



**SIERRA
CLUB**

The Sequoia

Join Us on Zoom Thursday, February 24th
with Guest Speaker Dana Nuccitelli
Climate Change in the Mother Lode

INSIDE

TALKING ABOUT CLIMATE CHANGE

STANISLAUS NATIONAL FOREST
CLIMATE TREND SUMMARY

LOCAL CONSERVATION UPDATES

Speaker, Dana Nuccitelli

is the Research Coordinator for Citizens' Climate Lobby, a nonprofit, nonpartisan, grassroots advocacy climate change organization focused on national policies to address climate change.

Their consistently respectful, nonpartisan approach to climate education is designed to create a broad, sustainable foundation for climate action across all geographic regions and political inclinations.

By building upon shared values rather than partisan divides, and empowering supporters to work in keeping with the concerns of their local communities, they work towards the adoption of fair, effective, and sustainable climate change solutions.

Learn more at:
citizensclimatelobby.org

Climate change is happening now.

What can we expect in the Sierra Nevada?

What is the current state of climate legislation?

What can you do about climate change?

On Thursday, February 24, 2022 at 6:30pm the Tuolumne Group of the Sierra Club will host acclaimed author and environmental scientist Dana Nuccitelli to learn more about **Climate Change in the Mother Lode – and How We Can Advocate for Change**. Please join us via Zoom for Dana's informed insights into how climate change is impacting our region. Presentation will be followed by a group question and answer period.

Dana Nuccitelli is an environmental scientist and climate journalist who has written extensively for *Skeptical Science*, *The Guardian*, *Yale Climate Connections* and other media. He also published the book *Climatology versus Pseudoscience*, and has authored ten peer-reviewed climate studies. Dana is the Research Coordinator for Citizens' Climate Lobby.

Join us on zoom for this informative presentation.

Send an email to:
tsclimateaction@gmail.com
to request a Zoom invitation in advance of this event.



photo: The Luupe-2021

Talking About Climate Change Let's Make it Personal and Local

Tuolumne Group Climate Action Committee



Sierra Club Climate Action Group

Climate change is here, bringing heat, drought, wildfires and smoke to our Mother Lode towns, and extreme weather across the planet. We believe that the best way to address climate anxiety is to talk solutions, inspire one another, and get connected with a climate action community.

Interested in joining other members for collective action? We'd like to hear from you. Email us at tsclimateaction@gmail.com. Stay connected to local climate action by clicking the climate action blog at www.sierratuolumne.org. Together, we can make a difference.

I was listening to a climate change webinar for Sierra Nevada residents when suddenly I heard, “we can expect 6-9 degrees of warming for our region.” Wait, what? The presenter spilled out that sentence as if it were common knowledge, so I had to check the facts.

I wanted to find a climate change report that was local instead of a generalized view of California. To peer into the future of Tuolumne and Calaveras Counties, I found the *Stanislaus National Forest Climate Trend Summary*, prepared by the US Department of Agriculture. This forest surrounds us or lies close to our homes.

You can read and download the full USDA report on our Tuolumne Group website's climate action blog at sierratuolumne.org. It documents what's changed already in the past few decades, and explains what climate models project for the future in our region.

Keep talking about climate change.

As we wrote in last fall's newsletter, we can all **create urgency** by talking about what's already happening and by making climate projections personal and concrete. This report does both. It's long – over 70 pages – but it provides data to help you engage people who have been on the sidelines about climate change. It will help you paint a picture of what climate change means for our homes, families, and local communities.

We've put together a quick summary of this report that you can use as you talk with friends, family, neighbors, and politicians.

Human activity is causing climate change.

97% of climate scientists agree that accumulating carbon dioxide and other heat-trapping “greenhouse” gases are driving climate change.

Future climate is based on collective choices – starting now.

For this report, projections were built off two scenarios: 1) business as usual with atmospheric CO₂ rising steadily through 2100; and 2) rising greenhouse gases through 2040, then a decline of about 45% by 2100. Most projections are shown as ranges.

How hot will our days get?

Our annual average maximum temperatures are projected to increase by 6 to 10.5 degrees Fahrenheit by 2100. By the end of the century, July/August temperatures in Sonora will feel like Las Vegas today. Our communities will be averaging 51 days per year of extreme heat (98th percentile of the location's temperature range). In Sonora, for example, we'd see an average of 51 days per year at 103.7 degrees Fahrenheit or above.

How hot will our nights get?

Annual average minimum temperatures are projected to increase even faster: 7.3 to 11.3 degrees Fahrenheit by 2100. By the end of the century, average minimum December and January temperatures will be comparable to today's temperatures for the months of April and October.

Diminishing snowpack.

As temperatures rise, we'll have more days and nights above freezing. As more precipitation falls as rain, future snowpack is expected to decline 60-85%. The snow that falls will melt earlier in the season, so less water will be available to plants and lower streams later in the year. This also means less water for people and agriculture, because snowpack provides 30% of California's water supply.

**JOIN US ON ZOOM THURS, FEB. 24TH AT 6:30
FOR GUEST SPEAKER DANA NUCCITELLI,
CLIMATE CHANGE IN THE MOTHER LODE
EMAIL: TSCLIMATEACTION@GMAIL.COM
TO REQUEST YOUR ZOOM INVITATION**

The snowline will rise.

By the time temperatures increase by 7.2 degrees F, regions below 6560 feet are expected to be snow free.

Extreme drought and precipitation events.

California has always had wide swings in precipitation, with very wet years and very dry years, but this variability will increase. We'll see more atmospheric rivers (and the flooding they can cause) and more intense droughts. By the end of the century, extremely dry years will become roughly 1½ to 2 times more common, while wet extremes will become 3 times more common. Extremes are normal now and will become ever more common.

More trees will die.

Warmer, drier conditions stress our trees and make them vulnerable to severe bark beetle outbreaks. Tree mortality is expected to increase by 15-20% for every degree of temperature increase.

Impacts to fish, birds, and wildlife.

Stream temperatures will rise, creating inhospitable conditions for cold-water fish. 36% of California bird species are now rare, threatened, endangered or experiencing significant decline. We can expect a major reshuffling of avian and wildlife communities, as populations expand, shrink, or migrate due to changing conditions.

Longer & more severe fire seasons.

The cascading effects of higher temperatures, drier conditions, reduced snowpack, increased tree mortality will lead to fires that are more frequent and severe. In the Sierra Nevada, annual average acres burned are projected to double or quadruple by the end of the century.

There is hope, collective action will make a difference to the future.

As you talk about climate change, it's important to emphasize that there is hope. **Humans are causing climate change, and humans can stop it.** Many solutions have been proposed to reduce greenhouse gas emissions, we need to do them all.

Individual choices, however, can never match the power of collective actions. We need federal policies to promote clean energy and phase out coal and other fossil fuels. Be sure to contact your representatives and let them know that climate science is NOT 'suspect science.' Be sure to vote you convictions. Amplify your voice by joining organizations that are working on climate change.

Here's our challenge:

Talk about climate change with one new person every month this year. Just start with a topic of common interest (children, fishing, skiing) or common concern (flooding, fires, dying trees, drought) and share what you know about climate change. We hope you spend the year talking, talking, and talking about climate change.

**LOCAL
CONSERVATION NOTES**

**SERAL Forest Treatments
Project Update**

The Stanislaus Forest held public meetings in January to present information about the agency's plan for the SERAL Project. That Project would authorize prescribed burning, thinning logging, and biomass fuel removal across a large portion of the Stanislaus River watershed in the national forest. The Forest staff will consider input submitted during the public comment period and make adjustments before potentially moving to approve the project in March or April.

**Sierra Nevada Red Fox
New Endangered Species**

For years state and federal agencies have recognized the plight of the Sierra Nevada red fox, which has an extremely small population. Years of studies have concluded that the fox deserves Endangered Species status, which was finally granted for the fox in September by the U.S. Fish and Wildlife Service.

**Yosemite Construction
Will Cause Delays**

Park Service officials warn visitors to expect parking challenges and traffic delays this summer due to a wide range of important restoration and construction projects in the Park. The campground at Tuolumne Meadows will be closed all summer as part of a major restoration effort. Bridalveil Fall will continue to be closed while major renovation is done for parking and trails, and a new welcome center in the Valley will result in additional parking spaces closed for the summer. The Park is eager to use long-delayed funding to repair deteriorating infrastructure and make the Park's road system more efficient.





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TUOLUMNE GROUP

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**SIERRA
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TUOLUMNE GROUP

Due to COVID-19, the Tuolumne Group Executive Committee is currently only meeting by phone or with online sessions. For information on how to participate in the next ExCom call, contact Elaine Hagen at the email listed below.

Chair Jim Bearden, jbearden@ieee.org

Secretary-Treasurer

Karen Swanson, tuolumnegroupsecretary@gmail.com

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Membership Elaine Hagen, elainehagen@att.net

News Editor Joe David, jd@daviddesign.com

We welcome your input and feedback.

NOTES & UPDATES

THURSDAY, FEB. 24TH ZOOM CLIMATE CHANGE PRESENTATION

Join us online Thurs. February 24th at 6:30pm for a Special Zoom Presentation by author and environmental scientist Dana Nuccitelli to learn more about *Climate Change in the Mother Lode – and How We Can Advocate for Change*. **Details on page 1.**

SIERRA CLUB OUTINGS

Sierra Club Tuolumne group outings have been on hold during the COVID pandemic. For the most current information regarding scheduled hikes and current guidelines for Sierra Club outings, go to the outings page on our website: www.sierratuolumne.org.

GET INVOLVED • TAKE ACTION

Today, years of hard-fought environmental protections are under threat—and to influence governments and businesses, we need everyone to speak up and shout out. Explore how you can get involved: go to www.sierraclub.org/take-action

RATHER RECEIVE THIS NEWSLETTER VIA EMAIL?

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

The Sequoia Newsletter is designed to provide local Sierra Club members with a trusted source of information on people, events, and issues impacting our environment. Members can also find additional information on our updated web page: www.sierratuolumne.org.

