

Meeting Notes

Tahoe Science Advisory Council

Thursday January 16, 2020

11:00 AM – 1:00 PM

Join Zoom Meeting

<https://ucdaviscoe.zoom.us/j/390656391>

Meeting ID: 390 656 391

Participants: Sudeep Chandra (UNR), Adrian Harpold (UNR), Alan Heyvaert (DRI), Adam Watts (DRI), Geoff Schladow (UCD), Steve Sadro (UCD), Max Moritz (UCSB/DANR), John Melack (UCSB), Pat Manley (PSW), Joshua Wilson (PSW), Ramon Naranjo (USGS), Paul Work (USGS), My-linh Nguyen (NDEP), Jim Lawrence (DCNR) Robert Larsen (CNRA), Alison Toy (UCD)

Agenda

1. Welcome, agenda review, introductions (Alan)
 - a. Meeting by Zoom in January due to unpredictable weather.
 - b. No meeting with stakeholders, no presentation, just business meeting, discuss projects and progress, and that we are consistent.
 - c. Reviews agenda, anything to add? No.
2. Council Survey (Alan/Geoff)
 - a. Most everyone turned in, thank you.
 - b. Do this on an annual basis to check-in.
 - c. Everyone who responded, you are not committed to anything, just getting general idea of who will be engaged in the short-term, long-term. Whether you can get in on the co-chair rotation. There is funding available to cover time. Questions about willing/available to serve on peer-review committee meeting, work on projects/topics with colleagues on council. Pat and Steve Sadro did not get a response, but it is not too late. Please do so in the next few days, send along to Bob, Geoff, Alan, or Alison. Encouraging to see that most council members are interested in remaining on council indefinitely or at least the next couple of years. At least two more years because who knows what will happen after that. For co-chairs there were a couple of interested people. Geoff will continue to serve as co-chair in 2020. John Melack said he would be interested in serving in 2021. Alan will step down after bi-state executive committee meeting so new co-chair will start September. Josh Wilson interested in beginning September 2021 for a two-year term, Ramon is interested starting this September 2020.

Geoff will continue and Ramon is willing to step in and then we have a couple people interested in the following year. Any additional inputs? No.

- d. We will make final decision by May meeting established and communicated with agency partners that new co-chair will start in September, assume we will continue the cycle where that Ramon and Geoff will continue to September 2021.
- e. Bob would be good to confirm, Geoff will be out of country, confirm that his time is available to serve. If there are other people interested in servinv. Looking for overlap before august meeting. Wants to start june and july time. Want to present to the states the previous cochairs demoing work up to date, laying out work plan with new co-chairs. With respect to survey overall it is useful to get everyone's perspective. Getting the work done is the most importat, understand who has the bandwidth to do the work, convo we have, task moving forward gets a sense of peep availability,
- f. Alan says that most express interest in working on committees, topic development committee either now or in the future. Work order projects we have good representation of people. Bandwidth is an issue as we get to take on more topics and projects, but we have substantial interest. Reach out to anyone if you have any other thoughts. Got some suggestions to TSAC operation and topics of discussion to be shared later. Next few months busy, several projects on board now. Likely to do presentations as part of that. To do that in the context of afternoon discussion with partness for enganagement. Where we are going, the findings, engage about those findings and have discussion about relevancy to management needs, problems they are facing as well. Afternoon discus. Has been useful, but also to keep agency [artners informed and engaged and get their perspective as well. Will discuss more, with upland project. Any thoughts about the survey?
- g. Pat understands that sudeep is also interested in co-chairs.
- h. Alan says 2021, would be interested in 2020 only if both co-chairs leave.
- i. Alan confirm decision in May, Ramon to have discussions with Bob, and then to report back.
- j. Ask for alan to go over his role.
- k. Alan says few standing obligations, implemented a bi-monhtly meeting offset month to month with TSAC with regional management team, Joanne Marchetta, Jim Lawrence, Lizzie Williamson, Patrick Wright, Bob, and Geoff. Had three of these meetings, proven useful to engage with day to day operations of what the council perspectives needs are and to hear back from our sponsors. More to help keep them apprise of what's going on, if there are needs they hear about it soon.
- l. Jim says it has been useful. Dept. contemplates legislative changes, find opportunities for budgets. Helpfult o geth the heads up and makes me a better advocate. So Geoff is willing to continue and Ramon is willing to

step in as co-chair. And then we have people interested in the following year as we continue this cycle. Make decision by March meeting, certainly by May it will be established and communicated to our agency colleagues. Let us know any thoughts or input, otherwise we will confirm next meeting and continue.

- m. Bob wants to confirm with Geoff that he has the time to serve. Because Geoff and Alan have served for so long, if there are other folks interested we want to continue the conversation. It would be great to start more in the June/July timeframe before going into the August meeting. Let states know the previous co-chairs demonstrating work to date and then moving forward with new work plan with new co-chairs. Looking forward we have some funding in hand, seeing projects get off the ground, my concern is getting the work done. Sensitive that everyone is busy but understanding who has the bandwidth is important moving forward so please complete survey.
- n. Alan says most people want to serve on subcommittees or topic development committees, good representation of people willing to work on projects. Bandwidth is an issue, but there seem quite substantial issues to participate in various projects. TSAC operations and topics of discussions to be shared later. Next few months pretty busy, several projects on board, presentations tied in with those will be coming up. Give opportunity to engage with agency members about the findings and relevance to management needs and thoughts or issues they are facing.
- o. Any more thoughts on surveys?
- p. Pat says that Sudeep is potentially interested.
- q. Alan says he is interested in 2021, 2020 if both chairs leave.
- r. Ramon asks for exactly what chairs are involved in.
- s. Alan says bi-monthly meeting (couple of hours) with chairs, program officer, and the regional management team, Lizzie Williamson, Jim Lawrence, Patrick Wright, and Joann Marchetta. Just keeps them apprised of council issues, it's been useful.
- t. Jim agrees the regional management team meeting has been very informative as we contemplate legislative changes. Find opportunities for budget. Useful in just getting the heads up and making me a better advocate.
- u. Alan continues, additionally Geoff and I or one will attend Tahoe Interagency Executive (TIE) steering committee meeting, usually once a month in the afternoon, first Thursday. Sometimes asked to make presentation to agency group or committee, usually happens once or twice a year, just to give overview of council and what we are working on. Helping with development of work orders. That will continue somewhat, but the effort will probably drop as the Program Officer actively participates in that process and expects he will do more of that and

continue with that. And everyone here is more familiar with the process of developing work orders efficiently. So won't take as much time from co-chairs to help with that process. Geoff and I get together with Bob (can be Zoom or phone call) about once a month for a couple hours to plan for the next meeting agenda. A couple of days per month on these various obligations. Those are the things that come to mind.

- v. Geoff the other big commitment is the prep for the exec meeting, summarizing accomplishments in the last year, developing what the council wants to work on in the coming year and the reasons for it, and usually conditioned by funding and priorities that have arisen amongst the agencies. That's a significant time commitment there.
- w. Bob thinks it was well-covered, trying to do what he can to take some of the burden off of the co-chairs. Will continue to help drive that. Offer myself in service to the council, so that it's not a load primarily carried by co-chairs. Try to manage financial aspects and work orders and keep things moving forward, like to take a role in providing reports to August meeting and help craft work plan, working on what our priorities look like. There has been a lot of work in the past, hopes that the workload is better distributed now. TIE steering that half day has had desire for the group to meeting quarterly rather than monthly. Discuss priorities and progress, help organize meeting, scrambled a little bit this meeting to find the afternoon discussion. We can improve the discussion and coordination to make sure it is the best use of everyone's time. That's what I'm thinking about moving forward.
- x. Alan, a lot of what we do is interact with the executive members to represent the council. The council is recognized as part of the Environmental Improvement Program (EIP) and they do want to hear from the council. Regional Management meetings will be a more useful time than TIE. Co-chairs work with agencies to work with us and the products are responsive to management needs and decisions and policy development in the Basin. One reason why we want to rotate, we want to give everyone the opportunity to engage with that process. The more we are all familiar with how things work in the basin, what the perspective is from agency partners, the better we will work as a council.
- y. Bob says it isn't clear who makes the decision. Sounds like multiple people interested, how do we collectively decide who the next co-chair(s) will be. Seems like you're looking at process of elimination as to who is available. Seems like there might be other people, should you kick off the conversation of who makes the call if there are multiple people likely interested.
- z. Alan says right now Geoff and Ramon are interested, in the event then more people are interested then we would default to the people who are interested. We would have to have a discussion, we have not done that in

the past. Is this something the council would like to discuss at this time?
I'm not sure if we need to discuss if we don't have multiple people interested in serving this coming year.

- aa. Adrian thinks we discuss when and if it's a problem in the future.
- bb. Bob wants to engage with Sudeep and get a better understanding of what his interest is. That's the only variable. If it's an easy answer it's an easy answer/ Wants to make sure that everyone has an opportunity, just want to clarify that we have heard from all folks.
- cc. Alan would encourage if Sudeep is interested or if other people are interested they should discuss together. That might be something to consider to the extent that we don't have any problems and multiple candidates. In the absence of multiple candidates, we will default to availability. Have decision made by March, if we need to vote in March, otherwise we will just identify new co-chair.
- dd. Bob, seems that we have only one co-chair leave for the rotation. If there is interest in Geoff's time.
- ee. Geoff would not stay on if he didn't feel like he had the ability and bandwidth. Early on, it was felt that having overlapping co-chairs was a good thing. Principal of one rotating out and another rotating in I think in the long-term will serve the council well. The other thing was representation, one from California and the NV for the perception of people on the outside. Those are two things we talked about a lot on the onset. Haven't heard convincing arguments for why we should deviate from those principals.
- ff. Alan says it was a priority in the beginning to have a representative from both states. But less so now. From my perspective it would be good to establish rotation. A lot of the merit in the continuity, maybe in the long-run won't be as important as people become more familiar with co-chairship, one of the premises from the beginning when we established as a council. If we can do it, it is the right thing to do.
- gg. Jim Lawrence, perspective from Nevada politics, appreciates Geoff's reminder of history. Establishment of TSAC, it was an absolute that the co-chairs one was from NV and CA. Agrees with Alan, as time has gone on people are more comfortable and it is not as imperative. I don't see it as an imperative, but there needs to be mindfulness as to where people are located and sitting. Moving forward, Ramon with USGS is fine especially since he's in Carson. Not necessarily NV and CA research institutions but be aware of geographic situation to deal with political optics we don't want to deal with in the future.
- hh. Alan thinks in the long run, as the council becomes well-established it will probably diminish, but let us remain cognizant of these political factors as well. They do carry some weight. At this point, unless anyone wants to contribute to this discussion, communicate with the chairs and Bob. Make

final selection of co-chair in March and wants to make sure the person is more fully engaged with council operations as we get closer to the summit.

3. Council Operations (Alan/Geoff/Bob)

a. Task Status updates

i. Water Quality Threshold – Making good progress on, then languished a few weeks. This is Ramon and Alan with Dan Segan. A little behind from where we wanted to be, but not worried, in fine shape. After the end of this meeting and the end of other work orders, feel that Alan's time will open up to reengage and wrap up this project in the coming month. Still ongoing but should wrap up by end of February.

ii. Periphyton peer review – Currently in progress. Adrian gives update, we are doing an engaged peer review with the authors (Geoff and UC Davis folks) have interactions with reviewers. 3 reviewers outside faculty members, developed questions with them, met with Geoff and Steve, had a 90 minute discussion covered reviewers questions and concerns. Dan Segan was on the call, could speak to the intention of the review and monitoring program broadly. Ask for materials from reviewers, one reviewer has agreed to be the chair, compile material, maybe 3-page document keep it brief. Set of reviewers plus Adrian to be delivered to the entire council, probably mid-February. Have you all recall, this gets publically released somehow, that's part of the by-law.

- Geoff says Adrian gave a good summary, it was a fun hour and a half.
- Adrian says I learned a lot. Had good reviewers, like Geoff said, it was a good discussion.
- Alan several people who said they were interested in participating in some capacity as part of peer-review committee, will share names with Adrian for the future.
- Adrian that would be great, trying to remember where things were left, don't know if I know if anyone but John Melack who is on the committee.
- Alan not necessarily part of committee but participating in a review.
- Bob extends thanks to Adrian and Geoff, heard a lot of good feedback. Agency members are seeing value in this approach and this process. Will be seeing more in the future. With respect to this review it is already leading more to additional questions, we will have more discussion with council, what does this info mean moving forward, spawned a lot of positive conversation. Lots of potential for things moving forward, great step for the council.
- Alan says Adrian expecting review document in mid-February. Yes, but don't hold Adrian to it. He thinks the way he has been approaching it, make sure internally the reviewers are happy before circulation.
- Alan, any chance for council to see before publicized.

- Adrian says we have two weeks after turned back to the council. There is a window to potentially edit it. Three reviewers, with Bob assistance, were sent six documents, some was skimming others were more in depth reading. We are also paying these reviewers, interested in knowing how much time was ultimately spent. Entity requesting review gets it two weeks before publicized, so TRPA/TSAC.
- Alan says TSAC did ask, so anyone with questions or objections, an interim quick zoom meeting if needed, more likely distributed to the council and then communicate back to the peer-review committee.
- Bob says give to agency partners and council at the same time for a collective review, agency members can also provide their perspective.
- Adrian agrees, so Dan Segal?
- Bob says yes, and Lahontan Waterboard Rep given that they funded a lot of this work.
- Alan, is everyone good with that approach? Ok.

iii. Summer/Winter Clarity – Ramon and Paul, give an update. Ramon says we have met twice to discuss what the overall task orders objectives were. Today we discussed the approaches and who is tackling what component of work. This work involves evaluating trends in summer and winter clarity, look at variables within the lake itself, what are driving those changes, and there are a number of different hypothesis to be tested, by agencies particularly NDEP. Just getting started on this project.

- Alan says the work order was drafted up and written up over the last few weeks, put in place a couple of weeks ago. So we are funded to work on this project. This is a high profile, highly sensitive topic of extreme interested for agencies particularly the TMDL agencies, we are on a tight timeline to produce council product in time for agency preparation for the Tahoe summit in August. Final products to be delivered in July and draft products earlier than that. We will have meetings with stakeholders as this project evolves and have some discussions at TSAC meetings as we produce the final product. Provide ample time for agency stakeholders to get up to speed with findings, interpretation of findings and framing discussion. A lot of times, we will have results, as scientists we throw the results out there and let the chips fall where they may. Important for agency partners to know what is coming well in advanced they can help frame how we discuss and represent them which is an important part of this process. Not just for this project but for future council projects.
- Bob says this dates back to a charge from the two states in 2017. First big project to formally address this. Clearly part of the work order adopted last August. Lots of eyes on this. Frame this for August discussion, need to be prepared to have initial conversations with agency partners sooner than that. This is going to frame the clarity measurement we anticipate in the

coming months. What's happening now with current clarity, a lot of interest in this and expectations that the council could provide meaningful context to the discussion moving forward.

- Paul discussed some of this this morning, make sure that we have a proper defensible analysis of what the trends are, which ones are statistical significant or not. We must share early findings with others and outline so everyone is clear we are going down the viable path.
- Bob this project is highlighting the importance of coordination among our academic institutions. There is a lot of data, data collected mostly by UC Davis funded by the states and TRPA. Making sure the data are all available and readily accessed, there's a free flow of information among institutions.
- Alan says we want these products developed sooner rather than later, rather than a technical report we will want some sort of communication piece. This will be something that is short, glossy-type pamphlet or paper that represents the findings, interpretation, the consequences of findings that communicates well to managers and the public and our legislative supporters. Bob working actively with groups, but must have products soon enough for these communication pieces to be developed.

iv. Clarity Model Enhancement – Alan says Bob indicates that we have funding coming thru from last year's BCP. Some of the money will be used to fund the clarity enhancement model.

- Geoff says the original clarity model was developed in early 2000s. Growing recognition/acceptance that some of the questions being asked now go beyond. The existing model cannot address some of the contemporary questions being asked. Re-writing that model, transitioning it from 1D to 3D so that nearshore versus deep water questions can be addressed. Send an outline to Bob and Alan to iterate on the first cut task order for that work. Hopefully will start in next few weeks. This will require significantly more time more like a 1-2 year undertaking.
- Bob says we should talk schedule. Appreciate that this is a phase project but we will want to demonstrate some some work and progress by August to at least give status. Encouraged by work order and process and would like to distribute to the full council. Circulate work order so we can get a team of interested folks, please consider in participating. John Melack has expressed interest on topics related to modeling. Get team together quickly, identify who is leading that effort, and get work orders assigned and in place. The money is sitting here, per the approved work plan there is a total 240k allotted to the project. We should look at phasing given schedule and timing, it's going to take a lot of time to get in place.

- Geoff says we have already laid out individual tasks that was included in that work description. Work on document with Alan and Bob for council distribution,

v. Lake Tahoe data synthesis and analysis – Was represented as part of our work plan at the last bi-state executive committee meeting. This is related to summer/winter clarity, bringing groups together on a regular basis to facilitate the aggregate of this data in an on-going basis to inform a periodic workshop. Where we bring folks together, not just basin but NOAA and other entities that would contribute forecasts and insights to see what is coming up in the next year or 6 months. Weather community does this on an annual basis, what they expect in next 6 months and what the impacts will be for flooding, drought, etc. Doing something similar for Tahoe, the intent of project is to set up process and framework for regularly aggregating data and make sure it is consistent and can be used as part of statistical modeling. We can regularly evaluate status and trends to report out on to agency partners to provide advance notice of what we see coming. Project will not start immediately since it is so closely related to summer/winter clarity. In a month, we will draft a work order that represents what is involved in this project and how it ties to summer/winter clarity, will send out to council for review in time for March meeting to survey interest and put together right participating group.

vi. Sustainable Recreation – Linked to landscape scale, both supported by SNPLMA secondary funds. Funds from sales of public lands in Southern Nevada, that dried up a couple of years ago, but some projects that didn't spend down or cancelled, so leftover funds were aggregated and considered secondary funds. Those were distributed to agencies for capital projects. TSAC got a small allocation \$175k for sustainable recreation and \$400K for landscape scale effects on the lake. Those standing projects, everyone expects those to be done and the funding will be available. But funding has not become available mostly due to BLM and USFS transfer funding issues. Also affects LTBMU, fire management, seasonal hires, etc. Should've been resolved in October but because of federal budget continuing resolution. Everything was put on hold until it was resolved just before Christmas. Still trying out how to make this happen. Talks to Joey Keely Program Manager for USFS in charge of making sure these funds transfer, indicated that the forest service as a whole is getting anxious, drop dead date in two weeks, and expect it has to be done by then, another 3-6 weeks for funds to move. Fairly confident that it will happen otherwise people at high levels will be in trouble. This is where the funding stands. We do have an overall plan for both projects and potential participants, and will send out in time for next meeting.

vii. Landscape scale impacts on Lake Tahoe – Geoff has a project team of folks from DRI, UNR, USGS, and UCD, circulated. Coming up with a

scope of work because it is a unified project, all the individual research teams are doing their specialized things. Took approach to each group, this is what is required, this is the approximate budget, can you do that? Hopefully we have a few iterations and then individual scopes and budgets. Then move forward to get funding.

- Alan says we are hopeful so that when things break free we will be ready to move.
- Geoff anticipated wouldn't start until April, so that may be consistent with what you are saying.
- Jim Lawrence is meeting with BLM state leadership tonight and this is the first I've heard of this. If there are challenges going on, please let me know, and see if I can pull some levers, no promised, but would like to help.
- Alan didn't think there were issues, but Joey says the problem the funding transfer is delayed due to process complications. Maybe inquire about that and we would appreciate any help that you can provide. But touch base with Jeff or Joey at LTBMU.
- Jim says he will make a gentle inquiry at this point and time.
- How are those funds supposed to move? Is it supposed to be joint money? They are different agencies. Is each agency supposed to contribute the money? Who is it supposed to go through?
- Alan explains, these are federal funds and must go through a federal sponsor. The LTBMU is our federal sponsor. Have arranged for sustainable recreation funds to be contracted through TRPA. Through standing master agreement with TRPA. Landscape scale project has been working with PSW and still in process.
- Geoff says or possibly thru LTBMU.
- Alan says met with Adrian and Rosemary who will replace Shay. Developed a vision for how best to integrate across these different systems with the work Adrian is doing stuff, GSL models. Draft a vision from our discussion and directly contact Toby to get his input and feedback as well. Put together a nice vision for how to integrate across those different systems.
- Geoff, says keep me in the loop bear in mind the budget, took a stab, but some might be estimated too low or high.
- Bob asks have you communicated with TRPA? Is Devin Middlebrook aware of the challenges and timing here. They were eager to get this work started.
- Alan says I just got this info a couple of days ago. It is on the to-do list to get in contact with Devin and work with him in preparation for implementing this project. Back backed away because can't do any more work where the funding isn't there. Don't want to keep reaching out and dragging people along until there is conclusive funding but will update Devin.
- Bob asks Geoff if he has identified agency partners of these delays and what this may or may not mean about expectations?
- Geoff has not informed partner groups but will be doing that.

b. Forest Science to Action – Wanted to leave discussion to this. Glad that there is a drafted preliminary work order. Similar process to S2A planning document for the lake. Now doing it for forest and uplands. Don't know if there is a lead selected. We do have this work order that Bob sent out to everyone, hopefully you had a chance to look at it. What are you planning to do and what are you expecting to get out of it?

- Adam recognizes Adrian, Sudeep, Max, and Pat for input into this. You all received a draft document resulted from several conversations we all had. It goes beyond what should be in document, got good feedback from Bob mainly to streamline it. Go through this draft and then briefly describe discussion Bob's recommended changes. Hopefully you will all have a chance to think about it as we go through it. Fairly short document. This is inspired by previous S2a plan, as described in conversation from last spring the focus is on fire impacts and upland ecosystems. Additional concepts the group is interested in introducing includes restoration and resilience, and increasing resilience of upland ecosystems to disturbances, with a focus on fire but not solely fire with all other processes particularly climate-change related disturbances that may occur. Envision a two-step engagement process with stakeholders to lead to a prioritization of science topics that would inform future management issues related to mitigating fire to upland the basin, as well as climate change and other impacts, see how we can inform resilience of systems to those disturbances. First step is to engage management agencies to build on previous work, filter through current stakeholders' lens of where the science should head to aid efforts. Timeline of refining the synthesis putting it together. 2nd step where maybe peer-review but also a process for engaging stakeholders a second time, before full review of TSAC. Those are the big steps in this nine task list. A couple of other things to note, we are trying to think very big, a very short initial phase in what we expect to big a large-scale, long process to address the complex interactions of socio-eco system. It might be a bit out of the scope to describe the third phase but felt it was important to mention to the committee. As part of an iterative process starting small based on time and resources we should be able to make some guesses as to where this could lead to in the future, to include more time and resources and a bigger net to cast so we can incorporate what we have learned and identifying future priority needs, have a mechanism in place to identify what might come up in the future, a living process. Might identify several topics that are priorities and one of those topics might continue to pay attention to what's on the radar as an issue in the basin, could become its own line of work in the future.
- Pat says that was well said. Only thing to add, a reiteration, we feel like in the time we have, we can identify some high impact activities that could start sooner than later. But would really like to take more of an extended time frame for a more considered and deeper dive to explore priorities and needs are including a broader engagement with folks. Our expectation and intention is to engage

stakeholders, if we have a full year ahead or more, we could bring a more robust document that people could help guide investments over the next five or more years. That's what we had in mind originally but that has been pushed to phase three, what we could do in the short terms and what could be brought in a robust representation of science needs with more available time.

- Adam, given the challenges and reality, data we have, legislative buy-in, as opposed to an annual process, maybe that longer lag process could be financially sensitive as well. Discussion, comments? Maybe then discuss a few of the comments Bob has sent over as well.
- Alan appreciates that this is a timeline for development, need to work through the process quickly to develop a vision, identify priorities and set it in a framework that makes sense. We also had the same long-term vision. The idea that longer term will have more opportunities to evaluate what information is, data needs, the key management questions, and how to address those. Included in document as subsequent, none of that was priority or part of work plan for this year. I think you will find yourselves probably doing something similar. Probably be doing this S2A planning again, perhaps next year where we integrate across two plans. You doing the upland and some of those impacts ultimately carry down to the lake. Integrating across two plans, integrated S2A. More than we accomplish at present, having those two products will allow us to work more efficiently on this in the future.
- Adam wants to make sure that everyone know that we are not using to take a longer look is not an excuse to come up short on a deliverable. Our notion is to prioritize what we can, identify what we can, given our ability to engage with stakeholders between now and the end of the work period. We want a tagalong process to leverage some of those connections of what we learn. We understand that is outside of scope and need to follow work described in document. Bob suggested streamlining and taking out some tasks that are unrelated.
- Geoff says it sounded like the subcommittee is viewing fire is the central driver of theme and that climate change is lesser than that. Is that what you are saying?
- Adam, my personal opinion that we have heard that fire is identified as major, current, and future threat in the basin so we wanted to call that out specifically because it has been called out specifically. But there are many other potential disturbances to the socio-economic systems in the uplands around lake Tahoe. We want to have a focus on fire on resilience and building resilience to future disturbances which is certain to include climate change and fire.
- Geoff the characterization as climate change as a disturbance like a one off event. At this stage is an unending process, which will many impacts on the terrestrial system. Something to think about what that means. In the aquatic part, climate change was really the driving factor, came to the conclusion that it is what future science has to account for. What measurements do you take? What models do you build to give agencies insight? What will climate change have to do to the system? Rather than a specific event.

- Adam we see all of these from fire to climate change not as individual events but a continuous range of process and impacts. Don't see a particular main fire event as a disturbance, so much as I see changes to fuel loadings, fire regimes, and potential fire impacts as a continuum.
- Pat says these are important topics for us to chat about. Just depends on what we are trying to accomplish with this and in terms of it being something is it something agency managers can relate to. In terms of resilience, the basin hasn't really said that resilience is their thing, the USFS has lined up behind resilience as a concept. It would be interested in having that conversation. If this investment in research and delivering science is toward restoration is clear and consistent and the restoration of what or toward what, it helps give us a frame for how to portray the usefulness of these investments providing information towards goals. If it has a resilience frame then it really is all about disturbance, how systems respond to disturbance. Then give it that whole well, there are pulse, press disturbances give it context the climate change is a press disturbance. Could be portrayed differently in different frames. Good point, what we want is this document to speak to managers, restoration to what end, getting feedback will help put these foundational elements in a context that make sense to them. Priorities can build off of those. Have lots of options restoration ecology, resilience concepts, variety ways to emphasize things.
- Max says Geoff makes an interesting point, although fire is one of the more prominent features, we don't mention drought, pests, rain shifts or beetle impacts. Kind of agree, calling out fire so much in the title and not mentioning these other climate change impacts stressors might be too narrow.
- Adam, there was marginal thing that didn't make the draft, more of a personal opinion thing. Time when resilience is well-received by an audience and sometimes fire sells better. That was one reason why if we include both of those big font headlines, we might get more participation from stakeholders, that result in buy in on the documents. Fire is a flag in the ground, there will be stakeholder that this is one of many major impacts to consider, not married to it, but I think it is helpful for getting attention and interest in the document. If we came up with a title of restoring for resilience, might seem to some management agencies that we are approaching from too academic a standpoint.
- Pat says we did this in a short time frame. The body is fairly well-represented in terms of what we think will be a valuable investment in a reasonable accomplishment based on the limited timeframe. I think titles and framing still pretty fresh. Feedback is great, appreciated, and encouraged, and certainly available to take it in a variety of directions based on feedback.
- Bob this is a good discussion. Highlights to importance of what I continue to push to finding agency stakeholder, don't want to slow this down, but having that touchstone will useful to find the focus and most value and most immediate need among agencies. Hopeful someone that was part the Lake Tahoe West process

who will be a natural fit. Rather than speculate what the agencies want, just want to ask and get them involved.

- Adam, do we want representation from both sides of the border, is there anyone from DCNR who would be a good management contact?
- Alan says he got a text from Jim has stepped out but is sure we should be able to identify good candidates to engage with you. Main point is that you developed a draft work order, looks really good, few minor things to change, the objective is to turn it out, get it to Bob so he can get the work orders in place for funding. You're setting up the vision, a part of your deliberations over the next couple of months will be to create a vision that is full encompassing that is easy to communicate and will resonate with agencies. In the end, the aquatic one did fairly well, could have done better. Consider this as a jumping off point, create vision, identify high priority projects that will inform management understanding and decisions. Feel free to reach out to the council and stakeholders more frequently, you have this timeline set-up so that we have discrete opportunities to get together and hear from you. March meeting afternoon will be dedicated in part to subcommittee between selves and stakeholders. In May. If there is value in sending out particular material in advance, do so.
- Adam, had an excellent meeting amongst 4 of us. Everyone is enthusiastic. Max was not present but assume his enthusiasm is always present. Adam is taking the lead as of our last Friday meeting. I do feel like in the interest of process give voice to some of Bob's comments. Should we send refining comments out, he deleted upon my review extraneous info for work on first phase and hope to do some work on a third phase.
- Bob, appreciates opportunity to weigh in, my interest is just to streamline, looking at the lens of a work order for an immediate task. That was my goal there. Just trying to clean things up remove info that isn't critical in terms of context of where we've been and where we might go with more of a focus on what this is and what we are going to do. I see this as serving two purposes, first to lay out immediate vision make a case for immediate needs with respect to science what projects to make an impact now, to make a case to solicit funding to support agency partners and get work down. This is the chance for us to make that case some discussion with agency partners that will serve us well. Reinforce what I am starting to think about in terms of a broader vision for our science plan, a bigger vision for the council as to what they see and how it aligns with the agencies, what priorities are and so holistically lay out a broader vision, something targeted at executive level, something more slick have CTC resources for more production value. Use what was developed for lake action and combine with terrestrial and trying to get a full package, starts to set trajectory, I'm grateful to the subcommittee to take this on and set a path forward towards getting funding to getting things done.
- Alan will send a few notes, but work with Bobs, cc co-chairs, you're done, but cleaning it up in the next few days so Bob can work on work order to get to your

institutions. Give opportunity for Bob to implement the process to an organization that hasn't received funds for example PSW. Identify project leads in the work order, in the case of summer winter clarity we identified two co-leads (Paul and Ramon), you can do that as well if you'd like. But definitely at least one person and that is the person Bob will be directly working with to make sure products are being delivered.

c. Budget Update

- Bob says summer/winter clarity funds are here, CNRA funds from California have also been approved for work orders, two projects the clarity model enhancement and data analysis, those funds also provide additional funds for things like peer-reviews. Note there are resources available for that. Funds still available from previous contracts that's going to be drawn down a bit with forest to action. Monies available for that at this time. Working with TRPA there was an application put in to the NV license plate fund for VMT work, waiting to hear back from \$75K. State of council is strong, there are resources to work with, there is work to be done. We are achieving credibility, that's what's helpful in the continuing the dedications of funds. Now that you are all undertaking all these important projects, get things done, demonstrate that we are achieving progress. I see the summer winter clarity and forest to action both are seen as marquee projects for the council and will continue to raise the profile of council in the larger picture. If there are budget questions, contact Bob always willing to share.

3. Wrap up, next meeting date/time and agenda items (Alan)

- a. Final Thoughts? Alan thanks everyone for participation. Next meeting is March 19th. That will be a full meeting including afternoon presentations and discussion one from Upland forest planning S2A and maybe a shorter presentation of something else whether it's progress of summer winter clarity or something else. Afternoon will be a typical format and will be an important part of the meeting. Getting communication from us about other things in the next couple months. All council members are engaged in some sort of project or activity or subcommittee, so we all know what we are up to and trying to accomplish between now and the next meeting. If you have question reach out to Bob, Geoff, or Alan for feedback.
- b. Bob to send out a meeting reminder for March meeting, trying to reschedule, but maybe convinced agency members to reschedule AIS meeting, so there shouldn't be anything conflicting after next meeting. Keep schedule as it is, I know it doesn't work for everyone at all time, but it is worth having as a placeholder. Looking for calendar invite.

4. Alan ends the meeting