



**SIERRA
CLUB**

The Sequoia



Ditch Trail near Twain Harte

**JOIN US FOR A HIKE
ANY THURSDAY**

Join us any Thursday.

*Contact Bob Asquith, Outings
Leader at bobasquith@gmail.com*

*Look for photos from recent out-
ings on our "Hiking the 120" page
on Facebook.*



Hiking near New Melones Reservoir

Further Adventures of Sierra Club Hiking Group

By Bob Asquith

We enjoyed fine weather on almost all our hikes in the first quarter of 2019. A good omen to be sure. We spent a morning at New Melones reservoir with Ranger Mike covering a part of the lake we had not visited before. Even in winter, there was much to learn. Next, we headed into the Tuolumne River watershed near Buck Meadows. We encountered bright skies, crisp temps and yes, some late season snow – just for variety.

March found us in Twain Harte exploring the Tuolumne Main Ditch. It is still in use today, though it is a fraction of its former self. And, of

course, we found great eats in Twain Harte. We continued our exploration of the foothills in Murphys by hiking along Six Mile Road with a stop for the bloomfest at Ironstone Vineyards – they have thousands of bulbs all blooming at the same time. Then on to lunch and ice cream at JoMa's to complete a great day.

Finally, we tracked a new trail between Rush Creek and the Mighty T, just west of the Big Oak Flat entrance to Yosemite. Ahead, we will continue our months long chase of wildflowers.

Join us! • Contact: BobAsquith@gmail.com



Hiking group explores a new trail near Hwy 120 Big Oak Flat Entrance to Yosemite.

INSIDE

**BACKCOUNTRY WATER
CONSIDERATIONS
PROTECTING THE
WILDLAND URBAN INTERFACE**

A Drop to Drink

By Todd Stolp



WE DON'T OFTEN THINK ABOUT needing a recipe for drinking water. However, for those of us who look forward to backpacking trips in the high country in the coming months, now may be a good time to review the recommendations of experts about how to avoid stomach ailments while drinking and bathing in that luscious, cold, Sierra stream water at the end of a day of hiking.

In Tuolumne County, biologists with the Central Sierra Environmental Resource Center (CSERC) have spent 10 years sampling streams in the Stanislaus Forest and on private lands across the foothills. CSERC's focus has been to locate stream segments with unacceptably high levels of fecal coliforms and E.coli. These bacterial tests are used as indicators to identify potential fecal-sourced contamination by infectious organisms like Giardia, Cryptosporidia, hemorrhagic E. coli, Shigella, or certain enteric viruses, all



Pumping water near Lake Atwood in the High Uintas

of which can pose risk whether water is used for drinking, bathing or recreation. This winter and spring CSERC staff continue to sample foothill streams across the Mokelumne, Stanislaus,

Tuolumne, and Merced river watersheds. The bacteriologic data collected by CSERC and by other researchers over the past 20 years has confirmed that Sierra streams are at highest risk of fecal contamination where livestock graze in proximity to waterways.

Observational studies have been done to estimate the frequency of what has been called "Wilderness-Associated Diarrhea"

(WAD) in backpackers visiting the wilderness. One retrospective study in 2007 placed the incidence of WAD at one case out of 5000 person-days in the wilderness. Fortunately, this incidence has been decreasing from an estimate in 1992 when 3% to 5% of wilderness travelers

were estimated to experience WAD. These improvements may result from the availability of improved filtration devices and greater adherence to recommended disinfection practices by high country visitors, since bacterial testing of high country water has continued to identify high risk areas.

According to the California Department of Public Health, Division of Communicable Disease Control, in pristine protected watersheds, where pollution caused by livestock and humans is minimal and for which the main concerns are bacteria and cysts, mechanical filtration alone can provide adequate surface water disinfection. Many commercial hand pumping filters are available now to meet this need. Careful filtration of drinking water, of course, must be accompanied by following appropriate filter maintenance, careful hand washing, cleaning of food utensils, food storage and appropriate hygiene when managing waste.

For water recovered from areas near where livestock have been grazing, additional treatment with boiling or treatment with chorine or iodine should be considered to prevent gastrointestinal illness. Ultraviolet purifiers are also available, but the electronics have been known to fail in some devices under trail conditions. Difficulties may be encountered with assuring that livestock grazing has not been underway up stream from where one collects potential drinking water, so caution should be practiced in deciding what level of water treatment is necessary in certain areas.

Bathing and swimming also need to be considered. In addition to thoughtful selection of a swimming hole, it is most important that inadvertent swallowing of water doesn't occur during a swim. Drying off immediately after stepping out of the water is also helpful if a snack or drink is to be consumed shortly afterwards. ■



Cows grazing near flowing water.

Residential Construction Requirements in the Wildland Urban Interface

By Keith Martin

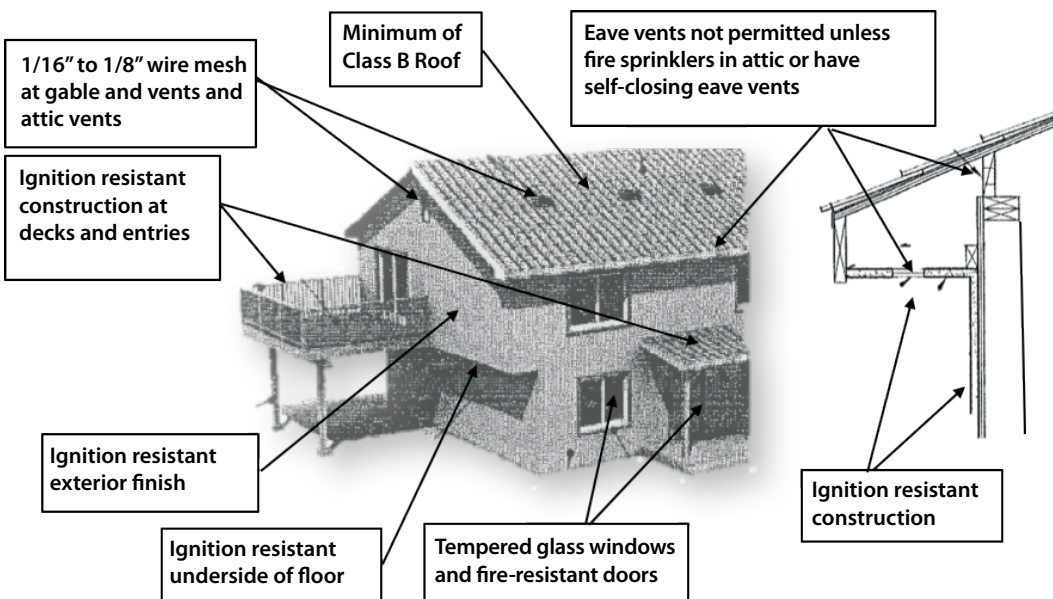
REQUIREMENTS FOR BUILDING in the Wildland Urban Interface Zone (WUI), as defined in the California Building Code and California Residential Code, changed significantly after 2008. In addition to fire sprinklers for the inside of the house (required statewide for all residential construction) fire sprinklers are also required in the attic if non-self-closing attic vents are installed. Homes constructed before the code changed are not required by code to be upgraded, however: if the structure is substantially damaged and needs to be repaired, the owner may need to comply with the current code. The effectiveness of these code changes and whether they provide advantages when retrofitting pre-2008 residences needs to be investigated.

Currently there are no standard retrofitting recommendations for pre-2008 homes. As WUI communities react to recent fires, it would be beneficial to have building department approved standard retrofitting plans available to owners. Acknowledgement of the effectiveness of these retrofits by residential insurers is crucial to stemming the current tide of insurance cancellations. The recommendations for retrofit plans should be based upon testing of the proposed retrofits and review of homes damaged and lost in recent fires. Review of video footage taken during the fires could also be useful in determining how homes were ignited. One

area of retrofitting, with potentially significant benefits, might be the installation of fire-resistant undersides and self-closing vents on roof eaves. An ember can be carried more than a mile from a fire on high winds. Studies have shown that during high winds, such as red flag weather events, the wind speed into the attic at the eave vents of pre-2008 homes can be as high as several feet per second. The entry of these embers into the attics might explain why so many homes in Paradise burned while the adjacent trees did not. Televised video footage seems to confirm attic ignition as the initial source of fire in some of the homes in Paradise.

Residents living in the WUI, as well as citizens statewide, should pressure their Congressional representatives to sponsor federal legislation to fund research into the patterns of recent fire damage and the efficacy of various retrofitting proposals. Relying solely on fire sprinklers might not solve the problem: concerns have been expressed about the ability of community water systems to provide adequate pressure for fire sprinklers during mass fire events. As we face another fire season, and as insurance cancellations continue to rise, the time to act is running out. ■

Keith Martin is a licensed Structural Engineer, a member of the Ad Hoc Fire Committee of the Structural Engineers Association of California, and our Tuolumne Group Outings Chair



MEMBER PROFILE



Robert Derlet MD:

Personal & Planetary Health Provider

By Todd Stolp

It is probably no surprise to anyone who knows Dr. Robert Derlet that he selected Emergency Medicine as his medical specialty. Emergency Medicine is on the front lines. It is a hands-on field of medicine that deals with some of the most catastrophic moments in health care. Consider, then, that Dr. Derlet also was a candidate for the 4th Congressional District in 2016, that he served as the director of the Emergency Room at the UC Davis Hospital for many years, that he continues to provide care on a part time basis today to some of the most underserved residents of Tuolumne County, and that he spearheaded some of the largest efforts to screen High Sierra watershed water quality over the past thirty years and it becomes obvious that this is a person with extraordinary knowledge, courage and dedication.

Dr. Derlet graduated from UCSF medical school and completed his residency at UC Davis at the dawn of the specialty of Emergency Medicine (EM). He was instrumental in the birth of the EM residency at UC Davis in 1990. Bob points out that it was the "pressures of medical school and residency, the lack of money for entertainment, and a yellow VW bug that drove me to seek solitude in the Sierras during my rare time off." Since that time, Bob has hiked virtually every trail in the Emigrant Wilderness and Yosemite National Park. Dr. Derlet met his wife, pediatrician Dr. Mikla (Nojonen) Derlet, at a Wilderness Medicine conference on the Klamath River, leading to their marriage in 2005. Over the years, Bob has taught a long list of wilderness medicine courses around the world. It is our great fortune to have Dr. Derlet as a member of the Tuolumne Group of the Sierra Club.



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Tuolumne Group Executive Committee meets monthly at the Tuolumne Utility District boardroom, 18885 Nugget Road in Sonora. For information on attending our next meeting, contact Trudy Craig at the email listed below.

Co Chair Trudy Craig, broadinski48@yahoo.com

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Treasurer Kevin Rice, kjrice@ucdavis.edu

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Newsletter Design Joe David, jd@daviddesign.com

Secretary & Programs, Open Positions

We welcome your input and feedback.

NOTES & UPDATES

>>>> APRIL EVENT: "YOU ARE WHAT EATS YOU"

If you would like to learn fascinating secrets about local vector borne organisms and their transportation systems – mosquitoes, mice, ticks, fleas and perhaps even “kissing bugs” – join us on **April 24th, at 7:00pm at the Sonora Library** when the Sierra Club Tuolumne Group hosts “**You Are What Eats You – Vector Borne Diseases of the Sierra Region**” by Michael Niemela MS, California state biologist with the Vector Borne Disease Section of the California Department of Public Health.

INTERESTED IN RECEIVING NEWSLETTER VIA EMAIL?

If you would like to receive our newsletter via email either instead of, or in addition to our printed edition, email your request to mail@sierratuolumne.org.

FRIENDS, COHORTS, PARTNERS & ALLIES

Friends of the Lower Calaveras River (est. 2008) is an advocacy, public outreach and education, environmental monitoring and restoration group originally focused on the Calaveras River from Hogan Dam to Stockton. Now known as Friends of the Calaveras River we are interested in connecting our work with those interested in the upper Calaveras watershed. Contact James Marsh at momscbm@sbcglobal.net

GET INVOLVED

Interested in getting more involved with our Tuolumne Group? There are many ways to volunteer for whatever time you are able to give. Contact Co-Chair Trudy Craig by email at broadinski48@yahoo.com to find out ways to help. Forest hikes and projects occur throughout the year. Find out more on our website: www.sierratuolumne.org

