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CA Department of Parks & Recreation
Sierra District
Cyndie Walck, CEQA Coordinator
P.O. Box 266
Tahoma, CA 96142

Subject: River-Golf Course PAAEA

Dear Cyndie Walck,

California's state parks face an uncertain future if the Parks Commission, Gov. Jerry Brown and the Legislature focus primarily on the financial and infrastructure woes of lands held in the public trust. Instead, there needs be equal emphasis on the protection of the natural resources that are the essence of our parks system. As well, the Parks Department could – and should – continue to lead initiatives to addressing climate change, water conservation and renewable energy sources.

State Parks has yet to adequately and vigorously include these important issues in their planning although they are clearly included in their mission statement. On the contrary, the agency is currently being pushed to promote a project that contravenes legislatively enacted park land protection, betrays natural resource preservation, and generally ignores the impacts of climate change affecting this project. The case in point is the proposed plan to move five holes of a golf course into Washoe Meadows State Park near South Lake Tahoe. This incursion is possible only because of an unprecedented move – pushed by State Parks for 2018 Parks Commission approval – to downgrade Washoe Meadows' state park status.

I was one of the scientists, as Director of the U.C.Davis Lake Tahoe Research Group that commented in 1972 TRPA meetings on the development proposal for the "Lake Country Estates Project". Lawsuits ensued until 1984, when the state purchased the land and assigned some 600 acres to State Parks to protect the "rare and irreplaceable natural resources" of what became Washoe Meadows State Park. State Parks has now threatened to betray that protection with the reinvented golf course proposal, presented under the guise of river restoration and Lake Tahoe clarity concerns.

I was dismayed to learn that a golf course expansion has again been proposed for this sensitive

riparian area despite its implied protection by state statute. I am very well acquainted with the area having walked over it with Dr Robert Leonard when the matter came up in 1972 and visited

it several times since. I am particularly impressed by the numerous fens and the surprise to find that trout were contained in some of them. My 1972 opinion remains substantially unchanged from that time and all aspects of my original testimony still apply and are worth repeating. This unique parkland must be protected for its significant environmental values and its important direct water course linkage to the Tahoe basin.

Having examined the proposal in the environmental documents, I have these general observations and objections related to Alternative 2B which includes the proposal to move up to 5 holes of the golf course into land west of the Upper Truckee River.

The selection of Alternative 2B as the preferred alternative proposal completely loses sight of the environmental ranking of the alternatives. As mentioned in the draft EIR volume 2 page 4-5, Alternative 5 is the environmentally superior alternative because it reduces land coverage the most among the alternatives resulting in lesser impacts on soils, hydrologic and biological resources. Alternative 5 is also superior because it would restore the largest area of SEZ and would provide some of the benefits of river restoration. For similar reasons, Alternative 3 is also environmentally superior when compared to Alternative 2B.

It is extremely important to minimize the use of fertilizers in the Tahoe basin, especially where irrigation is involved. In 1972 there were concerns about areas in the park with a high-water table. Application of irrigation water increases the risk of nutrient percolation to the water table. The risks of surface or subsurface transport of nutrients or other materials applied for golf course maintenance remains of particular concern today as we attempt to slow and we hope will eventually halt over half a century of well documented but gradual eutrophication of Lake Tahoe.

This year (2018) Tahoe has experienced the greatest loss of transparency on record since the cclear cutting of the basin to shore up the mines of the Comstock in the 1860's. The most logical explanation for the serious transparency loss has been clearly stated by scientists from the University of California at Davis who are based at the Tahoe Environmental Research Center. The best explanation is that the heavy rains flushed sediment to the lake which have accumulated in streambeds over the previous drought years and the legacy of bear, exposed land from the Angora fire. Not only has the resulting suspended sediment clouded the lake water but the associated nutrients have increased algal growth further contributing to lake's eutrophication and the associated loss of transparency. Unfortunately the golf course expansion would simply add to both sediment and nutrients loads already entering the lake. In addition, once a river course is altered it requires many years to return to a more natural, lower energy level which, over the years, results in a major pulse of bank erosion and associated sediment transport to the lake.

The proposal in Alternative 2B puts lake eutrophication and clarity at further risk from fertilizer run off from normal golf course fertilization and irrigation. Since I commented in 1972 about these concerns, Lake Tahoe has changed from a classic western lake with algal growth limited by nitrogen to a more co-limited system which is now a much more phosphorous sensitive system than it was 30 years ago. While phosphorous associated with both fertilization and sediment transport is now more important as a nutrient limiting factor, both elements are detrimental to the lake since they are a driving force for fertilization of algal growth and the accelerated eutrophication of Lake Tahoe.

Although the EIR states that in some areas the developer would increase the buffer between the golf course and the river, the topography of the golf course placement as outlined in Alternative 2B with greens in the uphill forest as well as in the flood plain and SEZ, provide a system in which is subjected to the normal hydrological force of gravity. This topography will move groundwater nutrient loads downhill to the river and the lake. The EIR also mentions a golf course path and bridges that are adjacent to the river, further compounding the issue. With the predicted extreme flows associated with climate change, we can expect an increase in the SEZs and zones subject to flooding. This could easily result in increased flushing of nutrients and any herbicides that might be used on the golf course as well as increased sediment transport by the river. As noted above sediment is a major concern since it reduces transparency and also is a source of phosphorus which adsorbs to particles and then desorbs once suspended in the lake water.

Land disturbance is of course a very important source of sediment and related phosphorus from the watershed. Alternative 2B involves a large amount of soil disturbance to grade the area for the golf course and associated golf cart roadways and maintenance avenues. Removal of trees, as planned for Alternative 2B, would also contribute to increasing nutrient and sediment yield from the watershed by exposing more surface to the impact of erosion from rain on the soil. Removal of existing vegetation is undesirable since it takes more years for any new plantings to become well establish due to the short growing season and snow cover.

The practices of water quality oversight and monitoring related to many golf courses have not kept up with the need for careful scientific monitoring with detailed testing by an independent party. Water quality is particularly threatened near a golf course, not only because of the use of fertilizers and other chemicals, but also because of the necessity for irrigation. A good aspect of Alternative 3 would be to reduce the amount of irrigation, nutrients and other chemicals that are routinely required for the golf course maintenance when compared to Alternative 2B. With any massive construction project, there needs to be verifiable demonstrations of water quality protection.

My colleague, Dr. Jerry Qualls, at University of Nevada, Reno, has previously commented on his concerns on the close proximity of a golf course to fens and other important wetland features. I concur with his concerns. They include an apparent limited understanding of the underground hydrology in these areas, which are still of concern even after considering the

small amount of additional information provided in the EIR. The extensive construction activity required by Alternative 2B would not only have potential impacts on the nearby fens and spring complex; but would also be detrimental to the air and water quality by virtue of the large amount of excavation, soil movement, and general construction activity. Alternative 3 would greatly reduce these potential impacts.

As a limnologist and President of the World Water and Climate Network (WWCN), I have continued to write and lecture on the effects climate change will have globally on our lakes and rivers (For example see Reference 1). Alternative 2B would not represent the best choice from the standpoint of climate change. In addition to the issue of extreme erosive flows and flooding mentioned above, other issues resulting from climate change include the effects of removal of C02 absorbing trees where they reduce erosion and may shade the river. The planned cutting of some trees in Washoe Meadows negates State Parks' lauded 2010 reforestation project at San Diego County's Cuyamaca Rancho State Park that was estimated to sequester the equivalent of more than 11,000 metric tons of carbon dioxide in the first 5 years per Reference 2. The draft Environmental Impact Report is further deficient because it does not provide an update on the details of the proposed deforestation of acreage in Washoe Meadows State Park that is planned for the purpose of moving the golf course onto the park land, and it does not state the number of trees to be removed or an upper limit of the number. The previous project specified removal of approximately 1640 trees of greater than 10 inches diameter breast height (and additional smaller trees). Similar details have not been provided in the EIR for the currently proposed project.

Climate change with ever increasing scientific evidence and unity can never again be ignored in any serious environmental document. State Parks should now address the already obvious need to adapt any and all projects to climate change and above all a steady global warming resulting in a much more fire dangerous environment. It should be addressed through analysis that meets rigorous scientific standards rather than political or fiscal expediency. The EIR is deficient because it does not provide justification for the planned deforestation action which would contribute to negative impacts in relation to climate change issues. For example, the issue with the use of irrigation water in a time when precipitation is predicted to decline and the potential for increase in the temperature of river water if irrigation water is taken from the river or if shade is reduced by riverside tree removal. The EIR simply does not justify converting a large number of acres of natural resource-based state park land into a golf course with its manicured greens and fairways. Further, the EIR does not provide information on how this is favorable for State Parks' climate change adaptive measures as promoted in the Reference 3 document.

The Reference 2 document indicates that "Expansion and protection of forested parks to store and sequester carbon, maintain biodiversity and aid in species adaptation to climate change are essential actions given the threat presented." The document also encourages protection of state park land and indicates that given California's pathbreaking global climate change strategy and the California Department of Parks and Recreation's position as the largest of the state park systems in the lower 48 states, the department should continue to be a model for others in the nation. However, if it is unable to protect its land from damaging development, and its managers over react to state budget-cutting frenzies, the agency's reputation potential for continuing as a custodian of California lands will be lost and global climate change problems exacerbated.

The golf course uses 60 million gallons per year from the river and aquifer. Removal of water from the river is not a good idea when it occurs at the time of minimum flows, when fish and other aquatic life is most vulnerable to heat stress. Climate change and associate droughts and floods will further affect the availability of water. A changing, warming climate will result in increased use of water, nutrients, and herbicides to maintain the golf course. A project with a smaller golf course footprint and lower water usage is for this reason strongly recommended.

I urge State Parks to select Alternative 3 or a still better alternative which protects rather than harms the health of the lake and not approve Alternative 2B which has the potential for so many negative environmental impacts outlined above. State Parks and the Parks Commission should carefully reconsider the negative impacts proposed in Alternative 2B that would decimate the heart of Washoe Meadows and negatively affect the quality of Lake Tahoe. It is my hope that State Parks will expand their overall vision by recognizing the reality of a changing, warming climate and the urgent need to adapt their policy accordingly by addressing both water supply and quality issues and by initiating renewable energy projects which are now so central to the future of the nation and the stewardship of our publicly held natural resources.

Sincerely,

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