

TAHOE SCIENCE ADVISORY COUNCIL

AGENDA | January 2024 COUNCIL MEETING

Date: Thursday January 18, 2024

Time: 10:00 AM – 12PM

Location: [Zoom](#)

Documents: <https://www.tahoesciencecouncil.org/live-documents>

Attendees: Sudeep Chandra (UNR), Adrian Harpold (UNR), Monica Arienzo (DRI), Tamara Wall (DRI), Alex Forrest (UCD), Steve Sadro (UCD), Max Moritz (UCSB/DANR), John Melack (UCSB), Pat Manley (PSW), Ramon Naranjo (USGS), Joe Domagalski (USGS), Jason Kuchnicki (NDEP), Dan Segan (TRPA), Melissa Thaw (Lahontan), Caitlin Meyer, Jim Lawrence, Laura Patten, Chris Fritsen, Kevin Fromherz, Phoebe Song (EPA)

Robert Larsen (CNRA), Alison Toy (UCD), Caelan McGee (Facilitator)

Next Meeting: Proposed – March 21, 2024

1) Round Robin

- a) John Melack – Has been studying Mono Lake, lessons learned are relevant to Tahoe and vice versa, lots of connections between different lakes
- b) Pat Manley – Tahoe is a leader in science and action, working on the TEON projecting is gaining momentum and speed
- c) Sudeep Chandra – Getting back into music, working South East Asia, love of small lakes
- d) Max Moritz – Second career as an academic, tried business in LA and turned back to science, flammability testing
- e) Tamara Wall – Red flag warnings and huge inconsistency in how they are issued, developing matrix to standardized of how products are issued, family building a cabin in Idaho
- f) Jason Vasques – started life as a fishery ecologist in the Virgin Islands, found a lost torpedo during a tow
- g) Monica Arienzo – trying to hike a portion of John Muir trail, two students graduating in 2024
- h) Adrian Harpold – getting back into rock climbing, looking at resiliency of Tahoe Basin to climate change
- i) Steve Sadro – 25 small lakes instrumented between Shasta and Whitney, making a push to quantify climate risk and vulnerability, getting back into photography
- j) Melissa Thaw – Backcountry ski and ice climb
- k) Joe Domagalski – Accordion lessons in middle school, Robert Wetzel course in school, PhD looking at trace chemicals in Mono Lake, working on a clear lake report, USGS partnered with UCD (internal cycling) and USGS is looking at the watershed contribution, handed off project of Lake Elizabeth looking at nutrient contributions from septic tanks.
- l) Ramon Naranjo – Isotopic analysis of groundwater in Tahoe, working on great basin saving lakes study to look at water availability in saline lakes throughout the great basin possibly focusing on lake Abert, looking at temperature trends in streams, enjoy music and pottery.
- m) Caitlin Meyer – excited in the research coming out for the forest health space, in HS broke a world record for texting
- n) Jason Kuchnicki – Nevada has been last in getting degradation plan in place, working on non-point source program for updated state management plan, originally from NE Ohio moved out to Tahoe after college
- o) Jim Lawrence – getting State of the Basin report done, getting back into music
- p) Alex Forrest – played the contrabassoon, taking over for Geoff Schladow as interim Director at TERC, excited about projects about AIS transport in Southern Quebec, bring lessons back to Tahoe, least excited in Antarctica at the Doomsday glacier and lost glider with an upcoming insurance claim
- q) Dan Segan – spend lots of time looking a socioeconomic patterns and getting Council more interested in this work

- r) Phoebe Song – excited about work with PFAS and textiles paper might be published this year, speak 4 languages working on French, visiting Iceland.
 - s) Laura Patten – legal solutions for nutrient solutions in Lake Erie which is useful to the Tahoe Basin
 - t) Chris Fritsen – played drums in high school, hydrologic optics, high school teacher for 4 years provides good perspective on science and society, working on non point source program for Nevada
 - u) Alison Toy – Katharine Hayhoe lecture, SWAR program, and snowboard instructor
- 2) Updates
- a) Council membership
 - i) Jonathan Long is no longer with Council, feedback for filling in the position, what expertise?
 - (1) Urban wildland interface, any suggestions for Pat before she starts reaching out
 - (2) Economist would be great and a perspective missing from our conversations
 - b) Budget/operations
 - i) No new funding coming in
 - ii) Some Lahontan funding
 - iii) Operational funding of \$100k a year
 - c) Projects
 - i) (Pat Manley) TEON project, two areas funded by SNPLMA, entering 2nd year of data collection, info available by the end of March
 - ii) Zooplankton and particles (Sudeep Chandra) – lot of time being put into zooplankton work, spatial and temporal distribution of zooplankton, in the process of counting samples, Stephanie Hampton expert coming out with rotifer work, assisting Alan Heyvaert with looking at run off,
 - iii) State of the Basin report (Jim Lawrence) – summary of the research and state of knowledge of the basin, relatively on track, have interviews done by now and identification of literature, chapters to be written and run by the steering committee for feedback, coming up shortly. Changing the name is under consideration. The timeline is to wrap up interviews and literature review by end of January. Draft chapters by end of February. Review between end of February and end of March. Final report end of March/April
 - iv) All SNPLMA funded projects must keep steering committees informed as part of funding requirements
 - d) Workgroups
 - i) John Melack – Water quality – how to proceed with clarity review that Lahontan has funded
 - ii) Monica Arienzo – Microplastics – meeting every month, good progress on document, summarizing knowns and unknowns, talking to managers learning about management priorities and science priorities and looking for overlap.
- 3) 2024 Science Council Workplan
- a) Effort we want to institutionalize
 - b) Content of document should not be surprising, derives a lot from our meeting in May
 - c) Fly through the workplan
 - i) A lot of excitement of the Council building on the conference, use science for management, workplan is a good demonstration of the direction we are heading
 - ii) 2 Sections:
 - (1) Organization and Structure
 - (a) Consistent with funding, continue to be transparent, protocols for funding distribution
 - (b) Manage Council resources how to best use for organizational structure
 - (c) Clarify roles and responsibilities for Council Members, chairs, and staff
 - (d) Establish clear policies to avoid conflicts of interest
 - d) Grateful it's put on paper, we can see the vision for this calendar year. Would like to add UNR and DRI received NOAA funding, \$50k for Council to address data, where does this data goes, data management, to be spent over the next two years. - Recall there was a proposal during the SNPLMA round for a data management activities. It'd be helpful to revisit, as it fits within the available resources.
 - e) Existing conflicts of interest documentation, asking to see other organizations' policies.

- i) ESA
- ii) NSF and their directorate
- iii) Committee of Visitors
- iv) Many local Fire Safe Councils have conflict of interest policies that specify what funded activities their board members may (and may not) engage in, given that those same board members could be voting on related decisions...
- v) The National Academy convenes a lot of committees that make policy recommendations
<https://www.nationalacademies.org/about/institutional-policies-and-procedures/conflict-of-interest-policies-and-procedures>
- vi) While not a science group, the BLM's Southern Nevada Public Lands Management Act program has protocols for conflicts of interest because many of the advisory group members represented agencies eligible to receive funding
- vii) Delta Regional Monitoring Program: 8.E Conflict of Interest Policy
 All Program Participants serving on Delta RMP committees shall avoid both actual and perceived conflicts of interest when selecting contractors. Any committee member with an actual or perceived conflict of interest in a contract has a duty to disclose this interest to the committee and to recuse himself/herself from the decision. In order to avoid potential conflicts of interest with technical contractors, the TAC shall not recommend specific contractors, but may provide criteria to be used in the contractor selection process. Additional details about handling conflicts of interest by public officials are available in Government Code Sections 1090-1099.
- viii) The free version of Trello might work for project management—very simple, and able to attach documents and forward emails to a project board
- ix) Any other groups?
- f) Programmatic
 - i) Outstanding items for water quality work group (clarity, monitoring, nearshore etc.), microplastics, biodiversity, additional work groups? Where can we establish new working groups, two-way street, need management partners who are interested in these topics.
 - ii) Trying to lean into the work group structure, most productive way to have a management/science discussion, get relevant experts, managers, council members in the same room
 - iii) Communication and executive engagement, clear outreach engagement plan, engage directly with TIE steering committee, different expectations from different groups
 - iv) Federal Summit conversation to leverage discussion with legislators
- g) We have a lot of discussions about things/projects on the watershed scale, watershed processes, but not reflected in working group structure. Might want some way of either incorporating or connecting those things.
- h) Project works were reported earlier in the meeting, that is work that members of our group are involved with, this list is different than the list in the document.
- i) Tried to not specifically mention projects underway. The projects are not what the Council does. It is the overseeing, the guiding, prioritization, and review of the work. Lots of guidance for how the work gets done but the doing of the work is not actually in the Council wheel house.
- j) With some projects not captured in workplan, but it is related to the work we are doing, state of the basin report is not captured in here, should be captured somewhere
- k) What can we get done in a year? New things can make it into this document as long as it has leadership from Council members. Creates an organizational structure for us that has points of contact,
- l) More specific workplans to tier down and find resources to support projects.
- m) It's not just conflict of interest it's also sharing projects. Data management a possible working group? Not just management but quality of data. What are the standards we are abiding by in data collection, SOOS has data sharing practices and standards that you comply with, lots of established practices with ocean work
- n) The Council can really assist with the data management, could assist with the Tahoe open data

management

- o) Data quality may be tackled as COI - can borrow from more established systems elsewhere.. very supportive of this investment.
 - p) Data sources to look at
 - i) <https://learning.nceas.ucsb.edu/2022-04-arctic/collaboration-authorship-and-data-policies.html>
 - ii) <https://www.nceas.ucsb.edu/data-and-information-policy>
 - iii) <https://www.soos.ag/>
 - q) Data work group is needed – interested Council Members – Alex Forrest, Monica Arienzo, Ramon Naranjo, and Pat Manley volunteered
 - r) What are the goals in a specific timeframe?
 - s) Names and emails for who is the point of contact for specific things
 - t) Next steps:
 - i) 2024 conference? Great to get feedback for what is the value of this would be, interest level, how do we structure it
 - (1) NALMS/CALMS conference in South Lake this year, consider having a workshop/presentation withing the CALMS section. (<https://www.nalms.org/> and <https://www.california-lakes.org>)
 - (2) I really liked the focus of the conference last fall—there is so much energy and interest in the Tahoe Basin ecosystem by non-scientists and managers/practitioners, it seems like harnessing that energy is a opportunity that should not be missed.
 - (3) A conference some people here might be interested in and it's in south lake:
<https://www.cafirescience.org/establishing-directions-in-postfire-debris-flow-science-conference>
 - (4) Will do follow ups with individuals
 - u) Endorsement of the document as is knowing that it is a living document, can you support this now? Any edits, changes, or reservations?
- 4) DRI “Climate Engine” Presentation
- a) Christine Albano – new resource at DRI, funding through NOAA, Satellite monitoring of meadows, linking climate and satellite metrics to fuels, and developing Climate Engine geared more towards forested regions like the Tahoe Basin.
 - b) Kristen Oshea
 - i) Research, Monitoring, and Decision Support with Climate Engine
 - ii) Climate Engine is built on Google Earth Engine, allows everyone access to geospatial data, just different coding for outputs.
 - iii) <https://docs.google.com/presentation/d/1QzfLA6TqLHXwLTRI0RBeYFhhcEfgWtiz/edit?usp=sharing&ouid=115056312538135631252&rtpof=true&sd=true>
 - c) Opportunity/resources to host a workshop regarding using this climate engine, if there is an event that this works with.
 - i) Who can we invite to this workshop?
 - ii) Could add on to another event or do it independently, contact Christine Albano
 - d) Could interface with TEON stuff with the usefulness of the scale of this project
 - e) Tie into our data questions
- 5) Next steps
- a) Ideas for conference or conference-like opportunities, will follow up, will bring proposals to council
 - b) Workplan is in place
 - c) Templates to be developed for finer scale of Council activities
 - d) Looking for assistance in creating workplans for different sections

Chat:

10:20:51 From Sudeep Chandra to Everyone:

It was great to hear what Melissa is up to. It would be nice to hear from our management community

since the Science members are "opening up".

10:20:59 From Robert Larsen to Everyone:

a

10:21:08 From Robert Larsen to Everyone:

Absolutely!

10:26:59 From Melissa Thaw Lahontan Water Board to Everyone:

As an Environmental Scientist with Lahontan Water Board I am a Contract Manager. I am excited about the Lake Tahoe work that is currently being funded. Nearshore, the Lake Tahoe TMDL and AIS are some priority topics for us in 2024.

10:27:53 From Phoebe Song, EPA to Everyone:

Reacted to "As an Environmental ..." with 

10:29:17 From pmanley to Everyone:

<https://ecologyandsociety.org/vol29/iss1/art3/> sharing

10:30:50 From Jason Vasques, California Tahoe Conservancy to Everyone:

I have to drop off for a few minutes. Be back shortly.

10:39:41 From Phoebe Song, EPA to Everyone:

I saw that event - so exciting!

10:40:18 From Tamara Wall to Everyone:

I have to step away briefly--

10:44:15 From Tamara Wall to Everyone:

I think an economist would be a fantastic perspective/expertise to have on the council.

10:48:10 From Laura Patten- League to Save Lake Tahoe to Everyone:

Sudeep, I'm helping coordinate some of that NV/CA oversight committee Tahoe meetings w/our lobbying advocacy and that's a great idea I can suggest from our end too.

10:54:46 From Jason Kuchnicki to Everyone:

Can you recap the timeline for State of the Basin and review process?

10:56:51 From Jim Lawrence to Everyone:

Replying to "Can you recap the ti..."

Hey Jason,

10:57:08 From Jim Lawrence to Everyone:

Replying to "Can you recap the ti..."

The timeline is to wrap up interviews and literature review by end of January

10:58:05 From Jim Lawrence to Everyone:

Replying to "Can you recap the ti..."

Draft chapters by end of February. Review between end of February and end of March. Final report end of March/April

10:59:30 From pmanley to Everyone:

Reacted to "I think an economist..." with 

11:05:31 From Robert Larsen to Everyone:

Recall there was a proposal during the SNPLMA round for a data management activities. It'd be helpful to revisit, as it fits within the available resources.

11:08:14 From Steven Sadro to Everyone:

The National Academy convenes a lot of committees that make policy recommendations

11:08:17 From Steven Sadro to Everyone:

<https://www.nationalacademies.org/about/institutional-policies-and-procedures/conflict-of-interest-policies-and-procedures>

11:08:33 From Max Moritz to Everyone:

Many local Fire Safe Councils have conflict of interest policies that specify what funded activities their board members may (and may not) engage in, given that those same board members could be voting on related decisions...

11:09:14 From pmanley to Everyone:

Reacted to "The National Academy..." with 👍

11:09:23 From pmanley to Everyone:

Reacted to "Many local Fire Safe..." with 👍

11:09:38 From Alexander Forrest to Everyone:

There is also the Jefferson Project at Lake George that may have some examples:

<https://dfwi.rpi.edu/jefferson-project-lake-george>

11:10:37 From pmanley to Everyone:

Reacted to "There is also the Je..." with 👍

11:11:21 From Jim Lawrence to Everyone:

While not a science group, the BLM's Southern Nevada Public Lands Management Act program has protocols for conflicts of interest because many of the advisory group members represented agencies eligible to receive funding

11:11:55 From pmanley to Everyone:

Reacted to "While not a science ..." with 👍

11:15:32 From Joe Domagalski to Everyone:

Here is an example of conflict of interest policy from the Delta Regional Monitoring Program:

11:17:25 From Robert Larsen to Everyone:

Reacted to "Many local Fire Safe..." with 👍

11:19:46 From pmanley to Everyone:

Reacted to "Here is an example o..." with 👍

11:20:09 From Tamara Wall to Everyone:

The free version of Trello might work for project management—very simple, and able to attach documents and forward emails to a project board

11:20:39 From Joe Domagalski to Everyone:

8.E Conflict of Interest Policy

All Program Participants serving on Delta RMP committees shall avoid both actual and perceived conflicts of interest when selecting contractors. Any committee member with an actual or perceived conflict of interest in a contract has a duty to disclose this interest to the committee and to recuse himself/herself from the decision. In order to avoid potential conflicts of interest with technical contractors, the TAC shall not recommend specific contractors, but may provide criteria to be used in the contractor selection process. Additional details about handling conflicts of interest by public officials are available in Government Code Sections 1090-1099.

11:22:59 From Alexander Forrest to Everyone:

<https://www.soos.aq/>

11:23:04 From Max Moritz to Everyone:

From NCEAS: <https://learning.nceas.ucsb.edu/2022-04-arctic/collaboration-authorship-and-data-policies.html>

11:24:39 From Max Moritz to Everyone:

<https://www.nceas.ucsb.edu/data-and-information-policy>

11:27:13 From pmanley to Everyone:

Data quality may be tackled as COI - can borrow from more established systems elsewhere.. very supportive of this investment..

11:30:40 From Max Moritz to Everyone:

Was there a synthesis of whatever feedback was collected during the last science conference? Would be nice to know what the "outcome" of that event was, from participants perspectives...

11:31:08 From Alexander Forrest to Everyone:

<https://www.nalms.org/>

11:31:14 From Alexander Forrest to Everyone:

<https://www.california-lakes.org/>

11:33:00 From Tamara Wall to Everyone:

I really liked the focus of the conference last fall—there is so much energy and interest in the Tahoe Basin ecosystem by non-scientists and managers/practitioners, it seems like harnessing that energy is a opportunity that should not be missed.

11:33:45 From Monica Arienzo, DRI (she/her) to Everyone:

Reacted to "I really liked the f..." with 👍

11:35:55 From pmanley to Everyone:

Reminder to everyone that our documents in progress and ready for review are posted on our wonderful TSAC live doc web page.. <https://www.tahoesciencecouncil.org/live-documents>

11:37:21 From Robert Larsen to Everyone:

We posted conference presentations and summary material on the website - take a look if you haven't already and share widely! <https://www.tahoesciencecouncil.org/presentations>

11:39:10 From pmanley to Everyone:

Reacted to "We posted conference..." with 👍

11:43:11 From Monica Arienzo, DRI (she/her) to Everyone:

Reacted to "Reminder to everyone..." with 👍

11:59:24 From pmanley to Everyone:

Amazing tool.. thanks very much for sharing..

12:01:08 From Ramon Naranjo, USGS to Everyone:

what remote sensing datasets within climate engine would be helpful for in-lake assessments?

12:01:17 From Monica Arienzo, DRI (she/her) to Everyone:

here is a conference some people here might be interested in and it's in south lake:

<https://www.cafirescience.org/establishing-directions-in-postfire-debris-flow-science-conference>

12:01:32 From Max Moritz to Everyone:

Super cool and thank you! Must go!

12:01:43 From kristenoshea to Everyone:

<https://docs.google.com/presentation/d/1QzfLA6TqIHxwLTRIORBeYFhhcEfgWtiz/edit?usp=sharing&oid=115056312538135631252&rtpof=true&sd=true>

12:01:51 From Monica Arienzo, DRI (she/her) to Everyone:

Reacted to "https://docs.google...." with 👍

12:01:58 From Alexander Forrest to Everyone:

Thank you everyone.

12:02:35 From Sudeep Chandra to Everyone:

Replying to "what remote sensing ..."

I have some idea Ramon! Let's talk and may be bring some ideas back to the Water quality working group

12:02:52 From Ramon Naranjo, USGS to Everyone:

Reacted to "I have some idea Ram..." with 👍