



NEVADA LEGISLATURE LEGISLATIVE COMMITTEE FOR THE REVIEW AND OVERSIGHT OF THE TAHOE REGIONAL PLANNING AGENCY AND MARLETTE LAKE WATER SYSTEM

(Nevada Revised Statutes [NRS] 218E.555)

DRAFT MINUTES July 19, 2024

The fifth meeting of the Legislative Committee for the Review and Oversight of the Tahoe Regional Planning Agency and the Marlette Lake Water System for the 2023–2024 Interim was held on Friday, July 19, 2024, at 1 p.m. in the Tahoe Room, Tahoe Regional Planning Agency (TRPA), 128 Market Street, Stateline, Nevada.

The agenda, minutes, meeting materials, and audio recording of the meeting are available on the Committee's meeting page. The audio recording may also be found at <https://www.leg.state.nv.us/Video/>. Copies of the audio record can be obtained through the Publications Office of the Legislative Counsel Bureau (LCB) (publications@lcb.state.nv.us or 775/684-6835).

COMMITTEE MEMBERS PRESENT IN STATELINE:

Senator Skip Daly, Chair
Assemblywoman Shannon Bilbray-Axelrod, Vice Chair
Senator Melanie Scheible
Senator Robin L. Titus
Assemblywoman Angie Taylor

COMMITTEE MEMBERS ABSENT:

Assemblyman Rich DeLong (Excused)
Assemblyman Ken Gray (Alternate for Assemblyman Rich DeLong) (Excused)

LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:

Alysa M. Keller, Senior Principal Policy Analyst, Research Division
Christina Harper, Manager of Research Policy Assistants, Research Division
Terese Martinez, Research Policy Assistant, Research Division
Erin Sturdivant, Senior Principal Deputy Legislative Counsel, Legal Division
Jeffrey Chronister, Deputy Legislative Counsel, Legal Division

*Items taken out of sequence during the meeting have been placed in agenda order.
[Indicate a summary of comments.]*

AGENDA ITEM I—CALL TO ORDER

Chair Daly:

[Chair Daly called the meeting to order, and welcomed members, presenters, and the public to the fifth meeting of the Legislative Committee for the Review and Oversight of the Tahoe Regional Planning Agency and the Marlette Lake Water System.]

Will the Secretary please call the roll? [Roll call is reflected in Committee Members Present.]

[Chair Daly reviewed meeting and testimony guidelines.]

AGENDA ITEM II—PUBLIC COMMENT

Chair Daly:

We will move on to the first period of public comment. Public comment is limited to two minutes per speaker. Please state and spell your name. We will begin with whoever wants to come up for public comment, fill the chairs, and we will begin. Thank you.

Doug Flaherty, TahoeCleanAir.org:

Honorable Committee Members, I request this Committee recommend to the Nevada Legislature that all future funding to the TRPA be put on hold until the following actions are taken by the TRPA Governing Board: (1) place a moratorium on all TRPA nonexempt activities until a supplemental cumulative impact/Environmental Impact Statement (EIS) to the 2012 Regional Plan is completed; (2) place a moratorium on all TRPA nonexempt activities until the TRPA develops and adopts thresholds of significance for wildfire and winter peril evacuation times; (3) suspend TRPA Code of Ordinances Section 2.5 and 2.6 until the supplemental EIS described above is completed; (4) eliminate the TRPA initial environmental checklist for nonexempt activities in favor of an environmental assessment; (5) modify the TRPA rules of procedures and Code of Ordinances to allow the public the option of non-binding mediation conducted under the applicable rules of the American Arbitration Association or the John S. McCain National Center for Environmental Conflict Resolution before pursuing recourse in a court of law; (6) request TRPA, Nevada Department of Transportation (NDOT), and their partners immediately halt the progress of the expansion of the East Shore Trail until a cumulative impact EIS is conducted based on new information and changed circumstances; and (7) due to the highly controversial mismanagement under the current TRPA leadership and the fact that the TRPA refuses to acknowledge that the Nevada Open Meeting Law and Brown Act applies to the TRPA, request the TRPA to immediately create and institute a whistleblower protective process to allow former, current, and future employees to blow the whistle on instances of TRPA mismanagement or violations of the Compact including applicable federal, state, and local law and regulation violations. Thank you. (Agenda Item II A)

Peggy Borland, Nevada Resident:

Good afternoon, Committee. I am here today with a request. When these Oversight Committee meetings started last January in Carson City, many of us had high hopes that this process and your oversight participation would result in some long-overdue reforms to an Agency that has veered off the course of Lake protection in favor of economic

development under the manner of a tourist economy. It is my opinion, and that of many around the Lake who consider themselves environmentalists, that the pendulum has swung too far towards development and tourism to the detriment of the Lake, while putting residents and our tourists in danger when the call for a fire evacuation comes. In these past months, we have all sat through many blue-sky presentations from the likes of the TRPA, the Prosperity Center, and others. Your Committee has curated these groups to be presenters without offering local, nonprofit, citizens conservation groups an opportunity to present to this Committee. We have serious concerns about unmet thresholds and compliance deficiencies. Friday, August 16th is the final hearing for this Committee, and it would show good faith and transparency to invite several of these groups who could consolidate and coordinate their presentations into one to present an expanded environmental perspective beyond the two minutes that we are given to speak during public comment. I thank you for giving this idea consideration. Thank you.

Ann Nichols, North Tahoe Preservation Alliance:

Good afternoon. I am a 54-year-old—no, I am not, I am much older than that—54-year resident of North Lake Tahoe, and I used to have brown hair when this all started in 2007. But anyway, I have owned my own business. I have built commercial buildings. I am a Nevada and California real estate broker for over 40 years. The important thing to know today is that TRPA is lacking transparency; it is almost completely missing. When we asked TRPA for the minutes of the Stewardship Tahoe, and their financials, and the Memorandum of Understanding (MOU) with their 30 partners, TRPA wanted \$2,000 for that information. This stuff should actually be on the Stewardship Tahoe website. I have emails to this effect, so it is the case they wanted \$2,000 to review. Since TRPA does not have any taxing authority, TRPA's latest tactic is creating or aligning with new entities that are quasi-governmental and then they are starting to—then they become—they have authority; and these people—Tahoe Prosperity Center, Tahoe Fund, Stewardship Tahoe—they want to tax us, but we do not even know who to go to for redress. We cannot get information without paying for it. So, I will hope that you will really look into this and ask them to be more transparent with the public and to find out what is really going on. North Tahoe Preservation Alliance has over 600 members. We have 1,000 signatures on a petition. We have been doing this since 2007; 4,000 have viewed our video which says, "Say no to urbanization of Lake Tahoe;" 4,000 have seen our TikTok videos. Why am I telling you this? Because the TRPA and Governing Board Members, some have portrayed us as gray haired—which that part is true—but rich, gray haired, second homeowners, and that could not be farther from the truth. We are attorneys, planners, and physicists; and I hope you will listen to us. Thank you.

Corinna Osborne, Chief Operating Officer, Edgewood Companies:

Good afternoon. Thank you for the opportunity to address you today and highlight our invaluable partnership with TRPA. In the brief time I have, I will provide a condensed version of our achievements together. Over the past decade, our Company's growth is a testament to our collaboration with TRPA, who have been invaluable in this journey. We have developed our property responsibly, demonstrating our commitment to environmental preservation. Edgewood Companies employs over 700 staff members and operates a 154-room lodge, 14 luxury villas, 3 restaurants, spa, retail outlets, and a seasonal 18-hole golf course. Our mantra—to be stewards of the land, guardians of the Lake, and solid corporate citizens—is a principle we hold very dear. Prior to breaking ground to the lodge, our partnership with TRPA has enabled us on numerous projects treating and removing 500,000 pounds of sediment per year from Lake Tahoe; acquiring and demolishing obsolete, environmentally unsustainable properties; and restoring its land to its natural state. We

built our property to lead standards, implementing a Lake source cooling system to reduce our carbon footprint. Today, our commitment and collaboration continue with TRPA, with projects like the golf course creek restoration project, realigning sewer mains, and daylighting Edgewood Creek for native fish passage and spawning habitat, along with harvesting aquatic invasive weeds from Pond One. Edgewood serves as a role model, proving that development can benefit the community and the environment through our partnership with TRPA. They guide us in raising awareness of environmental initiatives. It is crucial that we unite to enhance our tourism-based economy. We are eager to continue our cooperative efforts with TRPA, prioritizing collaboration over division. Thank you for your time and partnership in recognizing we borrow this land for future generations. We remain dedicated to a legacy of land stewardship and environmental redevelopment in partnership with TRPA. Thank you.

Tobi Tyler, Tahoe Area Group, Sierra Club:

Hello, I am a University of California, (UC) Berkeley graduate with a master's degree in environmental engineering and worked at Lahontan Water Board until 2017. My first comments relate to Agenda Item VI and recap my June comments regarding winning a lawsuit against herbicide use in the Tahoe Keys lagoons. The TRPA and the League are on a trajectory of pushing herbicide use in Lake Tahoe's waters. This would be an ill-conceived travesty for this Tier 3, outstanding, national resource water. The Lahontan Water Board, with a huge push from the League and TRPA, did not abide by their own rule book of regulations; so, we sued and won. The judge reviewed all the materials, and in May of this year nullified/vacated both the permit that allowed herbicide discharge and the associated environmental document. Now, they are ignoring the judge's ruling and continuing with the test as if the ruling never happened. The Keys can use non-chemical methods right now without the test. They have always been able to use these methods but have refused and instead use subterfuge in the form of this test to get around the regulations. More creative solutions than using poisons are needed to prevent Tahoe Keys weeds from plaguing Lake Tahoe's waters. Please tell TRPA they must comply with the judge's ruling, cease and desist with the test, and tell the Keys to implement non-chemical methods at an appropriate and effective scale immediately. Secondly, there are many disconcerting trends with the current TRPA, despite glowing reports you will hear today and have heard before. One, we need scientifically based environmental analysis with cumulative impacts analyzed on all nonexempt projects—no more fraudulent environmental checklist. Two, we need a basin-wide, single use plastic ban, and we need it today. The TRPA's attorney is telling board members they are just a planning agency, not a regulatory agency. The TRPA is the only agency that can do this because they are a regulatory agency through their Code of Ordinances. They need to take more decisive action on plastics for the ban. Three, TRPA is not currently complying with the Code of Ordinances, and they need much more transparency. It is needed for their development cap shell game that is contorted. That is, in essence, there are no caps at all. (Agenda Item II B)

Kristina Hill, Lake Tahoe Resident:

I am a former planner at TRPA and a long time (44 years) full-time resident and land use planning consultant in the Tahoe Basin. You have heard me say before, TRPA is more concerned about public relations than the environment. No doubt you will hear presentations today about their efforts to improve water quality, et cetera; but it is all smoke and mirrors demonstrated over the past few years. They have instead concentrated their efforts on building more dense and higher development, as well as creating more attractions to accommodate more people. They approved code amendments to allow for more luxury condos in lieu of workforce housing. Then approved code amendments that

were not in compliance with their code, which requires them to make specific findings that they did not make. They have suggested that a basin-wide ban on single-use plastics is not something they should consider. They say there are caps on development, but it seems every few months they amend the code and raise the caps. In short, there are no caps on development. I realize now that you and the TRPA Governing Boards are not really that familiar with the ins and outs of the TRPA Code of Ordinances and rely on what you are told by TRPA staff to make decisions. I understand that, but you could not discount the knowledgeable public comments by longtime residents that have to live with these outcomes of more traffic, more people, more height, more trails—that do not reduce traffic, but in fact, attract more people, create more traffic, and demand for parking. Please hold TRPA accountable to comply with their own Code of Ordinances and the thresholds that were established to protect the quality of environment by reducing or withholding funding until the Agency gets back on track. Thank you. (Agenda Item II C)

Brett Tibbitts, Tahoe East Shore Alliance (TESA):

I was recently part of an hour and a half conversation with a TRPA Board Member, trying to find common ground. This Board Member began our conversation with, “You guys really overestimate how much power we have.” You are going to hear this theme, “We are only a planning committee.” Astounded I said, “Planning committees, they are advisors; they do not vote to approve things. They advise the county commission or the city council. You are a Governing Board; you are much more like a county commission. You have power.” He said I was full of it—interesting. Last meeting, Julie Regan convinced a lot of you that TRPA has nothing to do with evacuation. And Chairman Daly stated, “Now we know TRPA has nothing to do with evacuation.” That is ridiculous. The TRPA is the Regional Transportation Plan Manager. They are the ones that brought the plan to convert Highway 50 into two travel lanes for much of Highway 50 in order to build a bike lane. They paid for the Wood Rodgers Report for NDOT, and that report said it must follow TRPA’s wishes. Now we have the Barton Hospital—this TRPA plan to revise the South Shore area plan so they can build a hospital. Peppered throughout this is that TRPA still wants to reduce Highway 50 to build bike lanes. How the heck do you build a five-story hospital on an already congested highway, on a two-lane highway? That is craziness. Plus, the next big issue is going to be Zephyr Cove. The TRPA hides behind MOUs. Last comment—why does TRPA do this? They do this to confuse everyone. They want to be like the Wizard of Oz behind the black screen, pulling the levers, and saying they have no power. Thank you. (Agenda Item II D)

JT Chevallier, Co-founder/Chief Strategy Officer, Eco-Clean Solutions:

Good afternoon, Committee. I am here today to talk about the valuable role TRPA plays in the environmental quality and restoration of the Lake Tahoe Basin, specifically through the Environmental Improvement Program, which I would encourage everybody, especially in this room, to go and research about the numerous programs that they deploy in the Lake Tahoe Basin. The EIP is critical, and the funding is critical for organizations like myself to be able to actually do tangible, economic, and environmental improvement projects in the Lake Tahoe Basin, like mechanical beach cleaning as well as mechanical marina cleaning. Without the TRPA and Keep Tahoe Blue, our Company would not be able to be successful in these endeavors; and due to the environmental thresholds, that we have to pass within the Lake Tahoe Basin—that are the reason why we are successful in the Lake Tahoe Basin—and are critical to the environmental preservation of Lake Tahoe. By fitting into this permitting structure, we have ensured that we can create an environmental benefit without creating an environmental detriment. I would encourage everybody as well to know that there are a lot of folks on this landscape that are not in this room today that greatly appreciate all the activities that are going on in the Lake Tahoe Basin, in which TRPA

has a strong hand in making sure that they move forward. This collaborative approach from private to public to nonprofit is critical for our success. Without the TRPA, we would not be able to create a value within the Lake Tahoe Basin without creating an economic or environmental detriment. Finally, I think we all need to be aware that we are stewards of this Lake, whether we are an individual or within a group; however, there needs to be a regulatory agency that oversees these very important environmental thresholds that we can follow and maintain to create a better environment for Lake Tahoe. So, I would say please support the large population of Lake Tahoe that supports these efforts and not the vocal minority. Thank you for your time.

Dana Tibbitts, TESA:

Extensive public comment has offered deep insight and compelling truths, but how seriously has this Committee taken these? The tendency to dismiss, invalidate, or discredit information that challenges the accepted narrative is disturbing, especially for a Committee charged with holding TRPA accountable on all fronts. The TRPA's tendency to bury the truth, hide the ball, and suppress or rebrand bad news is legendary; and seems to be leading this Committee down the primrose path of plausible deniability at every turn. To review a few critical issues on public record here: wildfire evacuation incapacity with 90 percent losses likely; tourism overload; rampant over-development; refusal to do required Environmental Impact Reports (EIRs) for major projects; bike paths replacing evacuation infrastructure; failed environmental safeguards; microtransit over microplastic toxicity in our Lake and drinking water; parking pandemonium choking major roadways; and mesh with all of these are endless public-private partnerships (PPPs). These concealed alliances, so loved by TRPA, are destroying public trust, agency transparency, and environmental health across the Basin. By farming out planning and project development, decision making, and even public interface to private consultants and entities over which they claim no control, TRPA is taking power from the people and giving it away to the highest bidder who gets a piece of the action without one iota of accountability. The PPPs are a way to mask evermore intrusive government and financial schemes that are using taxpayer dollars for undisclosed projects. It is said there is actually another more accurate term for these partnerships—it is called fascism, plain and simple. So, it allows TRPA to smile and say, "Heads I win, tails you lose." Please limit TRPA's use of these public-private partnerships. (Agenda Item II E)

Elisabeth Lernhardt, Zephyr Cove Resident:

Good afternoon, Committee and Chairman. Finally, the agenda is dealing with the biggest elephant in the room, the Lake and its water clarity. Yet the organization that does most of the empirical data collection and research is not on your speaker's list. The Tahoe Environmental Research Center published the *Tahoe: State of the Lake Report 2023* with some amazing findings about the dynamics of the limnological changes as they played out in the past two years in the Lake. Unfortunately, they lost their leader in Professor Schladow, who retired last fall; but I am urging this Committee to invite Professor Forrest, the Interim Director, or his successor, to present this year's *State of the Lake Report* to this Committee. This report will be presented on August 8, 2024, at 4:30 p.m. in Granlibakken and will be available online at their web page. I present last year's report—I know it looks voluminous, but it is well worth reading. Thank you. (Agenda Item II F)

Janet Murphy, Tahoe Douglas Utility District:

Good afternoon, Oversight Board. I am here on behalf of what this young lady has been passing out. I just received a notice of our infrastructure that is in the Marla Bay Beach and

there has been quite a bit of destruction and devastation. Our sewer infrastructure lies in the beach and it services 22 homes on the Lake. Their retaining walls have collapsed and in turn have broken their laterals that are in the beach. Then our line—our eight-inch line that takes in all of those laterals—takes in the Lake when one of them is broken; we cannot keep up with the flow of taking in the Lake. So, I brought TRPA and some of your staff down there. They recognized the devastation and the destruction. As you can see in the letter, they have asked Tahoe Douglas District for decommissioning and removal of all the infrastructure. If that happens, the 22 homeowners that tie into that line, our line on the Lake, would be required to put in lift stations. But first, they would have to build retaining walls that are lying in the beach and that are at extremely high risk because our drinking water comes from that national treasure. We are trying to be prudent and remove the line, but we cannot remove the line until the walls are rebuilt to stabilize the homes, as well as them putting in sewer lift stations. In the letter, it asked for Tahoe Douglas District to give a whole strategic plan by August, but that would be impossible because—

Chair Daly:

If you can start to wrap up, you are at your two minutes.

Ms. Murphy:

I am sorry—why I am here is because there is in front of you today, in the planning department, a wall and engineering for everybody to start the process, but I need TRPA to expedite all permits. That is why I am here. I am pleading with the Board to talk to the staff, to Ms. Regan. I need them to expedite these permits so I can do my job; I cannot give you a schedule until you do your part of the work.

Niobe Burden, Lake Tahoe Resident, Conservation Photographer:

Good afternoon, Oversight Committee Members. I am a member of the community here in the Lake Tahoe Basin and a worldwide conservation photographer. Today, I want to address the urgent need for the TRPA to study and implement a comprehensive carrying capacity plan for the Lake Tahoe Basin. This is the one item that continues not to be addressed and clearly needs to be enforced by your Committee as part of your dutiful responsibilities. This plan is essential to ensure the environmental sustainability and safety of our community, especially in light of the increasing risk posed by overpopulation and the threat of wildfires. Lake Tahoe, with its breathtaking beauty and ecological significance, was once considered for National Park status. However, the destination was not pursued at the time due to the rampant clear cutting of trees and the prioritization of tourism over conservation. As a result, Lake Tahoe's natural environment has faced significant challenges over the years. The delicate ecosystem of Lake Tahoe is under immense pressure due to the ever-growing number of visitors and residents in the area. Without a proper carrying capacity limit in place, we risk irreversibly damaging the natural beauty and ecological balance of this region. It is crucial that TRPA takes proactive measures, such as enforcing zoning regulations, visitor quotas, and fees to manage tourism, development, and its impacts on the Lake's sensitive ecosystems. Moreover, the recent escalation in wildfires across the Western United States has highlighted the importance of effective evacuation planning in the event of wildfire or any other emergency. An overcrowded area like Lake Tahoe will face significant challenges in safety and evacuating residents and visitors. It is imperative that TRPA establish a carrying capacity plan to not only protect the environment but also ensure the safety and wellbeing of everyone in the Basin. We cannot afford to repeat the mistakes of the past. I urge TRPA to learn from history and prioritize a study and implementation of a

carrying capacity plan that balances environmental sustainability with the needs of our community.

Chair Daly:

You are at your two minutes, wrap up.

Ms. Burden:

Let us work together to preserve the natural wonders of Lake Tahoe. I spent seven weeks in northern Italy and learned a number of ways carrying capacity is managed. Lake Tahoe is not the only area in the world facing these challenges. There are numerous resort destinations around the world leading by example and the gem of Lake Tahoe should be doing the same.

Chair Daly:

You have exceeded your two minutes. Your time is up, thank you. Seeing no other people here, let us go to the phones.

Broadcast and Production Services (BPS):

Please press *9 to take your place in the queue. Please press *6 to unmute. Go ahead.

Ellie Waller, Nevada Resident:

Many of the 2012 Regional Plan ordinances and policies are stale, even with countless amendments since 2013; the environment has changed, impacts go unchecked. For example, vacation home rentals have never been analyzed and approximately 5,000 exist in the Basin. Accountability and assigned deliverables, not just studies and plans of what has been achieved to improve the Basin's environment with billions spent and accountability of future pending Lake Tahoe Restoration Act funds to [inaudible] thresholds is a must. Much scrutiny when voting in favor of the requested extension of the Restoration Act is paramount. My opinion is thresholds have been reimagined and do not honor their original intent. Vehicle miles traveled (VMT) is now VMT per capita. The TRPA development and implementation priorities 2024 per capita VMT between 2020 to 2022 requested a 1 percent reduction from the 2018 baseline. What does 1 percent accomplish? Microtransit is not fully functional in Nevada and your presentation from the Lake Tahoe Visitors Authority left all of us wondering what they do. The 2015 milestone for per capita between 2046 and 2048 requests a 6.9 percent reduction from the baseline, less than 7 percent in 30 years. When all else fails, the technical body described in the TRPA implementation priorities will review the threshold standards and recommend a new target. The former target was addressed by both states' Attorneys Generals in 2016 lawsuits. The TRPA environmental carrying capacity threshold called for the region's VMT to be at least 10 percent below the 1981 level.

Chair Daly:

Caller, you are at your two minutes. Wrap up please.

Ms. Waller:

A study revealed the Basin was within 3 percent of VMT threshold and viola—VMT per capita was born! The new standard—27 years was the first round; 30 more years proposed to

achieve what you have without [inaudible], and I am the vocal minority—I wear the badge, as we have heard. (Agenda Item II G)

Chair Daly:

Do we have any other callers?

Monica Eisenstecken, Private Citizen:

I wanted to call in regarding the trash issue. I know there are a lot of people proud of them picking up all the trash, but the trash is not being picked up. I went to the beach yesterday. There is tinfoil, little pieces of plastic, kid toys, pieces of paper floating, wrappers in the Lake. You only have to look down at every step you take on the sand—there is trash. Why are we not picking up these little pieces? These are the worst things that could happen to our Lake. The Lake clarity is going down very fast. Microplastics are—we are the third worst lake. There needs to be more being done. There are 20 million people that come here and there are no services implemented to pick up all the trash. There is a lot more work to be done. I know they said the trash was better on Fourth of July. That is not true. I do not believe the media, they are bought and paid for. My cousins were here from Austria. They have been visiting here for years and they just shook their heads. They said there are diapers in the trees, bottles thrown in all the ponds, and plastic everywhere. Bottles, empty cans—people just trash Lake Tahoe. It is not about how many people that come here—we need quality, or we need to educate these people. And it is not up to the locals to pick up the trash. That is—I just do not get that. You are asking kids to go pick up after people's trash. You make enough money. These nonprofits make millions and millions of dollars. What are they doing with all this money? They say they are protecting the Lake. They are not protecting the Lake—they are pocketing all this money. That is how I see it. They need to go out and pick up the trash—and hold these companies accountable. Heavenly is disgusting—at the bottom, underneath the chairlifts. There are gloves, goggles, beer cans—you name it. Go walk underneath the chair lift at the end of the year, there is trash everywhere. [Inaudible] is filled with trash, Safeway—the little pond next to Safeway is full of trash. Whole Foods is filled with trash on the side.

Chair Daly:

Caller, if you can wrap up, please. You are at your two minutes.

Pamela Tsigdinos, Full-time Resident, North Lake Tahoe, Nevada:

Hello. Today you will hear presentations on TRPA's environmental threshold carrying capacity, but there is no hard data. Instead, from looking at the slides, there is an explanation of an overly complicated dashboard and website that TRPA created. As if by design, it is meant to be impossible to get a full understanding of the ten categories the TRPA is required to measure and monitor by order of the decades-old Tahoe Compact and Lake Tahoe Restoration Act. If a five-year update to TRPA thresholds last completed in 2019 is due a few months from now, a question I encourage you to ask is why is not their preliminary data or a preview of areas of greatest environmental concern? Surely you, and we the public, deserve to know more about the state of Tahoe's water quality, particularly since Article Two specifically mentions these thresholds are to maintain public health and safety. At June's TRPA meeting, the League to Save Lake Tahoe's Policy Director zeroed in on TRPA's near-meaningless environmental thresholds dashboard and its compliance deficits. This organization called for a more directed focus on Lake Tahoe's environmental threats. Given the growth in Tahoe visitors and the proliferation of trash now scarring the land, our environment is in trouble. Should not this Committee and the public have a clear

understanding of Tahoe's current environmental thresholds? Please do your job and ask for the hard data. Thank you very much.

BPS:

If you have recently joined the call and would like to provide public comment, please press *9 now to take your place in the queue.

Ronda Tycer, Incline Village Resident:

I would like to explain a bit about TRPA's thresholds. Depending on what they refer to—let us say Lake clarity—thresholds are something you want to exceed or not exceed if you are trying to save the Lake. The most famous threshold is the Secchi disc measurement goal of 100 feet of clarity. Any measurement less than 100 is not meeting the threshold. The 2012 Regional Plan specified ten thresholds from which TRPA has derived dozens of—many thresholds which they measure annually. They measure thresholds on a scale from no attainment to some attainment to full attainment. Now, all that is just preliminary to my main concern, which is the TRPA approves development of buildings in the Basin without any threshold analysis of that development's potential impact on Lake clarity. That is because they cannot. How can they measure how much Lake clarity will be lessened by building 100 new units? Yet there is a solid argument that the more development, the more Lake clarity declines; but, when approving further development in the Basin, TRPA staff regularly comes back with a finding of "no significant effect." That is because they are not measuring the effect of development on Lake clarity. They are only deciding whether the number of units they approve today exceeds the threshold number they set in 2012. So, what is wrong with this picture? First, the 2012 number of units may not be right for 2024. Second, any and all development impacts the Lake. But third, their use of the phrase, "no significant effect" has nothing to do with the Lake clarity. Thank you.

BPS:

Chair, the public line is open and working, but there are no additional callers.

Chair Daly:

Thank you. With that, we will close Agenda Item II—come on up, if you are here.

Stacy Baker, Lake Tahoe Resident:

Hello, thank you. I got stuck in the lovely traffic that seems to be a byproduct of all of this over-development. I echo the sentiments of everybody that has spoken. For 30 years of being a professional here, I am quite disturbed at TRPA's lack of ability to identify that if you do not protect this environment, there will be nothing for anybody. It would appear that TRPA's sham environmental studies do not necessarily reflect what is really going on. The Tahoe Beach Club and the amount of litter from them. This South Shore redevelopment makes no sense. There appears to be a groundwater issue, is anyone addressing this? I support what was said by the TESA, by the Sierra Club, and by the Tahoe Clean Air Act. Please, people, it appears—and I am not trying to be offensive—but it appears that there is significant financial gain to be made by selling our environment off to the highest bidder by choosing projects that make the most money; but yet not respecting riparian areas, wildlife corridors, bees. Pollinators are responsible for 90 percent of the food we eat, yet their environment is being decimated. My children grew up respecting the Tahoe Yellow Cress, but the Beach Club has pretty much negated all of the land that they were putting their little signs and doing their little science projects on. I implore you—please listen to science—

protect the environment. The mission statement of TRPA is to balance environment with economy—TRPA is wildly out of balance; it is economy up here and environment—is that even a consideration? Please, so we can all enjoy this, do the right thing. Thank you for letting me speak.

Chair Daly:

With that, we will close Agenda Item II, public comment.

AGENDA ITEM III—APPROVAL OF THE MINUTES FOR THE MEETING ON JUNE 7, 2024

Chair Daly:

We will move on to Agenda Item III, the approval of the minutes for the June 7, 2024, meeting. All members were emailed the link to the draft minutes, provided in advance. If there are any comments or questions, now is the time. If not, I will take a motion to approve the minutes.

VICE CHAIR BILBRAY-AXELROD MOVED TO APPROVE THE MINUTES FOR THE MEETING ON JUNE 7, 2024.

SENATOR TITUS SECONDED THE MOTION.

THE MOTION PASSED UNANIMOUSLY.

AGENDA ITEM IV—UPDATE ON LAKE TAHOE WATER QUALITY

Chair Daly:

We will move on to Item IV, which is an update on Lake Tahoe water quality. We have a presenter from the Nevada Division of Environmental Protection, Jennifer Carr. Proceed when you are ready.

Jennifer Carr, PE, CPM, CEM, Administrator, Nevada Division of Environmental Protection (NDEP):

Good afternoon, and thank you, Chair Daly, for the opportunity to speak to your Committee today. In this presentation, our goal is to give you background on the total maximum daily load (TMDL) program and the status of water quality and deep Lake clarity measurements for Tahoe. I will also discuss the science used by Nevada and California in the development, implementation, assessment, and ongoing modification of the TMDL program (Agenda Item IV).

As shown in the quote from the U.S. Environmental Protection Agency's (EPA) website, a TMDL is a tool for knowing the qualities of a water body and its pollutants and is a planning tool for restoration. The program I will be discussing today is known as the Tahoe TMDL. Certainly, it is hard to envision Tahoe as polluted, but there is a standard related to clarity in this water body and factors limiting the clarity are in fact pollutants in this instance. Staff of both the NDEP and the Lahontan Regional Water Quality Control Board work closely together in implementation of the program for consistency in regulatory oversight across the State line. Dr. Danilo Dragoni is the NDEP Deputy Administrator who is known as

Nevada's bi-state executive for this program, and Ben Letton, he is the Assistant Executive Director [Officer] of the Lahontan Regional Water Quality Control Board.

We have been doing this a while. The goal of the Tahoe TMDL is to restore clarity so people may once again see to the depths of nearly 100 feet, as could be seen in the late 1960s. This is what the clarity chart looked like in 2001, when the Lahontan Water Board approached NDEP to initiate development of a plan to restore Lake clarity. At that time, approximately one-third of Tahoe's clarity had been lost since 1968. The mere fact that we have a consistent record of clarity measurements going back that far is remarkable and it helped to define the extent of the problem we faced in 2001. This chart serves as a reminder of where we were nearly 25 years ago. The circles here represent the depth and the Secchi disk used to measure clarity, which is the depth people can see with the naked eye below the Lake's surface.

This is the basic timeline of the phases of TMDL development and implementation. In 2001, there was the realization that the only chance for successful implementation would be through a collaborative bi-state process. This involved laying out a phased approach for TMDL development surrounding key questions that fit within the required framework for U.S. EPA approval under the Clean Water Act. The Agency strived to ensure the Lake Tahoe TMDL was based on best available science throughout the entire development process, as well as extensive engagement with stakeholders, particularly the implementation community. Consequently, it took over a decade to develop and gain U.S. EPA approval of the peer reviewed TMDL report. As you can see, we are in phase three of the implementation program; 2076 is a long way off and reaching it will be the work of the next generation of staff that follow us.

The clarity challenge came about as an interim target that could be used to evaluate progress over a shorter time frame. Scientists were looking at the attainment of the clarity challenge to indicate the trend in clarity was not arrested but beginning to reverse; and we would be on a path to improved clarity. I will talk about where we are today in a few moments.

To know where we are going, it is often important to look at where we have been. The road map for improvement started with key framing questions and they are as relevant today as they were decades ago; but the answers change, and we adapt to what is going on in today's environment. A multimillion-dollar research and monitoring plan was launched that involved more than 150 scientists and professionals to quantify pollutant types, sources, and delivery rates of those pollutants to determine the capacity of the Lake to accept these pollutants and develop a feasible, cost-effective restoration strategy that would achieve broad stakeholder support. As a result, the Lake Tahoe TMDL is one of the most scientifically defensible TMDLs in the nation, and other similar resource management agencies around the country watch to see how we function. As we work through a changing environment, we are quick to react and make mid-course corrections annually. However, any large-scale change to the program would necessitate an equally rigorous scientific analysis of current conditions and emerging issues. This may not be an aircraft carrier, but we also cannot turn this thing as quick as a jet ski either.

What pollutants are causing clarity loss? Loss of clarity is simply the fact that light cannot make it as deeply into the water column as it did before due to the presence of light absorbing or light scattering pollutants. The importance of fine, inorganic particles in Lake Tahoe's clarity was first recognized in 1999. A series of in-lake investigations commenced in Tahoe in 1999, that help characterize particle distribution and dynamics in Lake Tahoe. Based on the best science available, fine sediment particles (FSP) scatter light

and have the primary effect on lake clarity, followed by nitrogen and phosphorus, which promote algae growth. In recent years, we have learned there are microscopic organisms that scatter light similarly to fine sediment particles, and the biology of Tahoe is becoming a greater part of the discussion. As you can see on the figure on the right, the light absorption and scattering effects have the impact on the light transmitted, which is—that light transmitted is what helps you see to the depths of Tahoe. In the left figure, it gives you a perspective on what I am talking about with fine sediment particles. Fine sediment particles are five to six times smaller than the finest beach sand or three to four times smaller than your human hair.

An extensive source analysis was undertaken involving a variety of expertise from many different organizations, collecting, and analyzing new data related to contributions of pollutants. One of the main accomplishments of the TMDL was to quantify the source of pollutants for fine sediment particles, which had not been done before, and assess its role in controlling clarity. At that point in time, this was an area of emerging science. The source analysis resulted in an updated pollutant budget that included fine sediment particles; because prior to that, the belief was that it was largely related to nutrients, nitrogen, and phosphorus. You can note in the center pie chart in red, the extent to which the urban environment plays in the delivery of fine sediment particles to the Lake, which is over 70 percent. You might ask yourself, how is this possible when urban areas make up a relatively small proportion of the land area? Data from stormwater monitoring projects that characterized runoff concentrations from various land uses indicated the ratio of fine sediment to total sediment increased with land use intensity.

The Lake clarity model simulations resulted in unequivocal importance of fine sediments. According to the model, clarity was clearly more responsive to fine sediment reductions than nutrient reductions, which is why the TMDL is focused on fine sediment particle removal. However, when fine sediment is removed from runoff, nitrogen and phosphorus nutrients are also removed as a co-benefit. The good news from this analysis was that achieving historic clarity was determined possible, but only with substantial load reductions. Another thing to point out is about half the load reductions are needed to achieve the clarity challenge. As you will see in additional graphics in a moment, the results have stabilized but we still have work to do in the next seven years.

Best available science data and technical information was used to determine the most efficient path to achieve the needed load reductions for all pollutants and sources to achieve the clarity challenge and long-term clarity goals. Due to the importance of fine sediment particles as a control on clarity, the strategy does rely heavily on reducing fine sediment loads and stormwater from the urban environment, which is reflected on the tallest bars on the left-hand side. Achieving fine sediment particle load reductions for the non-urban sources and achieving nitrogen and phosphorus load reduction from all sources are still important to achieving a long-term clarity goal over the 65-year period of implementation.

We have, who we lovingly refer to as, our urban implementing partners. Our urban implementing partners carry out controls such as roadway operations and maintenance, stormwater treatment, facility construction and maintenance, and parcel-based best management practices. These measures are registered through a comprehensive numerical accounting system known as the Lake Clarity Crediting Program. The photos here show roadway construction improvements in the upper right-hand corner. Maintenance with advanced tech street sweepers that are vacuum assisted, so you do not get those big clouds of dust you often see from street sweepers. The other photo there is of a residential or parcel-based best management practice (BMP).

This is an overview for visual impression to give some feel for the Lake clarity crediting projects, and it highlights the immense efforts that are being put forward by our urban implementing partners. On the east side of the Lake, the brown one is the Nevada Department of Transportation (NDOT). The blackish/dark blue one on the left side of the Lake is Caltrans. On the Nevada side, the gray at the top wrapping around is Washoe County and the purple is Douglas County. For the California contribution, the red is the City of South Lake Tahoe, and the yellowish color is El Dorado County; with blue being the Placer County contribution to various projects around the Lake.

This slide list types of projects and entities that are tracked in the non-urban sector. Forest uplands, stream channel erosion, and atmospheric deposition contribute to over one-quarter of the total fine sediment particle loading to Lake Tahoe. Non-urban sources also make up a significant percentage of nitrogen and phosphorus loading, as noted at the top. Actions taken by land and natural resource management agencies to improve water quality are integral to helping achieve TMDL goals. These occur at local, state, and federal levels. An example I will touch on at the very end is related to the Nevada Division of State Lands. They have a Land Bank that works to reduce impervious coverage of some of our uplands in order to work towards the goals of improving Lake Tahoe clarity.

Non-urban activities are not tracked using a numerical credit accounting system, but they are measured through performance measures. On this slide, you can see a picture of a post-fire rehabilitation project on Angora Creek. This type of project is reported using, like I said, performance measures. Their performance measure is linear feet of stream channel restored.

Of course, we can only manage what we can measure—you have heard that before. Progress assessment is a key task of TMDL program operations and is essential to demonstrate the expenditures of public funding on water quality improvements are justified. Urban stormwater quality control projects are expensive, and the low hanging fruit is slowly being picked. Load reductions will be harder to come by and load reduction performance will be a key metric in decision making and funding prioritization in the future. Monitoring is done on several levels and this information is assembled, assessed, and informs potential programmatic adjustments to improve the program.

How are we doing? The blue line shows the target credits the urban implementing partners are set to achieve each year through permits and various agreements we have with those entities between the states of Nevada and California. The credit tracking system is unique nationally and information is easily accessed online if you are interested by Googling "LT info." The 2023 results indicate annual load reductions fell slightly short of interim targets, as you can see in this chart. However, urban implementers are on track to attain 2024 milestones. Nevada's Department of Transportation and Washoe County exceeded their individual target pollutant load reductions in 2023. For California, so did Caltrans, South Lake Tahoe, and Eldorado County. Placer County in California and Douglas County on our side of the Lake did not reach their target pollutants for load reductions due to difficulties caused by the record snowfall. The extreme winter weather of 2022–2023 made it difficult to gain access to BMPs for maintenance and conduct roadway cleaning confirmation inspections, resulting in reduced credits. Even though Douglas County did not meet their target, the State of Nevada as a whole achieved 800 credits, exceeding the Nevada State target of 745.

Key notes on this graph are the increase in acres of disturbed areas that have been restored (which are depicted in blue) or enhanced (depicted in red) are improvements in our forest upland projects in the Lake clarity tracker. As you can see, there has been a significant

uptick in forest upland treatments that have been tracked in the system in the past five years.

This graph depicts the increase of miles of street sweeping using several different types of machinery. Overall, the takeaway is the increase of street sweeping activity assists with reduction in atmospheric deposition of pollutants into the Lake. The blue bars represent the high-efficiency, vacuum-assisted sweeping I mentioned earlier that you saw in the picture—so, like I said, you do not get the clouds of dust regular street sweepers throw into the air, which can travel, land on the Lake, and become an atmospheric deposition of fine sediment.

Of course, policy cannot be static in a changing environment, which is why it is fundamental we have what we call the TMDL's Adaptive Management System. The TMDL program is a formal, ongoing, adaptive management, and continuous improvement process. It is based on the iterative four step process of plan, do, check, and act. It is a management method used in business for the control and continuous improvement of processes and products. In a linear or annual format, this is another way to depict our TMDL management system; and it is executed on a cycle that results in tangible products and deliverables every year as shown above the blue bar. Descriptions and latest versions of every work product are available on the clarity tracker on LT Info online [www.laketahoeinfo.org].

It is important to note that stakeholder engagement and interaction is critical for the success of the TMDL management system. Implementers, scientists, funders, decision makers, and other regulatory agencies all play an important role in providing input and feedback in order for us to adjust and improve every year. The TMDL agency executives that I noted at the beginning, review the stakeholder feedback with staff and decisions on recommendations are transparently documented in a decision record memo at the end of the year that is approved by the bi-state executives.

We work hard to keep moving forward. The TRPA, NDEP, the Lahontan Water Board, and EPA have been coordinating with the Science Council and other Tahoe partners to better understand factors that are influencing Lake clarity. Related to biology and ecology, the TMDL did not account for what we now recognize to be a little organism called *Cyclotella*. It is a living organism that reflects light, much like fine sediment particles do; and there is an associated role of something known as the Mysis Shrimp. These things were not necessarily part of the equation back in 2001, but the science we continue to see and develop over the course of our adaptive management system helped to inform what we are doing to continue to improve the clarity of the Lake and our understanding of those processes.

Looking at climate change, a long-term trend analysis was performed for a seasonal clarity investigation to see if there was a difference between winter clarity and summer clarity. That indicated hydrodynamic conditions have evolved since 1969, which increase the Lake's resistance to mixing or what you might also hear of as lake turnover. The date of maximum mixing in winter has become progressively earlier in the year and lake temperature stratification that is related to the mixing phenomenon is starting earlier in the year and extending a month longer. Furthermore, the trend of decreasing summer clarity as a result of earlier, prolonged, and more intense thermal stratification of the Lake—different temperatures at different layers.

Related to the Caldor fire, an in-lake smoke and ash depositional study found that in-lake particles did spike, as you would think, but then they dispersed during and after the fire—so the impacts of the fire were actually very short lived, but results from pollutant loadings from the tributaries where other ash fell upland and may be getting washed down into the Lake is still pending.

A lot is going on among so many different stakeholders and partners. Two projects were funded in 2023 through a science-led Council effort process using the Southern Nevada Public Lands Management Act (SNPLMA) funding that focused on two projects, one for particles and one for Zooplankton. Once complete, the TMDL Agency staff will coordinate with the Science Council to determine how to incorporate project findings into the predictive clarity model. The particle project will assess characteristics of particles of runoff and a lake water column. The work products will further inform the clarity model and its development and then later validation; and will contribute to improved linkages between watershed, the near shore, and the Lake processes themselves. A Zooplankton project will quantify the horizontal and vertical distribution of these little organisms in the Lake to inform our understanding of biological processes going on in the Lake and how they affect clarity as well.

You will hear today about microplastics—research is going on related to microplastics and their effect on the Lake. Like I said, there are many more projects than I could possibly list during this presentation today, but a tremendous amount of science is ongoing.

This is the updated clarity chart for last year, I believe, which quickly shows the progress that is been made on stemming the loss of clarity overall and that we flattened the curve in the last decade. However, as we have been discussing, improvements in Lake clarity have challenges to explore and reconcile in our changing environment.

In this figure, the most recent clarity measurements are on the right side. In 2022, the water year, they experienced an impressive 11-foot improvement over the previous year. Long-term trends indicate the Lake water clarity continues to move towards stabilization. The average annual value in water year 2022 was 72 feet—which is pretty remarkable—but we are still shooting for the 100 feet we could see in 1969. The average for water year 2023, it was mentioned by one of the public commenters, is coming out in a couple of weeks by UC Davis in advance of the Lake Tahoe Summit. Preliminary information is indicating it will be similar to what we saw last time.

Science has played a key role in TMDL development and will continue to play a key role in adaptive management of the program. The NDEP and Lahontan Water Board are actively engaged with the Tahoe Science Advisory Council to better understand factors driving recent Lake clarity trends and the associated monitoring data and information needed to help improve this understanding. The agencies will work with the Science Council to implement priority actions identified in a water quality science to action plan, and prioritization of work will inform the Agency's ability to manage problems that are important when balancing limited available research and project funding.

[<https://www.laketahoeinfo.org>] That is the official website for LT info, but a tremendous amount of information exists in many layers of this program. There is far more on this website than I could even pray to share with you today.

Finally, I was asked to provide notes about the Nevada Land Bank, I mentioned earlier. Nevada Division of Environmental Protection has many partners, as I have discussed, and one of those is the Nevada Division of State Lands (NDSL). They serve as an agent for TRPA to reduce coverage on the Nevada side of the Basin as one strategy for improving water quality within the regional plan. Coverage is impervious surfaces and water runs off impervious surfaces easier than it would if it is soaking into the ground, so it has a potential detrimental effect on water quality. The work of State Lands complements the TMDL program as they continue to work to improve the status of coverage and removing coverage where projects can be done to improve Lake clarity and water quality. Charlie Donahue is

here; he is the NDSL Administrator, and he wanted to add a quick note about the Land Bank for you.

Charlie Donahue, Administrator, NDSL:

Good afternoon, Chair Daly, Members of the Committee. In my capacity as Administrator of NDSL, I also serve as a State Land Registrar. I appreciate Jennifer integrating comments about the Land Bank into her presentation. I think she did a great job making that nexus between land coverage and water quality. I am going to be frank. The reason I asked her to do this is because I am going to be asking the Committee to see if they have the capacity to sponsor a bill draft to address some of the powers and authorities the State Land Registrar has that are left over from the 1980 original Nevada/Lake Tahoe program to purchase properties. I hope you will see that in your work session, where the State Land Registrar was afforded an opportunity to move forward with the acquisition of a lot of properties to mitigate the impacts to water quality. The Legislature asked that to be approved by the voters in 1986, we modified it in the 1987 Session, and you afforded the State Land Registrar a lot of opportunity in acquiring properties and then reporting those acquisitions to the Board of Examiners (BOE), which was done on a quarterly basis. Now we are not really acquiring real property anymore, but those have to be reports that are submitted quarterly to the BOE, so it bogs up their agenda a little bit. Coverage is something we deal with, which is an interest in real property, and we buy and sell coverage here in the Basin; but it is a little different than the original intent of the legislation. I would be happy to answer any questions.

Chair Daly:

Thank you for the presentation. I am sure we will have questions.

Senator Titus:

I thank you both for being here. Ms. Carr, I have a couple of questions for you specifically. To be clear, it is your perspective that much of the clarity issue is coming from land sources versus generated within the Lake.

Ms. Carr:

That is an interesting question because one of the things we found during one of the years where we had a decline in clarity was related to the Lake turnover; it brought a lot of nutrients up from the bottom and impacted the measurements for that particular year. I think it was the year when we came out of an extreme drought that had gone on for several years, and there were other Lake dynamics occurring at the same time. There can be in-Lake processes that affect clarity, but certainly keeping the fine sediment particles from running into the Lake to begin with is a major charge of this TMDL restoration program.

Senator Titus:

Thank you. I have another question if that is okay. Along that same line, one of the concerns is we are loving the Lake to death with our visitation, et cetera. Has Nevada, and your Office in particular, done any comparison with similar lakes, specifically, say Crater Lake where it does not have the visitation? It is a high-altitude, deep lake. Their water quality/clarity—has it changed as much as Lake Tahoe has? Do you have any comparison of other bodies of water?

Ms. Carr:

I would have to get back to you on that one, probably through the Science Council to see what work may have been done for comparative purposes. I do recall they did a benchmarking study a few years back to benchmark our management system with other similar systems—Chesapeake Bay, Great Lakes, other similar management agencies around the country—but I do not know if we have benchmarked water quality and other land use practices surrounding those water quality effects.

Senator Titus:

It would be good if we could get that information, because again, there are the questions—what is really the issue here? What are the causes? How do we mitigate some of that? I know Crater Lake does not have the visitation we have, and I was wondering what that impact has done to the clarity of that body of water. If you have any information, not to give you another task, but I think that information would be helpful. Then another question, if I might. We have heard, throughout a number of these meetings, about different threats we did not even recognize. As a medical doctor, I know we are finding out about viruses; not because the viruses did not exist before, but now we can diagnose them. We have technology to do a blood test, or we can use an electron microscope versus the binocular. In your tenure, or say the last ten years or so, I am hearing a lot of new findings, and I think that is a real concern. Plastics—who knew plastics would have such an impact? It is real and everybody is recognizing those new threats. In your opinion—what are the new threats we are seeing now, which we did not even know about in 2000 or so? Plastics would be one, I think. Any other things that have now been identified that we were not able to pick up before?

Ms. Carr:

You mentioned a couple of them, certainly. Another one that hit home with me was the *Cyclotella* organism I mentioned, which acts like a fine sediment particle. It is microscopic. As it was explained to me—it is interesting what humans do. It is my understanding that someone had a brilliant idea to bring the Mysis Shrimp into the Lake to make bigger fish—to give them a better food source. Turned out those Mysis Shrimp eat the *Cyclotella*, so it threw the ecosystem out of balance. Understanding, not just the physical processes related to lake clarity, but now looking deeper into the biological processes of lake clarity, coupled with climate change, lake turnover, timing, and those sorts of things. They all are intersecting at this point in time, where we do have new realizations that were not available to us back in 2001.

Senator Titus:

Thank you. I really worry about human manipulation of the environment that has some of its own stability and will find the right place; and when we try to change that, we tend to mess it up. I will not use the real word I want to say, but in any case, thank you for your presentation.

Chair Daly:

Vice Chair Bilbray-Axelrod first and then we will go to Assemblywoman Taylor.

Vice Chair Bilbray-Axelrod:

I wanted more clarification on the bill draft request (BDR). I am not sure I totally understand what you are asking for.

Mr. Donahue:

Within statute, the State Land Registrar has certain powers and authorities and one of those is to acquire, dispose, transfer, or lease real property—or interest in real property—in the Lake Tahoe Basin. To help facilitate the acquisition of 500 parcels from the original Tahoe Bond Act in the mid-eighties, the State Land Registrar at the time was afforded an opportunity to not have to check in with the BOE for every acquisition. She was able to report those out on a quarterly basis, and I am still having to report no acquisitions out on a quarterly basis. The report must be submitted, and I am asking for a little relief in terms of that.

Vice Chair Bilbray-Axelrod:

So, is that semi-annually or annually?

Mr. Donahue:

I would be more than happy to submit an annual report. We provide an annual report from the Land Bank to TRPA, because a number of the funds we use are collected by TRPA through their excess coverage mitigation fees; they are transferred to the Nevada Land Bank and then we use that to mitigate coverage in the Basin. We provide an annual report to TRPA. I would be more than happy to provide an annual report to IFC, the Legislature, or the BOE.

Vice Chair Bilbray-Axelrod:

Appreciate that clarification.

Chair Daly:

Assemblywoman Taylor.

Assemblywoman Taylor:

Thank you both for the presentation. Ms. Carr, to follow up on one of the slides—slide 18, in particular. When you were talking about, “Where are we now?” And how you utilize—you mentioned the term “stakeholder input and feedback.” I was wondering how you get that feedback? Do you solicit it? How does that come your way?

Ms. Carr:

The TMDL Management Team solicits feedback from a wide variety of stakeholders every year and then that is all incorporated and tracked from year to year. Sometimes the solutions to questions and input or recommendations we have received from stakeholders is a multiyear effort. The program review/annual strategy process that comes out of the findings and recommendations memo every fall track all of that input that has been received from numerous stakeholders. Things that can be addressed in the coming year for our program planning are identified or things we think will take multiple years are also

identified and tracked as potential recommendations to the Bi-State Executives for action in the coming 12 months.

Assemblywoman Taylor:

Thank you. May I follow up, Mr. Chairman? I certainly see. How do you solicit it? Do you survey them? How do you get it from them?

Ms. Carr:

A wide call for input is basically put out through LISTSERVs and those sorts of outreach tools the Agency has to seek that input from anyone working at the Lake, loving the Lake, participating in—we have government entities, local urban employers, Forest Service, EPA—there are a lot of parties that participate in that annual process that is done through electronic notification.

Assemblywoman Taylor:

Thank you very much, I appreciate that.

Chair Daly:

I have a couple of questions, first for the Land Bank. On your annual report you hope to go to—you guys are not buying any more land, if I heard that correctly. Is it a resource problem or you spent the money you had? What exactly are we doing? I know you do not need the quarterly reports because there is nothing to report basically—so what is the program doing now?

Mr. Donahue:

The last real property we bought we refer to as Clancy Pole in 2017. It is up the hill here. It is a little over seven acres. We did utilize the excess coverage mitigation dollars to acquire that. We were allowed to use those funds with the update of the Regional Plan—it broadened our ability to utilize those funds. We still buy and sell coverage, which is an interest in real property. Somebody may want to put a double car garage adjacent to their house, but they do not have the necessary coverage; so, TRPA would tell them how much coverage they need. They can go and buy that on the open market, or they can come to NDSL. If we have that coverage available, then we can make that coverage available to them. It is a cash transaction.

Chair Daly:

When you say coverage—space? Are we talking about acreage? Are we talking about credits?

Mr. Donahue:

We are talking square feet.

Chair Daly:

For example, someone wants to build a two-car garage, and they do not have enough square footage on their property. What would the person do?

Mr. Donahue:

If they did not have available coverage on site, they would need to go to the open market or come to the Nevada Land Bank and purchase that coverage. Typically, we are dealing with coverage in square feet. We have had transactions of 18 square feet, and we have had transactions of over 2,500 square feet. We have also been fortunate enough to buy 22,000 square feet of Class 1b—which is stream environment zone—through the program, and that coverage is then retired. Some coverage is retired, taken out of the system to mitigate the impacts of impervious surfaces on water quality. Some coverage is made available and cycled through; folks within the Nevada side of the Basin have an opportunity to maybe redevelop their property the way they would like to.

Chair Daly:

I think I understand now. It is not necessarily that the person needs more physical property—they have to have the physical property. It is how much impervious coverage do they have on that property. They have to get credit to increase their footprint of that coverage—then give you guys money, so you can hopefully buy some in other places.

Mr. Donahue:

The TRPA would make that determination as to how much allowable coverage is available on that property. Then depending on the individual's development plans, they would inform that person how much more [coverage] they would need to go out and secure. They would pay an excess coverage mitigation fee to TRPA. A portion of those funds make it down to the NDSL in the Nevada Land Bank. If we have the land coverage—if it is a Class 1a or Class 1b—through appraisals we have established what we believe to be the fair market value of a square foot—then we would enter into a real property transaction through a contract, an escrow process.

Chair Daly:

Thank you, I think I understand. For Ms. Carr, you are with the Nevada Division of Environmental Protections on the Nevada side, but we are trying to think of everything we are doing here as “the Basin.” It involves two states. We get a lot of presentations from the Nevada portion of it. We have reached out to California on some stuff, but California is doing the same thing—are you partnering with them? Or is it all put through the TRPA, and there are joint processes? What is the relationship with the California counterpart? Or do you both do things separately? I hope it is not like that.

Ms. Carr:

It is not at all like that. We very much are partners with the reciprocal staff at the Lahontan Regional Water Quality Control Board. We both operate under the same Tahoe TMDL—looking at the same loading reductions. Our programs are a little different. California chooses to implement their side of the Lake with the Tahoe TMDL through permits. That is written into the urban implementing partners water quality control permits. On the Nevada side, we choose to do that through inter-local agreements. One of the primary reasons for that is because our 319(h) Nonpoint Source Program can fund projects if they are not regulatorily required. So, if these entities like NDOT, Douglas, and Washoe were under permits, we would not be able to provide them any program funding under the 319(h). So, we have the Interlocal Agreement—the Interlocal Cooperation Act in Nevada. We are using that tool to set their load reduction credits on a five-year process and then potentially have them be eligible for funding. There are slightly different ways we implement

the program, but we are in regular contact and work together with our partners at the Lahontan Board. It is a nice relationship.

Chair Daly:

I was assuming that was the case. Last question for me, when you mentioned about the shrimp, and you said somebody thought it would be a good idea because you get bigger fish. Was that intentionally done or was it done by somebody who thought it would be a good idea and did it themselves? Did somebody decide to do it on purpose, or did somebody do it on purpose without permission?

Ms. Carr:

I am going to look at my colleague. I think it was an intentional act to try to improve the large size fish—the sport fishery in the Lake. It was very much intentional. Not the same as somebody dumping out their aquarium into the Lake and causing other problems. It is my understanding, and I am getting nods from the gallery, that it was an intentional effort in the fifties. I think it was in the fifties.

Chair Daly:

In the fifties—so well before the Compact. Well before any mitigation at the Lake. Back when they had plans to cover every acre in the Basin. I was curious about that. That never works out. I was talking to one of the gentlemen earlier who said, “Could not we do this fish to get rid of that fish?” And I said, “You guys remember the Doctor Seuss story to get rid of the mice and you brought the mice back to get rid of the elements at the end of the chain.” It does not work, it never has. Anyway, thank you. That was my last question. Did you have any? Senator Scheible.

Senator Scheible:

I do have a follow up question now for you, Mr. Donahue. I know it was not supposed to be the focus of our meeting, but I am now very fascinated, and a little bit confused by this coverage system. To check my understanding, I want to ask if this is how it works or if I am off. Let us say I am very wealthy, and I buy a 5,000 square foot lot with a 3,000 square foot house on it. If I knock down that house and I build a 2,000 square foot house, so I have 1,000 square feet less use or coverage of my land, then can I get a cash payment from the State for those 1,000 feet that are no longer being used on my land?

Mr. Donahue:

I would be very interested in having a conversation with you about those 1,000 square feet. Yes.

Senator Scheible:

Jokes aside, that is how it works. If someone is reducing their footprint, even if not literally tearing down and rebuilding, but reducing their footprint, then they get some kind of benefit—a financial benefit from the State.

Mr. Donahue:

They could, and it could be banked on that property. There are properties that have banked coverage on them, and the coverage is owned by—not the owner of the property.

Senator Scheible:

One more question. Can owners of property negotiate with each other without going through Nevada as a marketplace? Could I write into my deed that I am going to buy this land, minus 1,000 feet of coverage which the original owner will retain? Or I am going to buy it, plus 500 square feet from the neighbor next door, for a \$10,000 premium.

Mr. Donahue:

There are examples you just lined out. The prior owner may reserve coverage and do transactions private party to private party. The TRPA would have to recognize that, but they do not have to come through NDSL.

Senator Scheible:

Thank you.

Chair Daly:

Senator Titus for a second round.

Senator Titus:

Thank you for your patience. Mr. Donahue, I have a question. Is this similar to what the Agriculture Division does and farmers do where they can bank some of what they are doing in the farm world and use it in other places? And there are tax credits for that or some credit system because—through the agriculture world, I think there is something similar out there. Are you familiar with that?

Mr. Donahue:

Although I started out my career in the Division of Conservation Districts, I am embarrassed to say, I am not familiar with such a program, but it does not mean one does not exist.

Senator Titus:

Alright, thank you.

Chair Daly:

I know there is a similar type of process in Washoe County with impact fees, and there are a lot of problems with it. This sounds a little bit different though. With that, if there are no further questions, thank you for your presentation. We will close Item IV.

AGENDA ITEM V—UPDATE ON ENVIRONMENTAL THRESHOLD STANDARDS

Chair Daly:

We will move on to Item V, which is an update on environmental threshold standards. We have a representative of TRPA, Dan Segan.

Julie Regan, Executive Director, TRPA:

Mister Chair, I am going to introduce myself again to the Committee. I am here with Dan, and he will introduce himself; but I am available to answer any questions that might have

come up. The land coverage system in Tahoe is complex, so happy to answer questions about that. I also want to acknowledge that Shelley Aldean, who represents the jurisdiction of Carson City on our Governing Board—she is in the front row, as well as John Marshall, our General Counsel. If particular questions might be best answered by them, we are happy to help with that. I will turn it over to Dan Segan. (Agenda Item V) [Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us.]

Dan Segan, Chief Science and Policy Advisor, TRPA:

Thank you, Julie. Good afternoon, Mr. Chairman, Members of the Committee. It is my pleasure today to provide you with an update on our environmental threshold carrying capacities. If you are new to the Tahoe regulation, the term may seem a bit odd to you—environmental threshold carrying capacity. It is a term of art given to us by Congress in the Bi-State Compact, which also defines its use and establishes TRPA with the responsibility of formulating these thresholds and adopting them. We formally refer to them primarily as threshold standards because that is how they are defined in the legislation.

The Bi-State Compact also defines the role of threshold standards within our system, as many of the commenters you heard today referenced. Threshold standards are at the top of the pyramid of everything we do—the plans we develop and the projects we implement are all in service of attaining and maintaining these threshold standards. I often like to remind people; they are not solely TRPA's threshold standards; they are the Basin's threshold standards. The Compact directs TRPA to work with partners to identify and establish those threshold standards and they continue to be referred to by other bodies—this is from the Lake Tahoe Restoration Act, which requires that we consider—as we appropriate dollars from the Lake Tahoe Restoration Act—those dollars potential contribution to attaining and maintaining our threshold standards.

What are threshold standards? We have about 150 threshold standards today in ten different categories that run the gamut from preserving the air quality within our region to ensuring fisheries. The coverage system we discussed is in service of soil conservation and preventing erosion within the region. It also includes things like restoring the overall depth of clarity within our Lake that Administrator Carr talked about. The standards themselves are our long-term goals, and there are three types of them generally within our system. We have goals to preserve things as they are—you can imagine the landscape is heavily degraded and there is a specific item we did not want further degradation of, like our wetlands, like populations of important wildlife species—so we have goals to maintain those. The second type of standards are standards to restore something that had been lost. This is like the clarity of our Lake or the health of our forests—we have goals to restore those. Finally, we have standards to create a better system for tomorrow. Here you can think about our transportation and sustainable communities' threshold standard, to improve the transportation system within our region for the next generation.

We have these 150 big, broad goals. How do we work to achieve those goals? There are two ways I think are important to recognize. The first is through the development of the Regional Plan, which is also a compact requirement for TRPA. The TRPA as an agency was born by the efforts of the two states with an Act of Congress, in the aftermath of the 1960 Olympics and the development boom that occurred after that. The environmental degradation that happened as a result of that boom raised awareness for the region. The goal of the Regional Plan establishes standards through which we evaluate new development projects or redevelopment projects to ensure there is not further

environmental degradation and those individual projects further contribute to our overall goals that are established in these threshold standards.

The second way we promote threshold standard attainment is through the EPI, which you also heard referenced earlier. The EPI is nearly 100 public and private partners that implement projects to promote environmental quality and restoration within the Tahoe Basin.

We do not just have these 150 threshold standards standing out there, we also have a responsibility to provide you and members of the public with our status relative to achieving these broad goals. We call those threshold evaluations. We have produced seven of those throughout our history. Starting in 1991, we produce these reports about every five years until 2011. Then in response to requests for additional data, we shortened our reporting timeline from five years between individual threshold evaluations to four years. We now produce these reports every four years, and we also produce and share all the data that goes into the reports on the Lake Tahoe info, sometimes called LT Info Dashboard. You can go on to that Dashboard at any time you want and find the information we are talking about.

What is in these threshold reports? For each of these threshold standards, we produce an analysis that summarizes the data collected relative to the status of that threshold, where we are on our progress towards attainment of that threshold if we are making progress. We also summarize environmental factors that are influencing that threshold, and the projects and work that has been done in order to accelerate attainment of that threshold standard. I say all of that, but most people just look at the colored dot you see on your screen. The green dots mean we are in attainment, the red and yellow ones mean we have not yet hit that threshold standard.

The two most recent threshold evaluations we did—this is a high-level summary of those. We were able to evaluate about three-quarters of our threshold standards between 2015 and 2019. There was small progress made in terms of the number of thresholds that were moved into the attainment category from the non-attainment category. You can see there were five additional standards that moved into that category. That is consistent with the slow rate of progress of large-scale environmental restoration efforts, like the one we are running here. In the peer review of these evaluations, one of the things that is often emphasized by those peer reviewers is that often in these large-scale environmental systems, the goal is to maintain the status quo. It is one of the things we are really focused on. I would like to urge you to dig a little bit deeper the next time you see one of our threshold evaluations, because I think this is the headline most people stop at—how many thresholds are in attainment, how many thresholds are out of attainment. But if you are thinking about thresholds as your long-term goals or like my life goals—if my life goal is to see my 50th wedding anniversary or see my daughter graduate college. My daughter is ten right now, so if I was producing the report, I would not be an attainment of that. I have been married 17 years, so not in attainment of my 50-year wedding anniversary, but that does not mean that you cannot see that you are making progress towards each of those goals on the way. The majority of what we do is not talk about how many are in attainment or how many are not in attainment, but the majority of what we do is spend time talking about if we making progress or are we losing ground?

I would like to illustrate a little more about how we use the threshold evaluation, and how we talk about both the threshold evaluation and the data behind it with our partners with an example. One of our original threshold standards was for the restoration of Stream Environment Zone (SEZ); SEZ is another term that is unique to the Tahoe region. It is

generally understood to be a wetland. In 1981, we established the goal of restoring 25 percent of our wetlands that had been disturbed. I mentioned before that we have done seven threshold evaluations, and if you had read any of those threshold evaluations, you would have seen something like this. The abrupt statement in 1991: "We are not in attainment of this and will not be in attainment until many additional SEZ restoration projects have been constructed." Later, we turned those brief statements into icons that you could tell were still red; we are not in attainment of this standard. But as I mentioned, the real purpose of the threshold evaluation is not just to establish that one point in time, but to establish, are we working on the trajectory? Are we gaining ground or are we losing ground? Part of what we do within the threshold evaluation is we look at both components of our system. Both the Regional Plan or the policies and guidelines that govern development within our region. Are those having the intended impact, and is the EIP implementing projects that are helping us here?

For each of our threshold standards, we have a detailed code of ordinances, permitting conditions; we have compliance actions we take if those are not met. What we do as part of this is we look through our permitted projects and we say, "Is the system working as it was intended to or do we need to make adjustments to our system, to our Regional Plan, and modify how we evaluate projects and modify the conditions that those projects need in order to be approved." That is a part of the threshold evaluation process as well, and how we use the evaluation.

The second part of that is evaluating the EIP. I mentioned earlier, the program was born in 1997. It was not until 2012 that the program got serious about collectively reporting on its impact. What I mean by getting serious is—the 80 plus partners of the program came together and said, "If we want to talk about the progress of the program and the contribution of our projects collectively, then we need to have a collective set of performance measures that we all use." We cannot have Parks using a different performance measure from the Forest Service, using a different measure from the Water Boards. We need collective measures, and because the EIP is as broad as the thresholds themselves, we are talking about restoring forest health, restoring water quality, sustainable communities, transportation, recreation quality. We have 35 performance measures that every project goes through and says, "What was my contribution here? And what was my contribution there?" For each project, we also require that the project list its funders and the total amount of money spent on that project. If you dig into this Dashboard, you can go all the way down to pick up an individual project. I will highlight two things on your screen. The first is the funding on the right. You can see the total amount of money spent on this project, and you can see the individual sources of the dollars that contributed to making this project a reality. The second thing you can see—we call them the key accomplishments—those are our performance measures. You can see the tangible benefit we derived from this project. All of those are the common performance measures each project reports and then we aggregate up at the end of the year to say how much progress was made within Tahoe. Eventually, how much progress are we making towards our overall threshold goals? Taking that back to our overall threshold evaluation report. The project I showed you restored five acres of SEZ and we have been at this SEZ restoration game for a long time—this is going all the way back to when the threshold was established. We said we wanted to restore 25 percent of our SEZ that had been degraded, which translates to a target of about 1,100 acres. At every check-in point along the way that we talked about in the threshold evaluation, you saw those red markers that said, "Nope, not there." It is fairly exciting now, if you have been in the Basin for a long time and you have been following this—over 45 years of implementation—we are within a whisker of achieving this restoration target. It is an exciting milestone, that is really thanks to all the partners of the EIP; there are over 55 public and private partners who have

implemented projects to contribute to this goal. There is good news and bad news there. The good news is we have almost achieved our target. The bad news is that the stakeholders in the Basin realized our work was not done yet. Since we have been tracking our progress all along, we have also been working with our science partners in preparation to establish a new goal for ourselves. Some of the guidance we have gotten from past peer reviews, and some of it is highlighted here in that quote on the board, is that you should not just be tracking how much you have restored in terms of acres, you need to track the quality of work you are doing, and the overall function of the system you are restoring. In conjunction with our science partners, we have developed a new system to better track our restoration efforts and better track the outcomes of those. We are moving beyond an accounting system that is solely based on the amount of acres. I am pleased to report we adopted that new goal with the support of the EIP in May 2024, which will allow us to continue to restore stream environment zones within our region and gain all the additional benefits that come with that.

What comes next? In the fall of this year, we will be releasing the eighth version of the threshold evaluation, summarizing progress through the end of 2023. After that report comes out, we kick off a larger process which brings in all of the partners within this and seeks the input of the public to help us prioritize what we do next based on these findings. Where do we think we are making progress at the rate we want, where do we need to redouble our efforts, and what else should we do? With that, I thank you for your time. I would be happy to answer any questions.

Chair Daly:

Thank you. Committee, any questions? Senator Titus.

Senator Titus:

Thank you for that presentation and all that excellent information. Going back to the very start of this presentation, you mentioned the original Act and those threshold standards origin. At that point, it mentioned basically such standards shall include, but not be limited to air quality, water quality, soil conservation, vegetation preservation, and noise. Those basic 5 morphed, I think, into 10 categories and then they morphed into 150 categories. Is it in the original documentation though—the basic 5 categories and everything else has come since then as subcategories.

Mr. Segan:

The Compact requires threshold standards be adopted in those five categories. It also required that we adopt those within 18 months after the Compact. The Agency set out a whole process that involved public and other agencies; they are the ones that identified the original nine categories, then adopted I think it was 168 standards underneath those. You can imagine, for each of the categories—for air quality, we have multiple standards for different air quality pollutants. We have standards similar to each of the states and the federal government for things like ozone, carbon monoxide, et cetera.

Senator Titus:

Have any ever been removed? It seems like you keep adding more. Have you ever achieved it and then remove it?

Mr. Segan:

We have achieved and removed, and we have done—I guess all of the individual actions. We have achieved and removed; we have removed in the past because there had been redundant standards. We have removed and clarified. One of the major projects we are working on with the Science Advisory Council is ensuring all of our standards are specific and measurable. We had a number of standards that were originally adopted without as strong a scientific basis, as you may say—that said, “Improve air quality until it is good enough.” A lot of the processes we have been doing is going through the process of defining what that means with regard to a pollutant of concern, if you will.

Senator Titus:

Thank you for that because I think the whole comment about, “Can you measure it?” And then, “What does that even mean?” I can get this data—does it make a difference anywhere? Final thing along that line—noise. This is our last meeting up here. I have not heard, and it was one of the priorities initially listed of those five. How is that doing? How are you measuring noise? Do you make a difference? Do not say you cannot hear me either.

Mr. Segan:

Noise is a good example of how the adaptive management process works, and how it is linked with the Regional Plan. We went through a series—a planning process that identified modifications to our Shore Zone Plan and adopted new shoreline regulations, I believe five years ago now. Part of that focused on—we have a threshold standard related to shore zone noise—basically, how loud the Lake is and how far you can hear boats into the Lake. We do not want boats going too fast next to our shore zone because it is too loud for people on the Lake; so, we have something called 600 foot “No Wake Zone.” When you are operating your boat near the shore, you are supposed to be doing so at a speed that does not produce a wake and also does not produce noise. A lot of TRPA’s enforcement and education work of our boat crew is about letting people who are boating on the Lake know about those regulations. Much like our red and green paddles for the threshold evaluation—in attainment or out of attainment—they have paddles to get people’s attention if they are going too fast. Then they stop and educate those individuals. We also rolled out a boating app for individuals. Obviously, our boat is not everywhere at all times enforcing that. The boating app is something you have on your phone as you are operating a boat on Lake Tahoe that tells you when you have moved into one of those “No Wake Zones” and we want you to operate your watercraft more slowly.

Senator Titus:

The noise measurement is about on-water noise, not off-water noise.

Mr. Segan:

We have noise standards relative to both. Those noise measurements are taken from our beaches and other areas within our region. They are primarily of watercraft noise on the Lake but measured from shore.

Senator Titus:

Fireworks do not count—noises like that? Concerts—none of that counts? It is mostly—you are measuring the noise of the craft on the water.

Mr. Segan:

I was referring to a specific standard of recreation-based noise. We have community noise equivalent levels (CNELs), that measure the ambient noise volume in the background, and we have different goals based on how the area is zoned. Any activity counts towards those CNEL noise standards.

Senator Titus:

Do you use a reference? If you can hear an osprey or an eagle, it is good enough. If you cannot hear them, it is too noisy?

Chair Daly:

Assemblywoman Taylor.

Assemblywoman Taylor:

Thank you, Mister Chairman. A quick question on the thresholds—I saw we went from 75 to 90—certainly still much work to do. I was wondering, is it possible for a threshold to be reached? Then when you measure again, say five years later, you have fallen off—it reverts. Can that happen, and do we monitor that as well?

Mr. Segan:

Yes, that is possible. We have seen that in the past with different standards. The example of noise is a useful one, where if behavior changes—we have seen them go in and out of attainment. Part of the work is to ensure they stay in attainment once they get there.

Assemblywoman Taylor:

Thank you.

Chair Daly:

Any other questions? I have a couple. How often do you update the environmental threshold standards? How current are we? These are different than the environmental impact thresholds which you are updating currently, right? I want to make sure I understand.

Ms. Regan:

I will start with that, and Dan can jump in. Yes, there are the standards we are held accountable for, but then when we analyze big programs or projects, there are environmental reviews that have to make sure we are not violating or degrading those standards. I think there are two pieces there. This has long been a topic we have discussed with this Committee and in different legislative hearings, because as Dan said earlier in the presentation, a lot of these standards flowed out of the 1980s, and they have grown and become more complex. A big charge of the Science Council, which you will hear from shortly, was to help guide best available science and modernizing those standards. It is also very expensive to monitor and to deliver the kind of rigorous scientific monitoring to make sure we are following these. That has been a process we have been engaged in for several years and a big piece of the work Dan has done in working with the Science Council to bring them up to best available science. We just adopted three new ones. The SEZ wetland was one category. There is a new standard for aquatic invasive species that you will hear about

and a new one for Tahoe Yellow Cress, which is that special endemic species—that little flower that grows nowhere else in the world. Our Board took action in May to improve those three. It is an evolving process. Then the evaluation report coming out this fall will highlight the need for more work. We have to prioritize, based on our resources and the resources of our partners—because we are not out doing forest treatments, but the Forest Service are and their work is implicated by a lot of these standards, so we have to work in partnership with them. Anything, Dan, to add to that?

Mr. Segan:

The only thing I would add is that the threshold evaluations occur every four years, which is the process of saying yes or no to the question: “Are we in attainment?” The monitoring data and the progress is updated every year.

Chair Daly:

Alright, thank you. I was trying to get clarification on what we have, how often it has been updated? How current is it? I understand, like on the example you gave on the SEZ. You set a goal, however many years ago, and you have been tracking it 45 years, I think you said, and you are almost to your 25 percent. Obviously, that does not mean you are not going to continue to try to improve the SEZs. When you meet your goal, you will reevaluate; maybe that would cause another standard to say we want to get another 10 percent. You might put a time frame on it of a year. You are updating when you reach your goal and you say, “What can we do next?” Until you hopefully restored all of it. Ozone was probably not an issue when you first started, but there are new thresholds. The EPA comes out with stuff that causes you guys then to modify. It is not a matter of saying, “Maybe we do not have enough information on our area,” to snap your fingers and say, “This is our goal.” That is what you are saying—it takes the time, money, coordination, and resources to do. If you can make sure I am on the right track there. Then is that different than an environmental impact statement or environmental thresholds? Or the standards? Kind of the same thing?

Ms. Regan:

I will jump in, and Dan may want to build on that. Yes, those standards are evolving. To use your SEZ/wetlands standard—what we did in working with the partnership is rather than declaring victory, we made it harder on ourselves, because the work is not done; because not only restoring “X” percent is enough. It is not a numbers game. Rather, how healthy are those wetlands? Maybe on paper—this restoration down the street was completed, but is that a healthy, functioning, wet meadow? Is the habitat improved? Is the riparian condition improved? We have raised the bar on that standard. Each of those standards we are looking at with a team of experts and all the partners to do it. The environmental impact statements you mentioned are using those standards in the analysis, so it is documented in every environmental document that comes across. I will give you an example—Meeks Bay restoration. In August, our Governing Board has the privilege of acting on this restoration of Meeks Bay. There is invasive species restoration, there is wetlands and meadow restoration; the Washoe Tribe is involved. That environmental review has been going on for some years, with the Forest Service and many partners; and that document has to analyze all of these standards you heard about to make sure there is no impact to those standards that cannot be mitigated. The environmental reviews tier off those standards. That is the standard for the Basin. Any big project our Board needs to approve that requires that kind of environmental review, is looking at these standards as the basis, and determining if there are impacts, or if there can be mitigation to work through those issues.

Chair Daly:

Those were all my questions. Any additional questions? [There were no additional questions.] Thank you again. We will close Item V.

AGENDA ITEM VI—UPDATE ON LAKE TAHOE AQUATIC INVASIVE SPECIES PROGRAM

Chair Daly:

We will move to Item VI, which is an update on the Lake Tahoe Aquatic Invasive Species (AIS) Program. We have Dennis Zabaglo, from TRPA, and Kevin Netcher, from Nevada Department of Wildlife (NDOW).

Dennis Zabaglo, Manager, AIS Program, TRPA:

Good afternoon, Chair Daly, and Members of the Committee, I am here with my partner Kevin Netcher, and we are going to provide you an update on our AIS Program. Kevin is going to lead us off, talk about the statewide effort, and then how we work together more locally. Then I will provide additional context on the Lake Tahoe program specifically. I will turn it over to Kevin. (Agenda Item VI A) [Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us.]

Kevin Netcher, Coordinator, AIS Program, NDOW:

Thank you for having me, I am happy to present to this Committee. I am going to be presenting on NDOW's AIS Program, and how we collaborate with TRPA. First, I want to give a quick, commonly used definition of AIS. They are freshwater or marine organisms that is not in its native range and causing harm or is capable of causing harm. This harm can be to infrastructure and ecosystem, sensitive species, aqua resources, or even humans. Nevada actually has AIS and injurious aquatic species defined in NRS. Nevada Revised Statutes 503.597 defines AIS as an aquatic species which is exotic or not native to this State, in which the Commission has determined to be detrimental to aquatic life, water resources, or infrastructures for providing water in this State. The same NRS also defines injurious aquatic species as an aquatic species which the Commission has determined to be a threat to sensitive, threatened, or endangered aquatic species or game fish or the habitat of those species. As a point of clarification, the Commission reference is the Nevada Board of Wildlife Commissioners. (Agenda Item VI B) [Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us.]

Here is the current list of Nevada's AIS and injurious aquatic species. Aquatic Invasive Species is primarily mussel species, as well as New Zealand Mudsnaills. The injurious aquatic species list is more varied and includes fish species, amphibians, and crayfish. I also wanted to go through additional regulations that are pertinent to later parts of this presentation.

Currently in Nevada, it is unlawful to launch a vessel into a body of water for which the Department has an approved inspection program, without first complying with that program. It is unlawful to leave an impaired body of water and launch the vessel on any other body of water without first decontaminating the vessel. An impaired body of water is a body of water where we know there is infestation of AIS. Each owner or operator in control of a vessel or conveyance shall stop at any mandatory inspection station for AIS authorized by the Department. Additionally, if a peace officer conducting an inspection of a vessel or

conveyance determines an AIS or aquatic plant material is present on the vessel or conveyance, the peace officer may order the vessel or conveyance to be decontaminated and a peace officer may impound or quarantine a vessel. There is also an applicable pertinent *Nevada Administrative Code* (NAC); NAC 488.526 requires that all water be drained from a watercraft and all drain plugs and drain valves be removed or opened while transporting a watercraft over land in the State.

All these regulations are necessary because of these guys—these are Quagga Mussels. Quagga Mussels are native to Eastern Europe and first showed up in the Great Lakes in the United States in the 1980s. It is believed they were transported to the United States in the ballast waters of cargo ships. It is possible to transport them over land, [inaudible], or watercraft, either live adults or their microscopic larvae called veligers. The veligers can survive in standing water within a watercraft. They create very dense mats and are very problematic for dams and irrigation infrastructure. This is a Nevada license plate that is 100 percent covered in Quagga Mussels that came out of Lake Mead after being in the water for about a year. They do it really quick. Quagga Mussels were first discovered in Lake Mead in the mid-2000s, and it is believed a trailered watercraft transported them from the Great Lakes. As a side note, Zebra Mussels are a closely related cousin to Quagga Mussels and they present similar challenges.

This map shows the current distribution of Quagga and Zebra Mussels in the United States. Quagga Mussels are primarily found in the Lower Colorado, Lake Mead, Lake Mojave, Lake Havasu, and parts of California and Arizona. While Zebra Mussels are primarily contained to the Mississippi River drainage and the Great Lakes—essentially the entire Mississippi drainage. Those yellow squares are where we know Quagga Mussel infestations failed. That is concerning because those two in Nevada are relatively close to here; those are Rye Patch and Lahontan Reservoirs. We detected Quagga Mussel DNA in those two reservoirs about 15 years ago, but fortunately, neither one of those populations were successful.

To prevent their spread, Nevada operates watercraft inspection and decontamination (WID) stations to inspect trailered watercraft. If any signs of Quagga Mussel or other AIS are found, the stations will decontaminate the boat using heated pressure washers with the minimum temperature of 120-degree Fahrenheit, which kills the Mussels and their larvae. Nevada Department of Wildlife's WID program is essentially broken down into two parts. The container program in Southern Nevada that decontaminates boats leaving Lake Mead, Lake Mojave, and the lower Colorado River, and a prevention program at reservoirs in Northern Nevada. The container program in Southern Nevada operates year-round, and it includes a roadside station in Alamo, Nevada; while the prevention program operates seasonally during the busy summer boating season. Additionally, tribal partners operate stations in Sutcliffe and in Owyhee, Nevada; and all the stations at Lake Tahoe are operated by TRPA.

Here is a photo of one of our watercraft inspection stations at Lake Mead. This is at Hemingway Harbor. A trailered boat would pull up on that green mat—it used to be green, the sun has baked it off. Then the pressure wash unit is contained within that Conex box. Once we have decontaminated the boat, the water flows through that mat and is recycled through our system through a series of filters, and we are able to reuse it to decontaminate the next boats.

It is not just Nevada and TRPA—every western state and some Canadian provinces have some level of a WID Program to prevent the spread of AIS. What is cool is we all use the same shared database that is housed by the Colorado Department of Parks and Wildlife. The

database captures inspection and decontamination information and allows for movement notices to be distributed when watercraft are moving between jurisdictions. Here is an example of what one of those movement notices looks like. This is a boat that was decontaminated at Lake Mead and is headed to Bear Lake in Idaho. The notice includes information about the inspection and decontamination, boat details, and the owner's contact information—if the receiving jurisdiction wishes to contact the vessel owner. Here is another example, this is a watercraft that was decontaminated at Lake Havasu in Arizona and is heading to Lake Tahoe.

I am briefly going to touch on coordination between NDOW and TRPA's AIS programs. The coordination between NDOW and TRPA's WID programs is extensive during the boating season, but we also coordinate in other ways regarding AIS. Nevada's Department of Wildlife is a member of Tahoe's AIS Coordinating Committee and both NDOW and TRPA are members of the Western Invasive Species Coordinating Effort and the Western Regional Panel on Aquatic Nuisance Species. Additionally, NDOW assists TRPA with AIS funding. The Aquatic Nuisance Species Plan Grant program is administered by the U.S. Fish and Wildlife Service. Historically, TRPA was allowed to directly receive those funds. During a previous presidential administration, it was determined the funds had to be received by a state, so NDOW began receiving the funds on TRPA's behalf and sub-granting 100 percent of those funds back to TRPA. Nevada's Department of Wildlife also has enforcement capabilities that TRPA does not, with NDOW Game Wardens capable of enforcing AIS regulations. Last week, TRPA contacted NDOW about two mussel fouled boats that were in the Lake Tahoe Basin, not in the Lake, but in a parking lot. So, NDOW worked with TRPA and the boat owners to actually seize the boats in place until they could be decontaminated.

Finally, NDOW also permits or has management responsibility for other AIS species in the Basin, such as crayfish or any other fish species. We would coordinate directly with TRPA on those efforts as well.

Finally, I want to end with saying that Nevada's AIS program is not just Quagga Mussels. Some of our other efforts include a Northern Pike suppression program at Comins Lake in Eastern Nevada, to maintain a very popular trout and bass fishery. Eradicating Australian Redclaw Crayfish from a series of ponds in the Clark County Wetlands Park, which is adjacent to the Las Vegas Wash (Wash). We did that to prevent them from spreading into the Wash and eventually into Lake Mead. Finally, NDOW tracks the presence of other AIS, such as the New Zealand Mudsnaills, not only in Lake Tahoe, but statewide. I imagine we are going to hear a lot more about New Zealand Mudsnaills from Dennis here in a little bit. With that, I will take any questions.

Chair Daly:

Senator Titus.

Senator Titus:

Thank you for the presentation. I am curious because it is in my District, you mentioned there was DNA testing at Lake Lahontan. There were actually some of the mussels you found in Lake Lahontan and the DNA tested positive for what you have identified. Is that what happened?

Mr. Netcher:

We actually detected their DNA within the water column. We never saw any actual mussels or veligers.

Senator Titus:

You do regular water testing to see if there are any—and you do a pattern for different DNAs of different invasive species.

Mr. Netcher:

Yes, for Quagga Mussels, through our Fisheries Division, we sample every reservoir in the State that we are capable of launching a boat on, at least once every five years. The larger reservoirs like Lahontan, Rye Patch, Wild Horse, and others are sampled twice a year.

Senator Titus:

The water.

Mr. Netcher:

Yes, the water.

Senator Titus:

Right. Nobody ever saw these. I am wondering—these boats are not cleaned with Clorox or anything like that. It is a high pressure, heat processing to clean. They are not sterilized. Is there a possibility the boats that were in Lake Mead, for example, or a boat that had these mussels on them, the without the actual mussel currently in there, would have the DNA left over from the mussels, then they put that boat in Lahontan and the species never actually was there.

Mr. Netcher:

Yes, it is very possible.

Senator Titus:

Because if that was not possible, then I would say whatever is working in Lake Lahontan, you should be doing it. Why would they not take off? My theory is they did not take off because they never existed in that Lake.

Mr. Netcher:

I would be in agreement with you.

Senator Titus:

From my science background—just saying. Thank you.

Chair Daly:

Any additional questions for NDOW? [There were no additional questions.] I think you are off the hook. We may call you back later, but we will now hear from the TRPA.

Mr. Zabaglo:

Good afternoon again. We will go into more specifics on the Lake Tahoe Program—give a broad overview of the Program, how we operate, all the partnerships and coordination we have with our private and public partners throughout the Basin. Then highlight the major aspects of the program with prevention, control, and monitoring; how we track our success—prevention being the boat inspection programs Kevin previously described. Then conclude with our accomplishments and the funding we receive to do this work.

Our program started in earnest in 2008, when Quagga Mussels were discovered in Lake Mead, as Kevin mentioned; it is a day's drive away. Boats travel from all over; we have had boats from every state in the country come to Lake Tahoe. That is when we got up to speed and started doing boat inspections that following summer after they were discovered. We are governed by our AIS Management Plan, that describes the various species we either have or are concerned about, Kevin described some of those impacts. They certainly alter the food web, which has devastating impacts on the ecology of Lake Tahoe, but also infrastructure. Lake Mead, where there is hydroelectric power, they have to build redundant systems to deal with those Quagga Mussels that build up. They are filter feeders. They have the byssal threads, like a beard—when you pull the beard off the mussels you eat—same kind of thing. They stick to everything, and you have to literally scrape them off, and it is a very expensive process; so, it has grave impacts there. Also, Lake Tahoe is a \$5 billion recreation-based economy, so if we were to have an infestation like a Quagga Mussel, some of the beaches—all the clear water you see would be greatly impacted to our recreators, both local and visitors. All of those are described in our management plan, as I mentioned. It is a federally approved management plan, Nevada has one as well, signed by both Governors and the Executive Director of TRPA. Part of that includes an early detection and rapid response plan I will talk about with the New Zealand Mudsnaills. We are part of the EIP, which you heard about previously. We are one of the major implementing programs for making sure the impacts from existing or new AIS are mitigated or prevented. Tahoe Regional Planning Agency is a designated lead of that management plan and also serves as fiscal agent, so we receive quite a bit of funding not only through the States, but the federal government to implement these programs. Then the partnerships that we have—as Kevin mentioned, NDOW is one of our Coordinating Committee Members along with NDSL, and then other California agencies and nonprofit and public organizations. That group provides strategic planning and guidance for what we do for prevention, control, and monitoring. Prevention works where programs have implemented these measures to inspect and decontaminate when necessary. Those efforts have by and large prevented new invaders from coming into those water bodies. The TRPA's Program is a mandatory program by the TRPA's Code of Ordinances requires inspections for all motorized watercraft. We have three inspection stations around the Lake—one in Nevada, two in California—that can also conduct these decontaminations Kevin mentioned, where we are using hot water—no chemicals of any kind. Even though Quagga Mussels are what everybody thinks about when we are doing these inspections, because we are looking for water and the clean, drain, and dry—if you have heard that mantra before—that is what all of our programs utilize. We are looking for anything. If you are not clean, you are not drained, you are not dry and we are doing a decontamination, it is going to deal with any invader we are concerned about, not only Quagga Mussels.

We have highly trained staff go through a process every year. We also work with the Paiute Tribe at Pyramid Lake to help train their staff. We are all using consistent protocols. The West has done an excellent job of coming together—we have consistent protocols, all of our terminology is the same, the way we monitor is very similar. We know what we are talking about when we talk to each other. Then also boaters know what to expect when they

cross state lines. Then education is critical. We want to make sure boaters know what we are doing, but also why we are doing it, because of the grave impacts we may have to Lake Tahoe's ecosystem. Education also helps with behavior change, which is really hard to accomplish.

Decontaminations are one of the biggest strains on our resources and time to be able to conduct. When we first started the program, we were doing about 75 percent of the boats or more needing a decontamination. With that clean, drain, and dry emphasis we are now less than 50 percent of our boats needing a decontamination; so, boaters are changing their behavior.

We mentioned New Zealand Mudsnaills; it is an invader throughout the country. Unfortunately, it was discovered here last year in September, the first invader we discovered since the program existed. I will show a map of where they are. They are super small; it is all those little black dots on these invasive plants. They are about the size of a grain of rice. They were first introduced into United States, I believe in the Snake River. Then the first observation in California was in 2000; and then in Nevada, maybe early 2000s, in the Truckee River—not too far from here. They are a little unusual to be found where we found them in Tahoe, in the Lake itself. They are called Mudsnaills for a reason, usually you find them on the banks of rivers and creeks; but we found them in Lake Tahoe. This is the South Shore; you will see a bunch of dark red dots. There is one little dot that also has a little yellow dot in it that we found about 2,000 feet offshore, which is unusual—not near a ramp or a marina—but at an area where there is a lot of recreation—visitors that could walk out to a beach. We do not believe—we will ever know for sure—that they came in on a motorized watercraft, more likely a nonmotorized watercraft or toy.

This is a grid survey we did immediately after the discovery. Once we made the discovery with our divers that were doing plant surveys at the time, they notified us immediately. We used that rapid response plan I mentioned, that is within our management plan, to develop an incident team with us and our primary partner, the Tahoe Resource Conservation District here in Lake Tahoe and formed a notification. One of my first phone calls, which I was dreading, was to Kevin and then to his counterpart in California and then to our partners at the U.S. Fish and Wildlife Service. It is probably a big kick in the gut when we learned what they were, but we acted immediately and had the plans in place to respond accordingly. We also implemented a technical advisory committee through the Tahoe Science Advisory Council to come up with guidance and recommendations from the science side for what we should be doing. Unfortunately, there are no real means of control for these species, containment is our standard right now. Delineation is one of the first things we did, this grid survey indicates where they are—not in Nevada—they have only been seen as far east as Ski Run Marina, which is on the California side, and as far west as Camp Richardson. This same grid work will be conducted again this year to track any increases or declines in those populations.

Since we think the most likely introduction was through a nonmotorized watercraft of some sort, we are putting a stronger emphasis on nonmotorized prevention and education. These are what are called clean, drain, and dry machines or CD3 machines—clean, drain, dry, dispose. They are used in other places in the United States, but we are focusing them on nonmotorized. They are waterless cleaning stations. These particular units here are mobile units. We can move them around to various popular launching places around the Lake. They have a hose to blow air to remove things, a vacuum to suck things up, and tongs to remove larger debris or plant materials. The first one you see on the right was purchased with funds from the League to Save Lake Tahoe, one of our nonprofit partners here in the Basin. The

other on the left was purchased with federal funds in cooperation with the Washoe Tribe. That unit sits at Meeks Bay and is being operated by the Washoe Tribe.

The nonmotorized program is a stewardship program, it is voluntary. It is called the Tahoe Keepers program. We train our recreators to identify invasive species on their paddle craft and learn ways to clean, drain, and dry them, including the tools I mentioned. We have a video—you can go online to watch the video. It has been updated recently, both in English and Spanish languages. Then you take a quiz and you become a certified Tahoe Keeper. It alerts our partners that this paddle craft is safer than others because they have gone through this process. Then education, as I mentioned, is critical. We now have materials also in Spanish, the example on the left is a placard we have in many popular locations around the Basin, to have that messaging in Spanish as well.

Another high priority aspect of our prevention program is moving to permanent locations. Kevin showed you the picture of the decontamination unit in Southern Nevada. We have very similar machines here in Lake Tahoe, but we use at off-ramp locations. When we started the program in 2008, we were doing all this work on the ramps. If you have ever been on a boat ramp here in Lake Tahoe, it is a very chaotic scene. There is not a lot of space to do this where you are launching boats and boats are leaving; trying to do an inspection and decontamination [on the ramps] was not very conducive to our work. Now we operate at off-highway locations. This is an example in Nevada, where our existing location is at the corner of Highway 50 and Highway 28, at an NDOT facility where we have to go through an approval process every year and also decommission and recommission it every season.

Working with NDOT, the Tahoe Transportation District, and the U.S. Forest Service, we have identified a permanent location that will be a multi-use facility. It is maybe a mile down the road across from Spooner Lake State Park that will be there all the time. We can provide additional customer service experiences; that is something we are very proud of—we can do these inspections and decontaminations so you can get on the water the same day. Being able to have that in a more professional environment, but also way less resources that are being expended from having to break down and remobilize the facility every year and then also not having to go through an annual temporary encroachment permit process. We are making great progress now. Environmental assessment was done a couple of years ago. We are now in the design phase of looking at 100 percent design plans, with construction starting as early as next year. We are really excited about it. It is also a multi-use facility where there will be a transit hub to go up the Highway 28 corridor to the various beaches and locations to relieve parking struggles that exist on that highway corridor as well.

Moving into control—we try to strategically plan our project so we can allocate the resources we have to the places that are most needed. We have two guiding documents, the Implementation Plan that was developed by the University of Nevada, Reno (UNR), that gave us a various list of locations and species we should be addressing based on where they are located, but also the available technologies we can use to make an impact with plants. That was one of the highest species to consider for treatment looking at localized eradication. You can see most of our infestations now for plants are on the South Shore near the Tahoe Keys. We have implemented these control projects—kind of like a wildfire where you are looking at hitting all the hotspots. You can see all the gray dots, those are now locally eradicated locations, along with the one on the East Shore of Nevada, Logan Shoals, which has also now been treated. Now we are focusing a lot of our efforts on the South Shore with the Tahoe Keys and Taylor/Tallac, which I will talk about here in a minute.

You heard Dan talk about environmental thresholds—but first, I wanted to show a couple of examples of the treatment technologies we use. This is diver-assisted suction. This is Eurasian Watermilfoil—divers picking them up, putting them in a hose, then they go up to a barge, and are disposed of. These are bottom barriers. This is an Asian Clam project at Sand Harbor. The idea is the same—it is these mats that cover them—whether it is a plant or animal. If it is a plant, we are using a thinner material that blocks sunlight to stop photosynthesis, that kills the plant. In this instance, it is a rubber bottom barrier that is more like a pond liner—it is suffocating them, it is starving them of oxygen and killing the clams.

Dan mentioned the environmental thresholds we are working on. The ones I think Julie Regan mentioned that have been recently updated are our AIS control thresholds. In the past, they were very aspirational and not very measurable. Now with all the data we have had and the experience we have of doing these projects—making them measurable. We are looking at no active infestations in the Lake and reducing abundance within the Tahoe Keys by 75 percent. It is a bit of a different standard because Tahoe Keys is a little bit of a different animal. It is a much denser infestation and much harder to deal with the scope and scale of that location at 170 acres.

Looking at these bigger projects in more detail, this is the Taylor/Tallac creeks and marsh ecosystem. This is on the South Shore of Lake Tahoe, Baldwin Beach area. This is a highly used recreation area. It is the last fully functioning wetland in the Basin. We are partnering with the U.S. Forest Service on treating a 17-acre infestation of Eurasian Watermilfoil and a little bit of Curly-leaf Pondweed, which are two notorious aquatic weed invaders. You can see the outlines in the dark areas where, either water or they are exposed, but those are bottom barriers that were installed by our contractors. That started in 2021 and going upland into the ecosystem there and upstream. Some of these weeds can be transported by waterfowl, but also by wind. It has gone upstream a bit, but we have done initial monitoring this season above where the bottom barriers are, and we have found no additional invasive aquatic weeds. Now the next step is to start looking under those barriers to ensure they have been effective at killing them. We may be able to remove them as early as this fall. This is a really important project because it is the first time we have done a treatment like this in this type of environment. Before we were looking at small projects within marinas, but this is now in a marsh and wetland area. It is the first step of a restoration the Forest Service will be doing in addition to the aquatic weed project. This has the potential to provide habitat for every single native species in the Basin, but it is also a natural filter. The wetlands that were talked about in the previous presentation—it is a natural filter for the Lake, reducing nutrients and sediment before they can get into the Lake, but also a carbon sink and then that native habitat restoration, which is critical. It is exactly what we try to do by removing these invasives, providing improved habitat for our native species.

Then the Tahoe Keys project was started—it is a test project that was started in 2022. With three years of analysis and data collection, this is our highest priority location for treatment because it is the source of weeds for all other places in the Lake. We looked at new tools that had never been used here in Lake Tahoe, such as aquatic herbicides in a one-time application. Also looking at innovative approaches such as UV light, which is a boat that has a ray of ultraviolet light bulbs that zap them and break down the cell wall. Looking at those two technologies to knock them back and then trying to use all mechanical methods to maintain that knock-back for the future. We are in the third year of that test. The last two years have been on all non-herbicidal methods with bottom barriers, divers pulling up weeds, and ultraviolet light. Once the project is complete, we will be taking the three years of data to assess what set of tools will most likely give us the chance to maintain any reductions that are achieved for the long term.

Then to make sure we know the projects we are implementing are effective, we employ monitoring to track our progress. On the left picture, there is a type of remote sensing we are using with sonar to be able to detect submerged aquatic vegetation. We also have divers in the water looking at plants, looking at their composition, what type of species we are dealing with, and also their densities. Ultimately, what we are trying to see is what you see on the right. Maybe when we go back after the project is complete to do surveillance, you might see a sprout or two and then they can immediately pull that and maintain that as a weed-free location.

The accomplishments we have achieved since the program began in 2008—over 110,000 boats inspected from all over the United States, hundreds of boats having aquatic invasive species of all sorts. Already this year, we have seen 17 boats with Quagga Mussels or Zebra Mussels from places south of here, but also from the Midwest, the Great Lakes area. That behavior change is really impressive, because it is so hard to have our boaters understand what they can do to help the issue. The Tahoe Keepers, as I mentioned, is a stewardship program. We have now close to 7,300 trained recreators. With 322 acres of AIS treated—last year was 100 acres alone—we are increasing our pace and scale. One of our strategic documents said that is something we definitely have to do if we are going to achieve our goals, is to be able to increase that pace and scale. We have additional staff; we are hiring additional contractors to make sure we have the capacity to do those projects. Localized eradication is something we are accomplishing in different locations around the Lake. Then slowly closing in on these larger, more complicated infestations with all the lessons learned that we have, addressing places like Taylor/Tallac and Tahoe Keys, as I mentioned. Then innovation, having new technologies like UV light to have another tool in the toolbox.

The program funding we have—Nevada was instrumental when we first started the program. First off with funds from the U.S. Army Corps, but when those funds were drying up, Nevada stepped up with significant funding to ensure our prevention program was being maintained. Now we still get that State funding, but now additional funding through the federal side of things, but also private sources. We compliment the program with the public funds—with voter inspection fees and additional funds for projects from nonprofit organizations like the League to Save Lake Tahoe and the Tahoe Fund. But what is really important is to ensure we have a long-term, sustainable source of funding to keep new invaders out and make significant progress on reducing the invasive species we have. To highlight Nevada's continued program support, the Lake Tahoe License Plate Grant is something we look to every year for funding. They are helping fund that permanent inspection station I mentioned at Spooner and also those general fund monies that help go to prevention and control efforts. We work very closely with State Parks at the Cave Rock State Park and Sand Harbor. While we do our inspections, it is also critical for these launch facilities to ensure every single boat that is trying to launch is inspected prior to launch, so we work very closely with those organizations. Then with Kevin and his staff—if we need help with the boat because it needs to be quarantined, TRPA does not have that power; so, we work with NDOW to ensure that boat is not going to launch, and we can do a proper decontamination on it.

Early detection and rapid response are key too. We do those Quagga Mussel sampling as well. The question Senator Titus asked about DNA—it is a very complicated thing to understand, and you grasp it very well. It is something we struggle with, with some of our partners because when you are doing that type of monitoring, it does not mean you have a real creature there. It is a skin cell, maybe that shed off that you are able to check. It is a critical tool for an early detection to give us direction to do more monitoring, to make sure

we understand what we are dealing with. Like I said that enforcement and education component is critical to the work we do. Thank you.

Chair Daly:

Questions, Committee? We will go to the end first, Senator Scheible.

Senator Scheible:

This was a really interesting presentation. I appreciate your thoroughness in it. I have a question I want to make sure I phrase right, because I understand this is all connected, that is the nature of an ecosystem. I was interested, especially when you were talking about the control projects and you have different approaches for plant life versus animal life, then what you described as weeds. Are certain areas more vulnerable to invasive species? You might see plants, animals, and weeds in one particular part of the Lake, whereas another part of the Lake has none of the above. How does the biology work?

Mr. Zabaglo:

Most of these invaders, especially the invasive aquatic weeds or plants—we call them weeds, generally speaking, to differentiate them from a desirable native species—they like to reside in these areas where they are like aquariums, in marinas where you have a lot of enclosures and protection from the wind or colder water. The Tahoe Keys, for example, is a little bit shallower in some areas, but it is definitely enclosed, with warmer conditions and less wave action. These plants—especially Eurasian Watermilfoil does not like the open water necessarily. We do not see them as much on the Nevada side because the winds come from the southwest over to the east shore of Nevada, so they do not establish as well. But there is a small marina on the Nevada side called Elk Point Marina. It is a small homeowners marina, cut into the landscape, so it provides that protection. We are working with those private homeowners to do a project there in the near future. Then other locations—Logan Shoals—again, it is a protected environment with a sheet-pile wall—generally we see them in these protected areas. Protected in the sense—they are protected from environmental conditions, not protected from us.

Senator Scheible:

I knew what you meant. To follow up—would that be true with invasive species? The animals too?

Mr. Zabaglo:

Not necessarily. Asian Clam is a species that has quite a bit of abundance on the Nevada side. In the near shore areas—we do not find them in the deep waters, but near shore; it is critical because that is also where our public interacts with the Lake. We do see them in more varieties of locations. Asian Clam or Signal Crayfish, the invasive crayfish we have, they are in many locations throughout the Lake.

Chair Daly:

Senator Titus.

Senator Titus:

Thank you for that information. I have a couple of questions. The Lake is very deep, I think 1,600 feet. You are doing a lot of monitoring, and you have hired divers—how much time is spent researching the depth to see if there has been changes in that?

Mr. Zabaglo:

We do diver transects every three to five years. We have a monitoring plan that was developed in 2018, that identified 108 dive transects around the Lake. Many of them are targeted to make sure we are hitting those locations where we know they are likely to exist, like a marina, but also random locations as well. Those are repeated, and they go out to a certain depth and distance to ensure we are looking at the potential of where they can grow, but also a little bit more. Because of climate change, habitat could expand, growing seasons can be longer, but we are adding buffers to that to ensure we are going a bit deeper than where we know they can survive.

Senator Titus:

Thank you. I have a follow up question. I fish. I have two small little boats I use when I head out fishing, and I proudly pay my AIS sticker. You did not mention any of that funding. Does that go to NDOW when I get my boat recertified/licensed every year? Then you share it here? Or is that strictly used for your boat inspection? Where does that funding go?

Mr. Netcher:

It stays with NDOW. We use most of those funds to match our federal grants; that is where the majority of that funding goes to. We do use some of it for limited control efforts as well.

Senator Titus:

One final comment. Thank you for looking at that permanent station you are going to do outside of Sand Harbor and Spooner Summit. I know Sand Harbor pretty well, and doing any inspections and unloading boats and loading them back up there causes a huge backlog onto the highway. Folks will then go to your permanent station, and they would be able to go into Sand Harbor. That might speed that process up a little bit.

Mr. Zabaglo:

We are currently doing those inspections and decontaminations off-site, so we are not having that impact as we did when we first started the program back in 2008. In 2010 and 2011 is when we moved to off-site locations, but they are temporary; so we are doing that decommissioning and recommissioning every season. This will prevent us from having to do that. Also having an environment where we can make sure we have the utmost up-to-date technology for decontaminations and providing a better customer service for boaters.

If I can go back to the question you raised on the funding. Nevada has their AIS sticker, but Lake Tahoe also has their sticker program, where we charge a fee for our services. It is a one-time fee that gets you as many inspections as you need for the season. The decontamination, if it is needed, is per instance. The boater can avoid that fee by coming clean, drain, and dry. That is what we are seeing more and more each season. As an incentive to boaters that arrive clean, drain, and dry, they do not need to have that decontamination. Our fee covers our program and then our programs complement each

other with having more water bodies protected through inspections and decontaminations—helps us all.

Senator Titus:

Great. Thank you.

Chair Daly:

I want to follow up on a couple of things, so I am clear. Regarding inspections—before people put their boats in the water anywhere on the Lake, they are supposed to get the inspection. I am assuming you have checkpoints. Is there somebody at the launch site who says, “You need to show me you have been inspected or you are not getting in.” Are those manned on a 24-hour basis, 7 days a week? Do you lock up the marinas at certain hours? What if you have some person with their mega 50-acre parcel that has their own boat launch, and their friend comes in from somewhere and does not get inspected. How do you handle that? Do you confiscate their boat and take over their mansion? I am perfectly fine with a penalty like that myself. Do we have those problems? Do we not? I have a second question once you get there. I know you guys have thought of this. There is a lot of logistic stuff, it is not new. They can get inspected, like you said, in Arizona and bring that certificate saying they are clean. Spell it out a little more.

Mr. Zabaglo:

When a boat is inspected at one of our inspection stations, we also partner and contract with all of the launch facilities around the Lake. Once that inspection and decontamination is complete, there is a little wire security seal that goes in between the boat and the trailer; and that seal needs to be broken in order for that boat to be removed from the trailer. It is not going to stop anybody; but it is a very strong observational indicator, so you know that boat has been inspected. When they go to the launch ramp, the launch facility staff are trained to make sure they are looking for that and that it is not tampered with. Then that boat can launch because it has either previously been inspected or been in Lake Tahoe more recently. Once that boat returns from the Lake, that staff will also put a seal on again to ensure that boat does not need to be inspected again because it has last been on Lake Tahoe. They will put that seal on the boat and then they can go back to Lake Tahoe with that seal intact. We have agreements with every single launch facility around the Lake; there are about a dozen or more of those locations. We train them, we secret shop them, we secret shop our own staff, so we know those protocols are being followed. As far as these private locations—to our knowledge from what we have seen with our observations around the Lake, there are not generally these individual ramps on one parcel. Certain neighborhoods will have their own launch facilities, and we have worked with them. It is a homeowners association (HOA), generally speaking; and we have agreements with them to follow the rules, and we also check on those facilities as well. The question about coming from other locations—Kevin mentioned the database we all use and share information on the inspections themselves and the decontaminations, and what happens to those boats, and we get alerted when boats come our way. We still may do a decontamination on that boat because we are looking for other species. Maybe if a boat came from Lake Havasu, we know they have Quagga Mussels, but they may also have something else we do not have. Even though they may have decontaminated them and checked them for Quagga Mussels, in most instances that will handle anything we are worried about. But they are not necessarily checking for that species as well, especially when it is a containment effort coming from a positive water body or a water body with Quagga Mussels. We will most likely do another decontamination, but we will not charge the boater for that, because they

did what they we are supposed to do. They did their due diligence. They tried to do whatever they could to become clean, drain, and dry. We want to reward them for doing that. We try to make our rules easy to comply with. You can get an inspection, decontamination, and get on the water the same day. We try to avoid any desire to skirt the system.

Chair Daly:

Understood. I know you said you had agreements with these HOA or “private” marinas. Is there any requirement for them to—what if they said, “No, I do not want to participate. These are our people, and we are not going to bother,” et cetera. Maybe it is a NDOW question. Do they have to participate, whether they like it or not? They do not own the whole Lake—they may own that launch site. Is there a requirement for that private property owner to comply or enter into that agreement? If there is not, there should be. There are limits to your private ownership rights. That is part of what government is for.

Mr. Zabaglo:

Any launch facility is required to have trained staff present in order to launch any boats at that facility; regardless of whether it is a private homeowner, a ramp, a public marina, or a commercial marina. Our code of ordinances requires that. They have to be trained; and then when no one is present, they have to have a means to prevent the launching at that location. Generally, it is a gate.

Chair Daly:

Understood. Final question for me—on mudsnails, you think they came in on a nonmotorized apparatus. Where is that moving towards to make sure you are not going to get some other species you have not thought of. You got the mudsnails, hopefully we will keep them isolated. Is there a similar program going to happen with that? You are going to say you cannot bring in your private ones. You are going to have to go to a vendor at the Lake. What is on the horizon on that side? It seems to be a growing issue or a new concern.

Mr. Zabaglo:

That was the emphasis on that nonmotorized stewardship program called the Tahoe Keepers, and those two units I showed, the CD3 machines. We are placing those strategically at locations that are very popular with non-motorized—to encourage the use of those prior to launching any paddle craft—to become clean, drain, and dry and prevent any additional new species we may be concerned about. One thing I forgot to mention, we also now have roving watercraft inspectors. In response to that new infestation or new discovery of New Zealand mudsnails. In addition to the watercraft inspectors we have at our inspection stations, we now have two roving inspectors that go around to these popular locations as well educating them, showing them how to use one of those CD3 machines if they are present. Telling them how they can follow where those CD3 machines are at. But also to show them the Tahoe Keepers training video and quiz, and how to become a certified Tahoe Keeper. So, a strong emphasis on nonmotorized education and opportunities to become clean, drain, and dry.

Chair Daly:

But it is still education, and you are on your own. Try to do the best you can. There is no coordinated system like there is for the motorized vehicles to get on because they have to

launch from somewhere. It is a different deal. There is other stuff. You just pick them off your car and walk down to the Lake and off you run.

Mr. Zabaglo:

Many of the locations where that is popular—or you have a great ability to hand launch paddle craft—you have to go through some gate or beach. The kiosk staff at these locations are trained also to ensure these boaters are Tahoe Keepers or that they are clean, drain, and dry. If they are not—or the roving inspector sees them and they are not clean, drain, and dry—then they are required to go to an inspection station. They are subject to an inspection and if a trained staff deems that they do need an inspection, then they are required to do so.

Chair Daly:

The protocol may need to be strengthened on that. We are in the beginning steps of it. Thank you. Any other questions, Committee? [There were no additional questions.] With that, you guys are done. We are going to confiscate some mega mansions. Anyway, we are going to close Item VI.

AGENDA ITEM VII—TAHOE SCIENCE ADVISORY COUNCIL OVERVIEW AND ACTIVITY UPDATE

Chair Daly:

We will move to Agenda Item VII, Tahoe Science Advisory Council overview and activity update.

Robert Larsen, Program Officer, Tahoe Science Advisory Council:

Good afternoon. Chair Daly, Members of the Committee, on behalf of the Council, thank you for having us today. I am going to give a brief overview of who the Council is. I know microplastics are the primary interest today, so I am going to try to get through most of my material quickly. Looking first at who the Council is again and who we are. The Tahoe Science Advisory Council was created in 2015 by a MOU between the Secretary of the California Natural Resources Agency and the Director of the Nevada Department of Conservation and Natural Resources (DCNR). Like TRPA, we are a true bi-state organization. (Agenda Item VII) [Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us.]

This slide summarizes some of the Council's broad objectives and our purpose for being. In essence, the Council is there to provide a link between scientists and managers. By maintaining a diverse group of scientists, the Council can provide a collaborative, coordinated perspective on a variety of different issues. We can bring forward new topics and highlight opportunities to advance research and monitoring at Lake Tahoe. I think most importantly is the last bullet—the Council provides space for ongoing conversation and dialogue between scientists and managers.

This slide shows our membership. We have six different institutions. We have two members from each institution. We have two academic organizations from California, UC Davis, and then the University of California system at large. There are two Nevada institutions, UNR, and the Desert Research Institute (DRI). There are two federal research organizations, the U.S. Geological Survey and the U.S. Forest Service Pacific Southwest Research Station.

Two members from each of these institutions, so we have an even dozen of members. We also have membership on the Council for each of the MOU signatories, so we have a member each for the Nevada DCNR; and then the member from the California Natural Resources Agency.

I want to take a few minutes to talk about how the Council approaches various issues. Not every project and not every activity we do falls neatly into these bins. There is a ton of overlap, but it is useful to consider how the Council leverages outside experts, talk about how the Council informs policy with science, how we quickly respond to unexpected events, and how we identify emerging issues.

Looking first at external experts, one of the Council's greatest strengths is our ability of its members to reach out into their networks and bring fresh perspectives and relevant expertise to different topics. In the past year, the Council has had an opportunity to exercise this in a number of different areas. You heard Dennis talk a little bit about the Tahoe Keys Control Methods Test. The Science Advisory Council has been involved in this project since it is inception, we provided an independent assessment of the environmental documentation before that project was approved. Then we have a standing group of scientists who review the data each year and assess the progress in each year. We are also talking about, once the project is complete, doing a workshop to assess what we have learned and identify next steps on how we control weeds in the Tahoe Keys.

Dennis also conveniently talked about the mudsnail response. When mudsnails were found last year, we were able to quickly organize a group of both regional and local experts, from both within the Council as well as outside, to talk about where do we go from here? What are the monitoring approaches? And what are the opportunities to get a handle on what we know, and what we do not know with respect to this new invasion. In the last year, the Science Advisory Council's Water Quality Work Group has performed a thorough assessment of Lake Tahoe's monitoring program. Once it completed that work, we were able to reach out to a half dozen different experts throughout the country, share those findings with them, and they were able to provide us with direct feedback on that work and provide suggestions for how we can improve monitoring at Lake Tahoe.

This has been invaluable to reach out beyond the known folks, not everybody lives and breathes everything at Lake Tahoe. It is great to have feedback from outside. Most of the time, frankly, we get validation that the science we are doing is on track. But oftentimes we also get additional insights as well. Either way it is been a very productive process to collaborate with external experts, and the Council is really proud of our ability to do so.

This is the core of what the Council does; linking policy with science and making sure the policy that is moving forward is informed by the best available science. I know this Committee has heard a lot about tourists and traffic; visitor management and transportation seem to be at the heart of all of the policy conversations we have these days. The Council is actively working to inform those discussions with relevant research and monitoring. We conducted a project last year that was informed by a Nevada license plate grant that identified the relationship between increased temperature in the Sacramento Valley and the number of cars traveling over Echo and Donner Summits. Not surprisingly, there is a relationship there, but it was good to quantify and see the number of the increase in the vehicle miles traveled and the increase in visitors associated with warming temperatures. Most recently, the Council conducted a project to look at monitoring programs. How are other areas, such as Aspen and other high-use recreation areas, looking at these types of recreational issues, and summarized those monitoring programs and provided

recommendations of how we can better collect data here at Lake Tahoe to inform policies and programs here.

Lastly, I did meet with the Director of the Destination Stewardship Council, and we were able to talk about opportunities of how we can further use science to inform how that group is looking at its challenges. That group is really the nexus of a lot of these recreation and visitor management conversations and the Council is already plugged in with that group trying to find opportunities of where we can support them.

Rapid response—I think we talked a little bit about this with respect to the mudsnail, but it is particularly useful to have a standing group of scientists when the unexpected things happen. The Council structure and our members commitment to supporting resource managers allows us to be quite nimble and responsive when catastrophic events occur. I think some of us remember all of the wildfires smoke we have experienced in the last few years. When the Tahoe Basin was inundated with smoke a couple of years ago, Council scientists mobilized quickly to test the effect on Lake Tahoe itself. They were able to set up sensors, both on land as well as in the Lake, and look at the impact of the smoke.

Looking at the Caldor Fire—I think we all know the Caldor Fire impacted some of our watersheds here in Lake Tahoe, particularly the Saxon Creek, Trout Creek, and Upper Truckee watersheds. Right after the fire was extinguished and we were able to get back into the Basin, we had Council scientists on the ground taking samples and looking at the impact of the Caldor Fire on those systems. There has also been a lot of discussion—in front of this Committee as well as in TRPA itself—on fuels management and forest treatments and whether that fuels management work is necessary and effective. To learn more, we had Council scientists look at both the Caldor and Tamarack burn scars; they conducted a series of experiments and collected data to look at both treated areas and untreated areas to evaluate burn intensity. They were able to confirm those areas that had been previously treated burned with a lower intensity, had lower flame lengths, and demonstrated the value of those forest treatments for protecting our forests. So, whether it is wildfire or new invasive species like the mudsnail, the Council is there to quickly respond.

Emerging issues are another area where the Council has an opportunity to provide support to resource managers. All of our Council scientists are active and practicing scientists and as such, they keep tabs on all these emerging issues. The Council forum provides a great forum for sharing that information and learning how those new findings might impact Lake Tahoe. Microplastics are a shining example of this right now. When a recent paper in the scientific journal 'Nature' highlighted the high concentrations of microplastics at Lake Tahoe, it got all of our attention, including the scientists; and we, the Science Council, formed a group of both stakeholders and scientists to start digging deeper into the microplastic impacts at Lake Tahoe. That is all I am going to say about that because I have a Council scientist joining us next to talk more about microplastics, so I will not steal her thunder. But this is a great example of how the Council can dive in on emerging issues and provide support to resource managers.

Looking forward, the Council remains committed to the conversation between scientists and managers and strengthening those relationships between our agency partners. We are also looking for ways to better integrate into the policy conversations. As I said, when these new topics are coming up, we are reaching out and identifying how we can either embed Council scientists into those work groups or otherwise have folks come and present to the Council, so the Council is aware of what those different topics are, and how they can help out. We are also committed to expanding our network. I talked about external experts I think we are seeing the strength of being able to reach out into Council member networks

and bring folks to the table and bring their experience and expertise into the conversation. I think most importantly, we maintain our commitment to providing a space for scientists and managers to talk. The Science Council meets every other month. We have a series of different work groups where we meet directly with Agency staff to talk about the issues of the day, talk about different monitoring data that have been collected, research projects that are underway, and determine how we can use that information to inform our decisions going forward.

The last point—I would be remiss if I do not talk about budgets for a minute. All of this work comes at a cost and our budgets for scientific investigation are either static or declining. The money we have to do the research and collect the data we need at Lake Tahoe is dwindling, and that does not even begin to scratch the surface of the cost associated with the collaboration, coordination, and communication—how we get the science information into the hands of resource managers also costs. Know that we are going to continue to fight and do our work. We are going to continue to elevate the importance of the Tahoe Science Advisory Council and do the best we can within the resources we have, but we are going to continue also to look for ways to increase the amount of funding that we have to support science at Lake Tahoe. With that, I am happy to answer any questions you might have.

Chair Daly:

Committee, any questions? Vice chair.

Vice Chair Bilbray-Axelrod:

Thank you for the presentation. You said you meet every other month. What does that look like? Are you getting together via Zoom or in person? You also made mention of things that pop up. Is that every other month? Then additionally, you might meet responsibly.

Mr. Larsen:

Yes, we meet every other month. Actually, post pandemic, at this point, we are mostly meeting on Zoom. That said, we are trying to meet at least once a year to get together to network and socialize with one another, to maintain that camaraderie among our scientists. We have several scientists from outside the region who participate in the Council, so Zoom provides a convenient platform for that. The water quality work group, I mentioned, meets monthly. Whether it is New Zealand mudsnails, invasive species, other topics—I maintain, and scientists maintain regular dialogue with Agency partners. As issues arise, if we need to convene a group or set up a meeting, we go ahead and get that together. If there is a peer review need—for instance, for Tahoe Keys, communicating with Dennis Zabaglo, other folks—and making sure the Science Council is accessible and available to meet those needs.

Chair Daly:

Senator Titus.

Senator Titus:

Thank you for what you are doing in your presentation. I am curious, you mentioned about the static or declining budgets. What do you have in process? Do you have somebody who reaches out to the agencies to ask for more funding? What is your strategic plan moving forward for funding?

Mr. Larsen:

The State of California provides a regular funding source for Council operations. I also have ongoing conversations with the State of Nevada about opportunities to support ongoing operations for the Council. Then there is the question of larger research and monitoring issues. Both the states of California and Nevada contribute to various monitoring programs for the Lake itself, for the tributaries, as well as invest in research projects. When there are grant programs that come through, we explore opportunities of where we can leverage those grant programs, whether it be the Nevada license plate program or federal funding, to how we can invest those funds to support science. I think we also see when there are questions that arise and folks say, "Can the Council do this or what about this?" We collectively, within the science community, as well as with Agency partners identify what funding sources might be able to meet that need.

Senator Titus:

Okay, thank you.

Chair Daly:

Committee, any other questions? No. Along those lines, you mentioned at the beginning that you are a bi-state organization. Spell out a little bit more for me on how you were formed. What authority do you have? When did you come into existence? You talked a little bit about the funding. Do you have a grant writer? Do you only cover Tahoe issues or is it more expansive? Spell that out a little clearer for me.

Mr. Larsen:

All fantastic questions, thank you, Senator Daly. The Tahoe Science Advisory Council is the latest in a long line of science organizations. There have been science partnerships in Tahoe dating back for decades at this point, but this particular iteration had its genesis in 2013. Shortly after the adoption of the Regional Plan, there was legislation in California Senate Bill 630 that was adopted to reaffirm California's commitment to the TRPA and the Bi-State Compact. Within that legislation, there was a small element that mentioned the creation of a Bi-State Science Council and a lot of that was driven by the need to support TRPA as it updated its Regional Plan and the need to update the thresholds. Based on that piece of legislation, there was a larger MOU that was drafted, signed by the Secretary of Resources in California, as well as the Director of DCNR in Nevada. That MOU provides the basis of the Council's purpose, its membership, and its overall objectives like they laid out. Moving beyond the thresholds and really establishing the Council's purpose; as the Council's core purpose as supporting management and providing policy guidance. Senator Daly, hopefully that answers your question as far as the history as to where we came from.

As far as our ongoing operations and funding, you asked if we have a grant writer, for instance. My position was established essentially as a part-time position. For the initial years of the Council's operation, there was a part-time program officer who essentially provided support to make sure meetings happened and scientists got together and talked. Over time, that position has evolved into a full-time position. I assumed the position five years ago and I have tried to accelerate that science management partnership. I actively work to coordinate with TRPA, the Water Board, all the different management agencies, as well as our science community, and figure out where those intersections exist.

Chair Daly:

Is there ongoing funding from California and Nevada? Or every session they say either you are on the chopping block, or you are not. Do you have federal funding? I do not know if you said if you just cover the Tahoe area. You were started to support the TRPA to provide them with information. You are not covered by the Agency, you are separate—independent from that to give them information. Who can call you up and ask you to do stuff? Or you say, “We want to talk to you about the mudsnails, the particulates, and the smoke,” or whatever the issue is. Do agencies call you and say, “Work on this for us.” You are not dictated to by the Board, you are a separate organization and provide independent information.

Mr. Larsen:

You are absolutely right. We are an independent organization by design and by creation to provide independent objective advice. We are not beholden to any particular agency. Again, my position is within the California Natural Resources Agency. As far as funding is concerned, State of California does provide ongoing, predictable funding for operations in a modest amount. There is no steady ongoing funding from the State of Nevada. We have had one time funding for different projects, but there is no operational funding per se. The State of California provides the operational funding on a regular basis and supports my position. But as far as who we are beholden to, you are absolutely right. Anybody can call us up and say, “We have a question about this. How can you help?” We can determine whether or not there are resources, what information we have that we can bring to bear in that question. We are an independent, objective, science organization providing guidance and advice to resource managers across the board. Not just TRPA, not just all the different organizations you heard from today, from Nevada—all those organizations have the same access to the Council too for our support.

Chair Daly:

But it is focused on the Tahoe Basin?

Mr. Larsen:

Correct. It is completely for the Tahoe Basin. Sorry, I failed to answer that question twice now. But yes, it is explicitly for the Tahoe Basin.

Chair Daly:

I wanted to be clear on that and that may be something, I am not on any of the finance committees in our legislative body on purpose. I am happy not to be there, but maybe we need to we do have one member that is on that.

Mr. Larsen:

Thank you, and we welcome an opportunity. There have been ongoing conversations about how the State of Nevada can have skin in the game with respect to the operations of the Council and those budget conversations are always complicated and tricky. I appreciate and respect that, as does the State of California, which is why we have been willing to act in good faith and maintain the Council. My position—although I work the State of California, I am of equal support to the State of Nevada, and I am equally beholden to the State of Nevada. It is a Bi-State organization at its core.

Chair Daly:

Okay, thank you. Did I cause anyone to have new thoughts or questions? [There were no additional questions.] With that, we will close Item VII.

AGENDA ITEM VIII—PRESENTATION ON PLASTIC POLLUTION IN THE LAKE TAHOE BASIN

Chair Daly:

We are up to Item VIII.

Chair Daly:

We will move to Item VIII, presentation on plastic pollution in the Lake Tahoe Basin, presenters via Zoom from DRI, Monica Arienzo.

Monica Arienzo, Ph.D., Associate Research Professor, Desert Research Institute:

Thank you, Mister Chair. Thank you to the Committee for this opportunity to present today.

Mr. Larsen:

Monica, I have your slides up, and I am happy to advance. Just let me know when you are ready. (Agenda Item VIII) [Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us.]

Dr. Arienzo:

Thank you for accommodating me joining virtually. I wanted to start today by talking about the work my group has been doing at DRI looking at plastic pollution, and the work we have been doing in collaboration with the Science Advisory Council, which I serve as one of the two DRI representatives. I wanted to start by telling you all a little bit about me. I lead the Microplastics and Environmental Chemistry Lab at DRI. My group is comprised of scientists with a Ph.D. and master's degrees, graduate students, and undergraduates as well. We do research, applying chemistry to understand questions about the environment with a lot of our work these days focusing on microplastics. One thing I wanted to highlight was the training we do for students pursuing higher education degrees. We do trainings for master's and Ph.D. students. Currently I have three graduate students. Then also the training we do for undergraduates and training them on research methods. I think you had the chance today to meet those students who participated in our Research Immersion Program—they are currently doing a research project this summer on litter in the Tahoe Basin.

Now that I have told you a little bit about me, I wanted to transition and give more specifics about plastic pollution and the definitions and terms I will be using. The first definition is what are plastics? This maybe seems obvious, but it is a topic of discussion within the scientific community. On the right-hand of the slide are common types of plastics and the examples of those types of plastics. For example, we have polyethylene terephthalate (PET), which plastic water bottles are made of. That is a very different type of plastic than say the plastic that makes up your grocery bags, which is plastic number four, low-density polyethylene (LDPE). All of these different types of plastics make up have different

chemistry, which means the way those plastics are going to interact with the environment are going to be different.

In addition to all these different types of plastics, those plastics can escape into the environment. When these plastics escape into the environment, we use the term macroplastic; these are plastic particles that are bigger than five millimeters or bigger than about the size of a pencil eraser. This is what we study in my group in the environment; we study macroplastics. On the right-hand side of the image is a cleanup I participated in with 'Clean Up the Lake.' This was a group at Lake Tahoe that has been scuba diving the bottom of Lake Tahoe to collect litter. You can see these macroplastics in the environment.

The next term I will be using is microplastics. Microplastics are plastic particles that are less than five millimeters, but bigger than one micrometer. They range in size from about the size of a pencil eraser—particles we can see with our naked eye—to particles that are about the size of a bacteria, which we need a microscope to see. On the right-hand side is an image I made to give an example of what these particles may look like. This is not a sample; this is an example. You can start to see the variety of particles we end up with. The next slide brings home this point. When we study macroplastics and microplastics, we have a lot that we are studying; we are studying a large variation in size. We are studying a large variation in shape and color, and also a variation in the chemical makeup of these plastics. I am making this point because there is a lot of interest in microplastic studies and wanting to answer the scientific questions about microplastics, but it is inherently difficult because this is a pollutant that is really varied. We have a lot of size variation, shape, color, and chemical makeup. All of these factors can influence how these particles are behaving or moving in the environment, and then also how they may be impacting the environment. This is a complicated pollutant to study. I want to highlight that we hire a lot of undergraduates in my lab to help us with these analyses because it is so complicated. I want to acknowledge the amount of work it takes to do this work that my group does and acknowledge the dedication my team has to studying this pollutant, whether they are graduate students working through one of their degrees, scientists at DRI who are working on a report for an agency, or undergraduates who are supporting all of our science or leading their own science.

Why are we interested in studying plastics? That is because these plastics can break down to form smaller and smaller pieces of plastic. I have talked to you about how these macroplastics are plastics that have escaped into the environment, and these can then break down to form these microplastics, I alluded to earlier. They can also break down to form even smaller particles that are the size of a virus.

These plastics can also sorb or release chemicals. Coming back to how these particles can be interacting with the environment, it can be really complicated because another chemical can attach to these particles, or these particles can be releasing chemicals into the environment.

Lastly, these particles can then be consumed by animals or animals can be ensnared in them. In my group, we focus on understanding where are these particles in the environment, where are they coming from, and where are they going? Then we work with other people who can then help us answer other questions about interactions with aquatic invertebrates or other organisms.

This is a little animation showing you how we think microplastics may be moving through the environment. Microplastics can be deposited through the atmosphere. They can accumulate in our snowpack. As that snow melts those microplastics may be transported

downstream. We also can have microplastics generated from tire wear and can be transported through creeks and rivers or storm water. We also can have the breakdown of larger pieces of plastic to then all result in plastics and microplastics ending up in our lakes.

This is to highlight that I know this is focused on Tahoe, but it is important to remember the downstream community. I live in Reno, and I think considering the downstream communities who may also be affected by what is happening in Lake Tahoe is also important. The drinking water we receive in Reno or even further down the street for the Pyramid Lake Pyramid Tribe is also important to remember that we do have export out of this Lake and those downstream communities may also be impacted.

What do we know about plastic pollution in the Tahoe Basin? As Bob Larsen alluded to and as we have heard from other speakers earlier today, there has been prior work done in Tahoe that has elevated concerns about plastic pollution and microplastics in the Tahoe Basin. One study that was led by Dr. Veronica Nava at the University of Milano-Bicocca. She analyzed microplastics in 38 lakes and reservoirs around the globe. What she found was that Lake Tahoe was the third most-contaminated water body studied across all of those lakes. This was surprising to a lot of people. It resulted in—as I think Bob alluded to as well—a lot of news articles came out about this. There was a real surprise that Tahoe was the third most contaminated water body.

I also want to highlight the work that my groups led. An undergraduate named Julia Davidson led a project analyzing litter that was collected by 'Clean Up the Lake' from the bottom of Lake Tahoe. At every single location we analyzed the litter from the bottom of Lake Tahoe—every place she looked, she found plastic litter. She also found the litter was dominated by items like food containers, plastic water bottles, plastic bags, and toys. This is helping us to get an idea of what is occurring in Tahoe when it comes to plastic pollution and microplastics, but also has created a lot of concern from the public and from managers in the Tahoe Basin.

As a result of all these studies that have been done that have highlighted the issues of plastic pollution. I will also note there was a lot of concern after Fourth of July last year when we had a lot of trash found along Tahoe's beaches. There is a lot of concern in our community of what do we do, how can we move forward in an informed manner? As I mentioned, I serve as one of two DRI representatives for the Tahoe Science Advisory Council. With Bob's guidance, we started a microplastic work group. The goals for this work group were to bring together scientists, managers, and stakeholders to understand what is known, unknown, and what we need to prioritize in the future when it comes to microplastics in the Tahoe Basin.

We try to take an approach with this group to try to bring together a variety of stakeholders into the meeting as well as scientists to help inform and understand microplastics in general. We took this approach because when there is limited research on a topic like microplastics, there is a lot of uncertainty. What can happen is if you are a manager trying to make a decision on where you should put your limited resources, it may feel overwhelming and can result in decision paralysis. If you do not have the information to tell you what you should do next, it is hard to make that decision. We wanted to take this approach to try to help capture that limited understanding, but also try to help us with making decisions to move forward. We also wanted to create a more informed group of stakeholders. We wanted to elevate knowledge in the Basin when it comes to this pollutant that has limited research and does have some uncertainty. What we wanted to do was to develop management and science priorities to guide those future efforts. Through the stakeholder process, by getting everyone on board, we hope we can drive action and move

forward in a cohesive manner in a way we all understand each other. We are moving together as a group.

As part of this work group, we started by developing a white paper that includes the current research which has been conducted in Tahoe. I highlighted two of those studies that have been previously done. We also highlighted existing monitoring efforts, the current known processes, and potential impacts. We discussed suspected sources and control methods. Then what we recently wrapped up doing was summarizing what our recommendations are for next steps. This is the part I am excited about because it helps us to synthesize the state of knowledge and make priorities for future investment.

Here are some of the high-level findings of this white paper. We have come to an agreement on some of these topics. To start, we discuss what are the potential sources to Lake Tahoe. The work group has coalesced around concerns around clothes dryers, car tires, roadways and asphalt, construction materials, erosion control products, and litter as being the sources we are most concerned about when it comes to microplastics.

We also have been discussing what the options are for controlling microplastics entering Lake Tahoe. I think it is important that we put this in two categories. The first is local solutions. We discussed a lot of our plastic reduction. These source control approaches and litter control options. Things like putting out more garbage bins on especially high visitation days and plastic reduction strategies, such as single-use plastic bans. I think it is important we bear in mind the regional as well as national and global frameworks in which we are operating within the State of California. There has been a lot of efforts to assess plastic use and plastic reduction strategies. California is at the forefront of looking at this across the nation. Across the United States, the U.S. EPA released last year, a draft national strategy for plastic pollution reduction, which I think will help to create a framework nationally for how we can begin to reduce plastic use. I also want to highlight that at the global level, the United Nations (UN) currently has a draft treaty on plastics—trying to account for the fact that a lot of times when plastics are released into the environment, they are not staying within our country boundaries right there, traveling globally. That is what the UN is trying to tackle. I want to highlight this is a topic that is not only of concern locally within our Tahoe Basin, but also is getting this global platform as well—where people have been talking about plastic pollution.

Wrapping up, when we surveyed our stakeholders, after we completed our white paper, presented it, and spoke to our stakeholders; we asked them, what are their top three priorities for studying and monitoring microplastic sources? They said tire rubber, clothes dryers, plastic litter, and asphalt microplastics are of concern to our stakeholders. Now we have a path forward for investment in the future.

Where do we go next? I think from a scientific perspective, continuing to monitor to understand sources as well as where these plastics are moving in the environment. We think there is a real need to assess the impacts of microplastics in the Tahoe environment. From a management perspective, looking at ways to reduce plastic consumption with probably a focus on these known, harmful plastics. An example of that would be tires have a product that is added to them, that when tires shed into the environment, that product can then be released into the environment, and it is known to be harmful to some fish.

In summary, in my research I spent a lot of my time looking at the microscope studying the small-scale pollutant on a microscopic scale. By working with the Council, I have been able to zoom that out and talk to managers and stakeholders and understand what their concerns are. With the Council, we have now been able to create priorities and a framework

for which all of us within the Basin can now move forward and start to address these concerns. I am excited about this work, and it has been a great way for me to think more broadly beyond the microscope.

With that, thank you for this opportunity again and thank you for accommodating me attending virtually. If you are interested in learning more, you are welcome to check out our website or email me. Thank you.

Chair Daly:

Thank you. Committee Members, any questions? No questions. I understand tires wear out and they leave a residue. Not sure about the dryer, maybe you can give me more explanation there. But before that, is the plastic breaking down into smaller and smaller pieces of the actual substance, or is it breaking down and changing chemically and altering its DNA? Is it a chemical process, or is it a smaller and smaller piece of the same beginning substance?

Dr. Arienzo:

Plastics, as they break down, they do break down physically, into smaller and smaller physical particles, but they do also break down chemically. We know chemical transformations occur to these plastics, and that is a part of the process as it breaks down. That is part of why we see some of these associated chemicals can then be released into the environment through this breakdown process. The second part of your question was dryers. For clothes dryers, this is actually research my group has been leading. We have collaborated with the League to Save Lake Tahoe to look at clothes dryers as a source of microplastics to the environment. We did this through citizen science, which is another passion of mine, and we engaged citizens to put pieces of mesh around the outside of their dryer vent, where the hot air exits the dryer outside of your home. We found a lot of materials emitted. Some of that material is plastic, and it does seem to be related to whatever you are drying. If you are drying a cotton sheet and a cotton towel, it is going to be mostly cottons coming out of your dryer. But we have also found that if you dry a lot of your synthetics, we do see proportionally those synthetic microplastics are also being emitted by your dryer. This is at the forefront of the research, and we are excited to keep doing this work on the clothes dryers because I do think it is an underappreciated source of microplastics to the environment.

Chair Daly:

I was wondering about the dryer part because I was thinking, how do you get plastic out of clothes? I know there is some synthetic in polyester and various things, but usually those do not go in the dryer. Then it was interesting, on the [inaudible] environmental erosion control which is solving one problem is then creating another apparently. I guess we have to start to find a different fiber material or something, maybe use spider webs or something to wrap the straw in. I thought that was interesting. We are using the plastics to solve one erosion problem for the Lake and creating a different one. Anyway, I do not have any other questions, does anybody else? Thank you. With that, we will close Item VIII.

AGENDA ITEM IX—PRESENTATION ON PILOTING SOLUTIONS TO KEEP TAHOE BLUE

Chair Daly:

We will move to Item IX, presentation on piloting solutions to keep Tahoe blue from the League to Save Lake Tahoe, Laura Patten.

Laura Patten, Director, Natural Resources, The League to Save Lake Tahoe:

Thank you, Chair, Vice Chair, Committee Members. Today, I will be talking about innovative technologies and solutions The League to Save Lake Tahoe has been piloting with our partners to address impacts from tourism on our environment. With a special focus on Zephyr Cove and Zephyr Shoals and our Nevada resource deployment that we have been utilizing to keep Tahoe blue.

For the last 67 years, the League has kept the exact same Mission, which is to protect the Lake Tahoe Basin for future generations. We do this by using the best available science and we use this science to drive solutions, similar to what Dr. Arienzo was talking about in the prior presentation on the work we have done. For the last 11 years, the League has been leading a lot of different cleanups all over the Lake with support from TRPA and our other partners. In total, we have led over 2,000 cleanups, including those community-led cleanups, signature cleanups, and what we call our blue crew clean ups, which are community-led efforts. We have picked up over a million items from the environment and removed those through all of those cleanup efforts, with over 60 percent of those items removed actually being plastic materials. The cleanups that are led by the League, but more importantly, these are community-driven and community-led efforts that are trying to mitigate the impacts of tourism, recreation, and of the trash in our shore zone on the environment. Those efforts are to protect Lake Tahoe's renowned water quality and lake clarity.

I would like to highlight one site, which you can see in this slide, which is the Zephyr Cove and Zephyr Shoals area, which has come under management this year with Aramark Corporation taking over that site from the U.S. Forest Service. On July 5th, after the Fourth of July crowds leave, we have been cleaning up the beach with our volunteers, including a TRPA blue crew. For the last three years, we saw a big uptake in the amount of litter that was removed at this particular site. In 2023, our volunteers picked up over 6,000 pounds of trash at this one site location. You probably saw the media surrounding that issue last year as well. Using this data and with support from this collaborative Destination Stewardship Council that the League sits on, we were able to work with the Forest Service and Aramark Corporation to improve the infrastructure, education, and enforcement surrounding the July 4th holiday. We were able to ensure that Aramark took over management of not only the Zephyr Cove area, but the Zephyr Shoals area and then put in additional fencing—almost 5,000 feet of additional fencing—to be able to control traffic in that area. They hired additional staff, and then we worked with them to develop additional educational materials to make sure people knew that when they came to Tahoe, the 'Tahoe Way' was a clean beach. That was the thing that we set the scene for the Fourth of July holiday. As you can see in this graph, in 2023 we picked up over 6,000 pounds of trash. In 2024 we saw a 97 percent reduction in the amount of litter we picked up through these efforts that we piloted through this collaborative Destination Stewardship initiative and with our partners at the U.S. Forest Service with Aramark Corporation and also with Eco-Clean Solutions.

I wanted to show this picture to demonstrate last year's event at Zephyr Cove and Shoals. You probably saw something similar to this in the media last year. I showed this picture because I think it became a call to action for everyone in the community. This year we had a record amount of volunteers come out because of what happened last year to address these impacts. We had almost 800 volunteers come out on July 5th to see what they could do to help with our litter clean up, to help with those efforts, and to create a new ethos at the Lake and at this site. What we saw through our efforts was the 'Tahoe Way' is to leave the Lake better than you found it. The data we collected, especially at this particular site, really supported that. That is through the efforts of this partnership.

Three years ago, the League and the Forest Service, we started to see an uptick in the amount of litter we were finding. When we started to see that trend and with the support of TRPA, we established what is now known as the Blue Beach Program. This year was the first year we piloted that at Zephyr Cove and Shoals. With support from Aramark, we were able to install additional restrooms—almost 40 additional restrooms for the Fourth of July weekend. I am told many of those are going to be remaining throughout the season through collaboration we have done with them. We were also able to install that fencing I discussed; 600 feet of fencing will remain throughout the summer season in order to make sure we are directing visitation in the right places to reduce these impacts as well. We were able to install 40 additional trash cans and 3 additional dumpsters that will stay throughout the entire season. Also, additional educational signs showing people how to recreate responsibly, directing them to where appropriate trash receptacles and restrooms are—trying to guide people into doing the right thing, and having correct behavior. The work of the partnership—I do not want to say it is done. This is continuing; we are continuing to work with the Forest Service and Aramark at this site, and we are hoping to expand this program as well, so we are expanding this ethos, not only in this one site where we are piloting all of these three, very simple things—infrastructure, education, enforcement—we know that is what we needed to do, and we are really focusing on implementing that this year.

The other aspect of this is the new technology we have brought to Lake Tahoe, in partnership with Eco-Clean Solutions, because volunteers can only do so much above the sand. What we have been finding is there is some accumulation, especially of those macroplastics that Doctor Arienzo mentioned before. We are finding ten times in terms of the number of items beneath the sand. We are deploying this technology called BeBot at these different site locations throughout the Lake. This year, we were able to get a Lake Tahoe Restoration Act grant, and this is an EIP as well—I want to make sure that is emphasized. We are utilizing different technologies to actually prevent microplastics from ever being in the Lake. If we can capture those plastics at those larger sizes, then we can make sure we are not the third most contaminated lake for microplastics. This type of technology is really important. We are also working with DRI on making sure we are figuring out exactly what types of materials we are collecting as well because the League to Save Lake Tahoe prides ourselves on utilizing the data and utilizing the science to come up with different solutions.

We still have work to be done. We are excited about the progress we have seen this year. Through 11 years of cleanups, we have been able to utilize the data for different solutions. We were able to pass a plastic water bottle ban, a plastic bag ban, and a polystyrene ban in the City of South Lake Tahoe with the data we have collected through all of these successful cleanups. We have been able to reduce the amount of litter at this one site location, but we are seeing that as a trend as we start to move this program beyond Zephyr Cove and Shoals into areas such as Meeks Bay and working with the Washoe Tribe. We are hoping to continue this Program expansion with the Destination Stewardship Council with the work of

all of our partners with the different agencies to make sure we are working together to keep Tahoe blue. Thank you.

Chair Daly:

Committee, any questions? Senator Titus.

Senator Titus:

I do not have a question; I have a thank you. I think your group has done a stellar job and the difference—just with education, I think the majority of people will do the right thing given the right opportunity and having the foresight to put up the bathrooms, put up the signage, give directions. That is what I had complained about first, when it happened last year, they did not have garbage cans there. So they are going to not carry it out, which is ridiculous because you should be carrying stuff out. Recognizing where the opportunities are—that low-hanging fruit. How about we put out more garbage cans, maybe that will help. Thank you for what you are doing. It is nice to see it actually made a difference.

Ms. Patten:

Thank you.

Chair Daly:

Any other questions? Senator Scheible.

Senator Scheible:

I also agree. I think you guys have done an excellent job, and I appreciate all of these efforts. I am especially interested in the pilot programs to ban or reduce the use of certain plastics in particular places. You had noted there was a 97 percent reduction in the litter weight from 2023. Can you briefly tell us how you get to that number?

Ms. Patten:

We have all our volunteers fill out data cards for all of the materials that are collected. Every single time we do a clean-up, we tally all of the data from every cleanup, including how many plastic water bottles are collected, how many caps, what type of material everything is that is collected. We have done that for over a decade. We have been able to collate that information. We also have a trash dashboard on our website that updates on a biweekly basis so we can see if there is any difference in terms of what we are picking up—if we pass a plastic water bottle ban, are there less plastic water bottles, as an example. We are trying to track every single piece of trash we pick up, so we can advocate for the right solution in the right place at the right time.

Senator Scheible:

Is there a statistical method for a control as well? If I go down to the beach and I pick up 1 water bottle and then the 8 of us go down next week and we pick up 25 water bottles. You cannot compare those and say, oh no, there are now more water bottles on the beach because we had a much larger group of people seeing a much larger portion of the beach. How is that accounted for in these numbers?

Ms. Patten:

We count the number of volunteers as well, and we do acreage for each clean-up we do. We also assign particular areas, and we have Global Positioning System (GPS) locations for each specific area. Every time an area is cleaned up, you can, for example, adopt half-a-mile of beach and we have crews that go out and adopt that half-mile, and we collect the number of people, the number of hours they are collecting trash, and the type of materials collected. It is a pretty thorough process. There are differences in terms of—sometimes on the fifth of July, we have actually cleaned up less trash because of the weather, as an example. We try to control as much as we can.

Senator Scheible:

I think that is absolutely fantastic and that gives some context. I think that makes that 97 percent more powerful, because we all know statistics are only as good as the data you put in. We are not picking two different beaches on two different days in order to get this number we want. You have accounted for the other kinds of variances that can occur and give us spurious correlations. Whereas here, to the best of our ability, it really does appear to be causation. I appreciate that. I think it is incredibly helpful moving forward. Thank you.

Ms. Patten:

Thank you.

Chair Daly:

Any other questions from the Committee? Well, none for me on this one. Thank you for the presentation. With that, we will close Item IX.

AGENDA ITEM X—PUBLIC COMMENT

Chair Daly:

That brings us to Agenda Item X, which is our second period of public comment. Please remember to state and spell your name for the record and limit your comments to two minutes. We will time each speaker during the comment to ensure everyone has a fair opportunity. With that, do we have anyone wishing to provide public comment here?

Brett Tibbitts, previously identified:

I was not going to speak. There is no doubt this year that Zephyr Cove was better. I walked at 5:30 a.m. on Friday, July 5th from Skyland to Zephyr Cove. The lack of trash was amazing, but the space from Zephyr Cove to Warrior Way where they took parking off Highway 50 is a small area. So, all the parking got shifted down to Round Hill and Nevada Beach and the parking was worse than ever. They are parking on a three-foot bike lane on to the mountain side and people are opening cars. What we really need to do long term is to move everyone up to the Heavenly parking lots and bus them down. That is really the only solution that I can see.

I want to say this too. I hope on your tours—I guess they are done now—if you can, walk from Skyland to Zephyr Cove, the Dreyfus Estate area; it is the most pristine—some of the most pristine, beautiful areas of the Lake left. Aramark and the U.S. Forest Service want to put 150 new parking spaces, asphalt, right on the Lake. They want to put a big event center; they want to put camping and glamping. That has to be stopped. Aramark has been

fired from Crater Lake; they are not a good operator. They are in real trouble at Yosemite. It is just going to be a crime if this pristine area of the Lake is taken away. So, I just wanted to give another side to this. The East Shore is virtually unanimously against the expansion. So, thank you very much, but this year was 1,000 percent better at Zephyr Cove. You have to give credit to that.

Chair Daly:

You are slightly over the time limit but thank you.

Elisabeth Lernhardt, previously identified:

I live right next to the Dreyfus Estate. I can only say everything that was mentioned right now is correct. Dear Committee Members, dear Chairman, as the only elected oversight for the Agency responsible for the well-being of our cherished Lake, residents, and tourists your role is crucial. I am here to express my deep concern over the failings of the TRPA. Tahoe Regional Planning Agency has strayed from its missions by disregarding Nevada, California State laws, as well as its own Bi-State Compact. This Agency seems more focused on securing millions in federal grants for road diets and bike lanes than prioritizing environmental protection and public safety. They have neglected to encourage responsible tourism and environmental respect. There are no significant efforts to promote fire safety or reduce littering, save the private efforts. Where is the cooperation with the Forest Service to address the 20-year backlog of burn piles in the Basin? This issue was acknowledged last year by Valerie Hipkins, in her presentation attended by me and Julie Regan. The TRPA routinely disregards public input, favoring the interests of special interest groups and wealthy individuals. This has turned into another self-serving government entity. For instance, why do they approve massive underwater hockey pools in Incline for Elon Musk's cousin or sprawling compounds on the West Shore from Mark Zuckerberg. The proposed privatization of Homewood Resort further highlights these misguided priorities. Now, additionally, Caltrans is proposing a road diet for Stateline from the Y. Nevada's Department of Transportation's final proposal for Highway 50 in Nevada still includes a bike lane paralleling Highway 50. Please, this disregard for their mission is unacceptable. I completely support Doug Flaherty's proposal. Thank you.

Denise Davis, Lake Tahoe Resident:

I appreciated everyone's efforts in keeping the Lake clean and cleaning up after the Fourth of July. But I do not know if you noticed in the presentation where they said they noticed the uptick for three years and then it became a disaster and then action happened. We have citizens showing up and attending hundreds and hundreds of hours of TRPA meetings and other meetings, and we all are expressing our concern because we are seeing things, and we are not feeling heard. When I moved to the Lake in 1995, the TRPA restrictions were very strict, and that was due in large part because there was a lot of concern about restoring the health of the Lake. What a lot of us are concerned about is we do not want to recover from a disaster, or a mess, or pollution. We are trying to deal with it before we get to a disaster or a mess. So, when we are expressing our concerns about increasing tourism or increasing housing, it is not because we are trying to keep the Lake to ourselves. We are seeing what all of the other areas across the country are seeing—the results of the increased tourism and everyone's new love of the outdoors. So, we are just asking you to please hear what we are saying, respect our observations, and just let us feel heard. Thank you.

Chair Daly:

Not seeing any other in-person public comments, BPS, do we have anybody on the phone lines to provide public comment?

BPS:

Please press *9 now to take your place in the queue.

Pamela Tsigdinos, North Lake Tahoe, Nevada Resident:

Hello, I really would like to thank and applaud Dr. Monica Arienzo. She has given us a really eye-opening, important presentation. I want to underscore three specific things that came out of her research, and I look forward to reading her white paper. The first is that tire rubber, asphalt, and construction are among the top providers of microplastics and nanoplastics. Yet, at the same time, the Tahoe Transportation District and the TRPA are petitioning this Legislative Committee to create more parking lots and more opportunities to do construction and trail extension, which involve asphalt and a number of other rather large construction vehicles with very large tires—in addition to the number of people who are driving into the Basin itself. I urge you, strongly, for the purposes of future generations and the health of all who love Tahoe, please move those parking lots outside the Basin. People can board buses just as easily in Carson, Reno, and outside of Placer and El Dorado Counties. Think about what your decisions will be in terms of funding. Please move the asphalt parking lots and construction for the trails outside the Basin. Thank you.

Ellie Waller, previously identified:

To continue my opening public comment, TRPA Development and Implementation Priority (DP) 5.4 schedule of milestones to obtain a regional funding source for transportation projects and programs, and ongoing regional funding source or sources dedicated to transportation for the Tahoe region that is regionally expected to meet the needs set forth for its Regional Transportation Plan shall commence implementation no later than December 31, 2023. This has been discussed at the Governing Board. This was not achieved, in my opinion, with no consequences and probably not disclosed when requesting Lake Tahoe Restoration Act funds or Assembly Concurrent Resolution (ACR) 5 requests for \$7 million a year from federal funding sources for 20 years to help meet identified transportation funding shortfalls, which were identified by TRPA, the Tahoe Transportation District, et cetera. Then you have DP 5.6 adaptive management responses to be implemented after results assessment. If the milestones established for DP 5.4 are not attained, the standard of significance for land uses in the code of ordinances shall be no net unmitigated VMT, except for deed-restricted, affordable, or workforce housing. This measure will remain in effect until the funding sources are commenced. This begs the question of building moratorium, which was mentioned by a Nevada TRPA Governing Board member at a meeting. Again, when all else fails, the technical body will set a new target. Now I am going to address vocal minority. I wear that badge, as we have heard that moniker from a TRPA Governing Board member as well. This term and many others need to stop; TRPA Governing Board members should be held to a higher standard. (Agenda Item X A)

Chair Daly:

You are at your two minutes; can you wrap up please?

Ms. Waller:

Yes. Last sentence—Edgewood bends the rules with help from senior planners to their benefit with TRPA's blessings. Thank you.

Chair Daly:

Thank you.

BPS:

Chair, the public line is open and working, but there are no additional callers at this time.

The following written comments were submitted for the record:

- Heather Blumenthal (Agenda Item X B)
- Aaron Vanderpool (Agenda Item X C)
- Mike Vollmer (Agenda Item X D)
- TRPA Letter submitted by public individual (Agenda Item X E)

Chair Daly:

Thank you. With that, we will close Agenda Item X, our second period of public comment.

That brings us to Item XI, which is adjournment. That concludes our meeting for today. Thank you to all our presenters, members of the public, our staff, and everybody setting all this stuff up. Members of this Committee, before we adjourn, I would like to remind everyone that our next meeting is our final meeting and work session scheduled for August 16, 2024 at 1 p.m. That meeting will be held in the legislative building in Carson City and video conferenced to the legislative building in Las Vegas. The Lake Tahoe Summit is August 14th, everyone should have the Summit on their agenda as well. With that, we are adjourned.

AGENDA ITEM XI—ADJOURNMENT

There being no further business to come before the Committee, the meeting was adjourned at 5:12 p.m.

Respectfully submitted,

Christina Harper
Manager of Research Policy Assistants

Alysa M. Keller
Senior Principal Policy Analyst

APPROVED BY:

Senator Skip Daly, Chair

Date: _____

MEETING MATERIALS

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item II A	Doug Flaherty, President, Tahoe Sierra Clean Air Coalition, TahoeCleanAir.org	Written Public Comment
Agenda Item II B	Tobi Tyler, Tahoe Area Group, Sierra Club	Written Public Comment
Agenda Item II C	Kristina Hill, Lake Tahoe Resident	Written Public Comment
Agenda Item II D	Brett Tibbitts, Tahoe East Shore Alliance (TESA)	Written Public Comment
Agenda Item II E	Dana Tibbitts, TESA	Written Public Comment
Agenda Item II F	Elisabeth Lernhardt, Zephyr Cove Resident	Written Public Comment
Agenda Item II G	Ellie Waller, Nevada Resident	Written Public Comment
Agenda Item IV	Jennifer Carr, PE, CPM, DEM, Administrator, Nevada Division of Environmental Protection	PowerPoint Presentation
Agenda Item V	Dan Segan, Chief Science and Policy Advisor, Tahoe Regional Planning Agency (TRPA)	PowerPoint Presentation Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us
Agenda Item VI A	Dennis Zabaglo, Aquatic Invasive Species Program Manager, TRPA	PowerPoint Presentation Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us
Agenda Item VI B	Kevin Netcher, Aquatic Invasive Species Coordinator, Nevada Department of Wildlife	PowerPoint Presentation Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us

AGENDA ITEM	PRESENTER/ENTITY	DESCRIPTION
Agenda Item VII	Robert Larsen, Program Officer, Tahoe Science Advisory Council	PowerPoint Presentation Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us
Agenda Item VIII	Monica Arienzo, Ph.D., Associate Research Professor, Desert Research Institute	PowerPoint Presentation Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us
Agenda Item IX	Laura Patten, Natural Resources Director, The League to Save Lake Tahoe	PowerPoint Presentation Due to copyright issues, the handout is on file in the Research Library of the Legislative Counsel Bureau, Carson City, Nevada. For copies, contact the Library at (775) 684-6827 or email to: Library@lcb.state.nv.us
Agenda Item X A	Ellie Waller, Nevada Resident	Written Public Comment
Agenda Item X B	Heather Blumenthal, Tahoe Keys Property Owners Association	Written Public Comment
Agenda Item X C	Aaron Vanderpool	Written Public Comment
Agenda Item X D	Mike Vollmer, Tahoe Resource Conservation District	Written Public Comment
Agenda Item X E	Public Individual	Written Public Comment

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