

Outfitting athletes for the Winter Olympics

By Susan L. Sokolowski, The Conversation

At the first Winter Olympics, in Chamonix, France, in 1924, athletes competed in uniforms made from natural material resources like wool, cotton and leather; some had sport-specific modifications to aid in performance (like impact protection or warmth) or appearance (like a coat or skirt that would flare when spinning).

They did include colors and badges to signify the countries their wearers represented, but overall their dress could have largely passed for everyday clothes.

Since then, athletes' uniforms have changed substantially.

Read the whole story

Susan L. Sokolowski is the director and an associate professor for sports product design at the University of Oregon.

Brace yourself for more extreme weather

By Karen Kaplan, Los Angeles Times

Scientists have some sobering news about the future of our planet: Even if humans manage to meet the temperature target set forth in the Paris climate change agreement, record-

breaking weather events will become increasingly common around the world.

And that's the good part.

The Paris plan seeks to keep Earth's global average temperature within 2 degrees Celsius of pre-industrial levels by getting people to reduce their carbon emissions. According to the United Nations, 174 countries have signed on to the agreement.

However, the actual commitments made by these countries would probably allow the global average temperature to rise by as much as 3 degrees Celsius. In that case, extreme weather events would become much more commonplace almost everywhere on the planet.

Read the whole story

SLT struggles to cultivate workable pot regulations

By Kathryn Reed

The future of recreational marijuana and even expanded medicinal offerings in South Lake Tahoe remains hazy.

It might become a littler clearer after Tuesday's cannabis workshop being led by the City Council. The focus is on retail sales in the city limits. The meeting begins at 5pm Feb. 20 at Tahoe Beach Retreat.

The community cannabis subcommittee delivered recommendations to the City Council on Feb. 6. Not all of the electeds were

enamored with what was presented. That subcommittee has met at least twice since then. Members are expected to be at the workshop to share tweaks they've made, answer questions and provide information.

Some of the subcommittee recommendations include:

- All shops should sell marijuana for recreational and medicinal use.
- Delivery should be allowed if tied to a storefront, with GPS tracking.
- No outdoor cultivation.
- Maximum grows of 5,000 square feet.
- Local tax of at least 3½ percent of gross receipts, with tax question going to voters in November at the earliest.
- Allow three retail licenses.
- No one with a felony allowed to open a shop.
- Prefer local operators.
- Provide a place for people to consume the pot so it's not being done illegally at a tourist accommodation; and provide a shuttle service.
- Allow local law enforcement enhanced access to the facility and books.

Some of the issues brought up by the council and/or the public centered on the distribution regulations and whether to allow microbusinesses.

It is ultimately up to the City Council to decide what to do. It can adopt some, all or none of the subcommittee recommendations.

The state has a number of rules that are already in place that can only be changed by the city by making them stronger, more restrictive.

The council has an urgency ordinance in place regarding recreation pot. It was first approved in December and then extended in January by 10 months and 15 days per state law. The plan was to amend it on Feb. 6 to allow for development agreements. However, the city was provided with inaccurate legal advice by interim City Attorney Nira Doherty at the second January meeting. She said it would be fine to amend the ordinance in February. That would have been illegal. So, the ordinance as first approved is what is in effect.

The whole urgency ordinance could be replaced and then the urgency measure would be disbanded. This is the likely scenario as the city moves forward with the recreational ordinance.

Barton Health was asked to participate and chose not to.

"Barton participates in the Community Health Advisory Committee, a group of local health and wellness organizations facilitated by the Barton Foundation that identifies unmet health needs in the community. This group is working to make a recommendation to City Council that a portion of tax revenue generated by the sale of cannabis be used for education, awareness and prevention surrounding minors and cannabis use," Barton spokeswoman Jenna Palacio told *Lake Tahoe News*.

It's not clear if Councilman Jason Collin will be able to vote his conscience for the city or be beholden to the stance his employer takes if they are different.

While the subcommittee started with 15 members, there have only been 13 who have actually participated. The other two were Barton employees.

It's expected that recreational facilities would also be

allowed to sell medicinal marijuana. The current medical marijuana ordinance only allows for three such establishments in the city, with the council needing to sign off on all future ones. Today there is only one such business.

Tahoe Wellness Cooperative was one of the original three. It has been on tenuous footing with the city for a while. Litigation is ongoing regarding the validity of the permit. It keeps being a closed session discussion with the council, with no reportable action being taken Feb. 6.

Cody Bass, who runs TWC, told *Lake Tahoe News* that he presented a settlement agreement to the council at that meeting. The council didn't bite.

When asked why the agreement was rejected, Mayor Wendy David told *LTN*, "This information is privileged and confidential."

Bass is barely operating because he has not been able to restock his shelves with most products since the first of the year. This is in large part because the city told the state he doesn't have a valid permit. It's a technicality in that the court has allowed him to stay open as the dispute lingers.

"With regards to commercial sales of cannabis, Tahoe Wellness Cooperative has been engaged in commercial cannabis sales since we opened in 2009 and begin collecting sales tax, of which we've collected over a million dollars in sales tax to the state of California for commercial cannabis sales," Bass told *Lake Tahoe News*. "The [state Bureau of Cannabis Control's] statement is accurate and all commercial cannabis sales in the state of California will now be through for profit entities with no requirement to operate on a not for profit basis. The problem for TWC is that we cannot engage with other licensees as the bureau stated, therefore we cannot acquire the medicine our members require for their ailments, greatly hindering the products we carry for the sickest of our members. Something that happened only because of the chief of

police writing a letter. The misinformation that was spread around that the city can't authorize a for profit use because it is not written in their current ordinance is very inaccurate, and now even the city attorney agrees it's inaccurate. State law allows for local authorization through a 'permit' or 'other authorization,' which in this case is clearly the stay from the superior court, not a statement saying there is 'no authorized cannabis use in the city of South Lake Tahoe' as the chief wrote to the bureau."

That letter the police chief sent has nearly put TWC out of business.

Study: Cloud seeding really does work

By Matt Weiser, Water Deeply

Cloud seeding has become big business worldwide as a means to boost water supplies. Utilities and governments spend tens of millions of dollars on the process, which is especially common in Western states that rely on winter snowpack to meet year-round water demand.

The basic process involves spraying silver iodide from a plane as it flies through storm clouds. The silver iodide induces moisture in the cloud to form ice crystals, which then (hopefully) fall out as snow.

Some studies have estimated cloud seeding can boost snowfall by between 8 and 15 percent. This figure was derived by comparing snow depth on mountains beneath clouds that were seeded, compared to nearby mountains in unseeded areas

affected by the same storm. And it was deduced that seeding made the difference.

Read the whole story

Wearable technologies help Olympians

By Jaci VanHeest, The Conversation

As Fitbits and other wearable activity monitors change how regular people exercise and track their activity, they're having similar effects on how Olympians train and recover between workouts.

It's long been common for coaches to use video cameras to show athletes what their form and movements look like, to track progress, and to fine-tune exactly the right technique for, say, taking off for a jump or landing after a particular trick. But those only show what's going on from the outside.

Now, wearables, biometrics and apps analyzing their data are becoming much more common for athletes at all levels, giving indications of what's going on inside an athlete's body. I have worked as a sport physiologist with elite athletes for two decades, including with USA Swimming and U.S. Figure Skating; there's not yet much research about the results in figure skating, but wearables have helped coaches, athletes and sport scientists in other sports like swimming, cycling, soccer and volleyball.

Beating how fast?

The most basic measurement of how hard an athlete's body is

working is how fast her heart is beating; many wearable devices track their user's heart rate in real time. Trainers can measure how fast an athlete's heart beats during maximum exertion in a test on a treadmill or skating increasingly fast across the rink.

Then, during workouts, a coach can determine how hard the athlete is working by comparing his real-time heart rate to his maximum. When a person's heart is beating almost as fast as it can, that's pushing nearly as hard as a person's body can. When an athlete's heart rate is closer to half its maximum, the body is working at an intensity that allows the skater to recover from more demanding efforts. By tuning the workout to keep the athlete's heart rate in certain ranges for certain periods, a coach or sport scientist can optimize both exertion and recovery time. That way, the body's muscles and cardiovascular system are well trained and in top form for competition.

How many landings?

Figure skaters and many snowboarders and skiers are among those whose competitive performances include jumps – which means they have to practice intensively for each one. Those leaps, and their landings, exert enormous amounts of stress on athletes' bodies – ranging from eight to 14 times the person's body weight for a brief moment. A 100-pound skater who jumps 50 times in a typical daily workout for five training days is loading 160 tons of cumulative weight on her bones during that training week. The forces are absorbed by muscles and bones in the feet and legs, as well as the torso.

That's a lot of stress, and a lot of potential for injury. In figure skating, for example, 70 percent of injuries are from overuse – primarily from the accumulated effects of those impacts. Wearable monitors can track how many jumps a person takes and measure the rotational, gravitational and other forces involved in the jumps and landings. These readings can

help coaches ensure athletes develop strength and endurance while warning of potential for injury.

More sophisticated biosensors embedded in clothing keep track of an athlete's body temperature, movement and breathing rate and other data, also helping coaches fine-tune workouts to optimize performance.

Getting enough rest?

Crucial elements of Olympians' top performance come while away from practice sessions – including when they're eating and sleeping. Athletes can use smartphone apps to record what they eat and when, tracking how many calories they take in, as well as amounts of nutrients like proteins, carbohydrates and fats.

Similarly, sleep-tracking devices use accelerometers to track a person's movements – and sometimes heart and breathing rates – while they're asleep. The data can reveal indicators of how well the person rested, such as how much a person moved around in bed at night. That can help coaches choose appropriate workouts depending on how tired an athlete is.

Wearables make available all these data – about nutrition, exertion, stress forces, rest and recovery – that coaches and athletes alike can use to improve training, boost performance and, ideally, make it to the top of a medal podium.

Jaci VanHeest is an associate professor of education at the University of Connecticut.

Little consensus on VHR

issues in El Dorado County



El Dorado County residents on Feb. 12 vent about VHRs to staff and electeds. Photo/LTN

By Kathryn Reed

MEYERS – The conversation has not changed. Proponents: Vacation home rentals are a fact of life in a tourist town. Opponents: VHRs ruin neighborhoods.

This week Sue Novasel and Mike Ranalli, the two El Dorado County supervisors who make up the ad hoc VHR committee, got an earful from people about the issue. While some spoke to specifics about the Apple Hill area, most were Tahoe residents with local opinions. About 70 people filled the CCC room in Meyers on Feb. 12.

The electeds were joined by reps from the county's legal department and Chief Administrative Office. They along with fire and law enforcement are the internal team at the county working on the issue.

The complaints in the county are much the same as they are in South Lake Tahoe, with noise, trash and parking the primary

problems. Then there are those who think this is a commercial business, when it's not. And others believe the only place for a tourist is in a hotel.

Jobs and revenue for the county are some of the positives about the short-term rentals.

Monday's meeting was mostly an opportunity for county reps to listen to concerns. But it was stated by more than one attendee that it is time for action, which includes compromise.

On March 3 from 1-3pm at South Tahoe Middle School's multipurpose room the entire Board of Supervisors will reconvene. This is a continuation of the **Feb. 1 meeting** that was canceled because of overcrowding.

The county's working group has conceptually agreed to the following in regards to VHRs:

- Inspections for safety and compliance before a permit is issued.
- Doing an analysis to determine which county department should handle the issue.
- No warning for first violation.
- Increase penalties, with possible permit revocation after three incidents in an 18-month period.
- A maximum occupancy between 10pm and 8am.
- Exterior signage.

Those are just a fraction of the regulations on the table to be further vetted, then adopted, implemented and enforced.

Ranalli said the county is the process of rejiggering how it does enforcement on all issues, not just VHRs.

Novasel agreed more needs to be done about the whole issue, and that people need to feel safe.

Prepping skis for Olympics is art and science

By Julie Brown, Powder

For the world's most elite ski racers, when a win on the World Cup is a matter of hundredths of seconds, the right tune can make or break a competition.

Which is why every ski racer has a person whose job it is to make sure the skis are tuned to be as fast as possible. Lindsey Vonn's ski technician is World Cup wax room veteran Heinz Haemmerle. Ted Ligety works with Austrian Alex Martin. Last winter, Travis Ganong brought rookie Lukas Rottinger onboard.

The tune is in the details. It is as much about matching notes on time to temperatures and measurements as it is a feeling of what works, what does not, and most importantly, what the racer wants.

Read the whole story

Water conservation slipping in California

By Paul Rogers, Bay Area News Group

As California suffers through another dry winter, increasing fears that drought conditions may be returning, the state's residents are dropping conservation habits that were developed during the last drought and steadily increasing their water use with each passing month.

A new analysis of state water records by this news organization found California's urban residents used 13.7 percent less water last year in the first eight months after Gov. Jerry Brown declared an end to the drought emergency than they used in the same eight-month period in 2013. But in each of those eight months last year, the water savings dropped from 20 percent in May to 2.8 percent in an unseasonably dry December.

"We are having a very dry winter again," said Heather Cooley, water program director at the Pacific Institute, an Oakland nonprofit that studies water use patterns. "That wet winter we saw last year could have been one wet winter in a 10-to-12 year drought period. We have to be very cautious about our water use."

[Read the whole story](#)

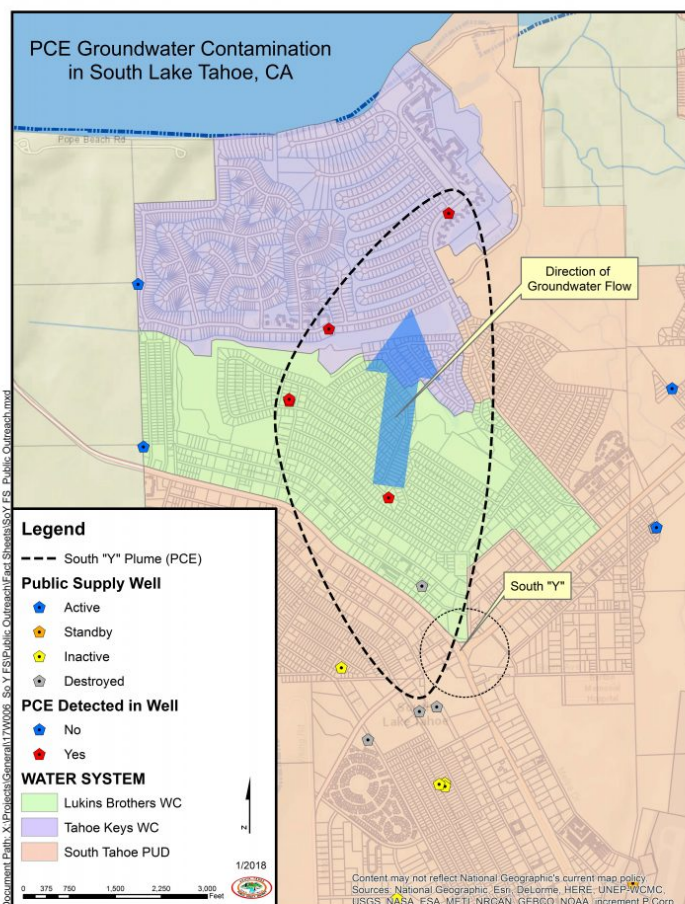
Toxic plume a concern for SLT

water companies

By Kathryn Reed

Cleaning up the groundwater contamination at the Y area of South Lake Tahoe is moving at a glacial pace.

And while more than 60 people last week attended a meeting at Lake Tahoe Airport about PCE, or tetrachloroethylene, not much new was presented by the three water agencies affected by the solvent nor the regulatory agency responsible for overseeing the cleanup.



The arrow designates the direction of the PCE plume, while the circle is the area it's believed to be in.
Map/STPUD

Representatives from South Tahoe Public Utility District, Lukins Brothers Water Company and Tahoe Keys Water Company all gave a spiel about the contaminant. Also at the meeting was Lahontan Regional Water Quality Control Board members. That state agency is responsible for determining who is responsible for the contamination, the cleanup method and overseeing that it is done.

While PCE has been written about for years by *LTN* and has been a known issue in town for decades, the plume continues to percolate beneath surface, polluting the groundwater. Remedies have been elusive.

Instead, the water companies have each had to shut down wells. Lukins is getting some of its water from STPUD.

Nothing new came out of the meeting. For the public, it was an opportunity to have all of these agencies in one room answering questions.

It was stressed by everyone that what flows from the spigot from each of the water purveyors is safe. There is no PCE in the water being delivered to any customer serviced by these three water companies. Someone would have to be regularly drinking PCE contaminated water for 70 years for there to be health risk, according to Lahontan.

STPUD accounts for 87 percent of the groundwater use on the South Shore, Tahoe Keys 10 percent, Lukins 5 percent, private wells 2 percent, and small water systems 1 percent.

It is believed PCE got into the groundwater from a dry cleaner at the Y. It is also used as a degreasing agent. It's heavier than water, so it sinks.

"Because it is not soluble in water, it can be more easily removed," Richard Solbrig, STPUD general manager, said at the meeting.

Nonetheless, it hasn't been removed. This in part is because the culprit, while identified as the Lake Tahoe Laundry Works, may not be the only contributor to the problem. Then the state has been slow in mandating action be taken.

The status today is that a consultant is putting together a feasibility study.

Sachi Itagaki, an engineer with Kennedy/Jenks consultants, said her firm will be looking at alternatives for soil and groundwater remediation, how to dispose of the contaminant, coming up with what needs to be built to remove the product, and establishing a cost to build whatever is needed as well as the operating expense. An implementation plan is also part of the contract.

The report should be done this summer, with another community meeting likely to take place then.

Cleanup will be done vertically and laterally.

In the meantime, the three water companies are working together and independently to ensure their product is safe as the toxic plume continues to hover in the Y area.

Dry, hot winter closes ski resorts, stalls wildflower blooms and revives drought fears

By Paige St. John, Rong-gong Lin II and Sarah Parvini, Los Angeles Times

TRUCKEE – In the Sierra Nevada, snowpack levels are running below even the darkest days of the drought, with cross-country ski resorts closed and mountain biking becoming the sport of choice until the snow returns.

In the Bay Area, cities like San Francisco, San Jose and Santa Rosa are experiencing the hottest starts to a year on record.

And Southern California remains in the grip of unprecedented dry and hot conditions, despite a weak storm that moved in Monday.

February is historically a wet month, but not this year. And the long-term forecast offers little hope for relief.

Read the whole story