descriptions, we might have model outputs that aren’t strictly tied to flame length. This could bring in a combination of intensity and duration.
- The group should consider whether it wants to structure FSIM differently in Wildland Urban Interface (WUI) areas and non-WUI areas.
 - Mr. Forest Schafer: We have had a lot of discussion about acceptable ranges of conditions within and outside the WUI.
 - The WUI boundary is primarily constructed from a socio-economic standpoint, whereas when trying to define resilient conditions, analyzing the ecological resilience of the WUI separately might not make sense.
 - For some landscape values, this will make sense – such as when assessing the resilience of life and property (under Public Health and Safety) to wildland fire, where we will want to focus on distance to structures and infrastructure.
 - So we likely will make some distinctions around resilience with regard to Public Health and Safety, as compared with ecosystems.
 - Mr. Long: If this could be included in the documentation, will help ensure that the modeling aligns with this approach, since we’re assuming people will want to see outputs as represented for the WUI.
- **ACTION ITEM:** IADT to further discuss construction and/or display of analyses with regard to the existing WUI boundary.
- Regarding trees per acre (indicator #7), it’s unclear how the reference points were settled on and correspond with resilience – are there multiple lower limits? It seems that the table might focus on mid and older stands, but not early seral stage stands.
 - Mr. Schafer: While the two leads for this are not present (Ms. Gross and Ms. Tase), we referenced the Natural Range of Variability, and recognize that as we are looking at an overall distribution across the landscape, there will be some places on the landscape where we may want some amount of non-resilient conditions.

- **ACTION ITEM:** IADT to clarify how trees per acre incorporates early seral stage vegetation.
- Mr. Striplin: On connectivity (indicator #11), it's important to note that different types of connectivity can influence other indicators differently. For example, meadow connectivity may be a barrier to fire, while terrestrial connectivity may promote fire. This underlines the importance of looking at indicators together, rather than in isolation.

Regarding roads and trails and human access (indicators #8 and #9)

- Mr. Brian Garrett: The challenge is interpreting the LiDAR bare earth data, and that our roads and trails data is inaccurate and imprecise (coarse). This same data was to be the foundation for human access. We have some data on single day trips to highly sought-after hotspots, and some patchy cellphone data, but don't feel that either tells us much that is reliable.
- What does it mean that the data is coarse and inaccurate – does it under-represent or over-represent roads and trails?
 - Mr. Garrett: It likely under-represents legacy trails and roads, as well as user-created trails and roads. Second, the actual data is imprecise with regard to the specific location, which makes it hard to have confidence in knowing where roads actually intersect with water courses.
- Is this within 100 yards, 200 yards?
 - Mr. Garrett: I am not sure in the moment. We also have motorized vehicle route information, but are again not sure of the accuracy.
- Does one know if the biggest problem for erosion is non-motorized trails or motorized trails?
 - Mr. Garrett: It's hard to know without further inquiry.
- One approach would be:
 - Step 1: Acknowledging the data isn't as accurate or precise as one might like, conduct a stream buffer analysis that the IADT feels sufficiently comfortable with, perhaps combine this with road density. Combine this broad-scale coarse assessment with more anecdotal information about intensive use areas (the hotspots, for example), areas known to have user-created trails, different kinds of watersheds. Use this to set some priorities about where to conduct further investigation.
 - Second, conduct the further GIS inquiry originally envisioned (including the under-represented legacy and user-created roads and trails), except focus not on doing this for the entire landscape, but the more specific priority areas for investigation.
- Mr. Garrett: This is helpful because we hadn't considered going back to the old data. We should be able to work on a buffer analysis and advance this.
- Mr. Long: Bill Elliot (USFS Rocky Mountain Research Station, a member of the Science Team) has a researcher working with LiDAR data for roads analysis, he is interested in further discussion to guide their efforts. We could discuss the quality of the LiDAR data set and previous work to map out the roads relative to streams. Those data are unlikely

to have good information about the quality of road crossings or features, which is important and would likely require fieldwork.

- o Also, road density might be a good first cut, though the Emerald Fire monitoring showed that sediment was caught in detention basins and along road systems, and perhaps in floodplains, rather than making it into creeks, or at least not very far. So how erosion plays out is very complex.

5. Closing Remarks

Mr. Striplin thanked participants for their time, and reminded stakeholders that the next meeting is Wednesday, September 6, 10 am to 4 pm. It will focus on the Landscape Resilience Assessment and the launch of the Landscape Restoration Strategy and associated modeling.

6. Stakeholder and Agency Representatives, and Public Parties

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 Science Committee Members

1. Brett Storey
2. Bruce Springsteen
3. Jeff Brown
4. Jennifer Quashnick
5. Matt Freitas
6. Roland Shaw
7. Sue Britting

Staff

10. Brian Garrett, USFS
11. Dorian Fougères, NFF
12. Forest Schafer, TFFT
13. Jason Vasques, CTC
14. Jonathan Long, USFS
15. Randy Striplin, USFS

Stakeholder Community Committee Members

8. Casey Blann
9. Zack Bradford

Interested Parties from the Public

None