



Climate Change: What Does It Mean for Southern California?

Presented by the University of California Thelma Hansen Fund

Agenda

Each webinar will open to participants 5 minutes before 4:00 PM.

Tuesday, April 27

- 4:00 PM **Welcome**—Annemiek Schilder, PhD, Director, UC Cooperative Extension (UCCE), Ventura County and UC ANR Hansen Agricultural Research Extension Center (HAREC)
- 4:05 **Message from Assembly Member Steve Bennett, District 37**
- 4:10 **Climate Change in California: A Drier or Wetter Future—or...Both?**
Daniel Swain, PhD, Climate Scientist, UCLA Institute of the Environment and Sustainability, NCAR, and the The Nature Conservancy
- 5:05 **UC Climate Stewards: Fostering Resilience in California Communities and Ecosystems**
Sarah-Mae Nelson, MS, Academic Coordinator, UC Climate Stewards
- 5:28 **Closing**—Annemiek Schilder, PhD

Wednesday, April 28

- 4:00 PM **Welcome**—Annemiek Schilder, PhD, Director, UCCE/HAREC Ventura County
- 4:10 **Climate Change Trends and Impacts on Agriculture in California and Ventura**
Tapan Pathak, PhD, CE Specialist in Climate Adaptation in Agriculture, UC Merced
- 4:55 **Heat, Wind, Freeze, Wind, Repeat**
Ben Faber, PhD, Soils, Water & Subtropical Crops Advisor, UCCE Ventura County
- 5:15 **Overview of the Healthy Soils Program**
Nicki Anderson, Community Education Specialist, UCCE Ventura County
- 5:28 **Closing**—Annemiek Schilder, PhD

Thursday, April 29

- 4:00 PM **Welcome**—Annemiek Schilder, PhD, Director, UCCE/HAREC Ventura County
- 4:10 **How Can We Address the Growing Wildland-Urban Interface Problem in California?**
Max Moritz, PhD, CE Wildfire Specialist, UC ANR and Bren School of Environmental Science & Mgmt., UC Santa Barbara
- 4:55 **Fire and Rangelands: Impacts on Ventura County Livestock Agriculture**
Matthew Shapero, MA, Livestock & Range Advisor, UCCE Ventura & Santa Barbara Counties
- 5:10 **SAFER, Sustainable and Fire Resistant Homes & Landscapes**
Sabrina Drill, PhD, Natural Resources Advisor, UCCE Ventura & Los Angeles Counties
- 5:28 **Closing**—Annemiek Schilder, PhD



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Biographies of Presenters

Nicki Anderson brings nearly 15 years of experience working with food system resiliency and regenerative agriculture to her new position at UC Cooperative Extension in Ventura County. With nearly ten years of experience as a full-time farmer, Nicki is always keen to connect the context of community health to food production and access. She is excited to be working on the development and execution of the Healthy Soils Program, helping farmers first and foremost.

More about Nicki Anderson's presentation: What is the Healthy Soils Program and what has it accomplished so far? A look on how this program plans to continue working for California farms and farmers.

Dr. Sabrina Drill is the Natural Resources Advisor for UC Cooperative Extension in Los Angeles and Ventura Counties in Southern California. She helps agencies, organizations, and communities get, understand, and help co-generate the scientific information they need to restore urban streams and habitats, manage invasive species, prepare for and recover from wildfires, and use urban nature to increase resilience to extreme weather and climate change. She serves on the Steering Committees for the National Urban Extension Leaders and the National Extension Climate Initiative. She has a Ph.D. in Geography and a MS in Biology, both from UCLA, a BS in Biology from Virginia Tech, and an AA in Natural Science from Simon's Rock of Bard College.

More about Dr. Drill's presentation: Creating safer landscapes in fire-prone areas starts at the home. How do you increase the likelihood of homes surviving fire at the structure and near-home landscaping scale.

Dr. Ben Faber has degrees in Biology, Pomology and Soil Fertility. He has been a University of California Farm Advisor in Santa Barbara and Ventura Counties since 1989. His work covers issues associated with soil, water and subtropical crops. These topics include the pests and diseases of various crops. Additionally, issues of managing soil and water to improve production and reduce soil and water degradation. The goal is to have a profitable agriculture that optimizes our people and natural resources. Topics in Subtropics Blog: <http://ucanr.edu/blogs/Topics/> Topics in Subtropics Newsletter: [http://ceventura.ucanr.edu/news/Topics in Subtropics/](http://ceventura.ucanr.edu/news/Topics_in_Subtropics/)

More about Dr. Faber's presentation: What is going on with the weather and what is the impact on farming? Coastal farming has enjoyed a fairly constant environment over the years, disrupted by the occasional freeze and the regular occurrence of devastating Santa Ana winds. Now, thrown into this pattern, are devastating heat waves which affect cropping patterns and cause significant crop damage and loss. What are these changes and consequences?

Dr. Max Moritz received his PhD in biogeography in 1999 and has been a statewide wildfire specialist with UC Cooperative Extension since 2004. He is also an adjunct professor at the Bren School at UCSB. Much of his research is on the dynamics and effects of fire regimes at relatively broad scales. He has used different spatial approaches to analyze landscape fire patterns, including mapped drivers of fire hazard, projections of climate change effects on fire activity, and home loss studies. Through his extension activities, Max aims to translate and apply scientific information for sustainable planning and management decisions on fire-prone landscapes.

More about Dr. Moritz's presentation: With increasing area burned and homes lost in California, we must somehow adapt to, and coexist with, wildfire in the coming decades. A review of what we've learned about incorporating human development into future projections of wildfire and mitigation of losses, particularly as they relate to stronger land use and urban planning.

Sarah-Mae Nelson is an educator, science communicator, curriculum developer, and climate change communication specialist who draws on her background and interest in interpretation in informal science education centers. She has a MS in Climate Science and Policy from Scripps Oceanography, UC San Diego and a BS in Marine Biology from UC Santa



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Cruz. She serves as Communications Director for the National Network for Ocean and Climate Change Interpretation (NNOCCI) and Digital Communications Lead for the United Nations Education, Communication, and Outreach Stakeholders (ECOS) community. In 2015, Sarah-Mae was nationally recognized by President Obama as a Champion of Change in Climate Education and Literacy.

More about Sarah-Mae Nelson's presentation: The UC Climate Stewards course of the UC ANR California Naturalist Program is a model education and service initiative that prepares participants to engage within their communities in integrated climate solutions, participatory science, and communication to advance community and ecosystem resilience.

Dr. Tapan Pathak is a UC Cooperative Extension Specialist in Climate Adaptation in Agriculture at UC Merced. His statewide research and extension focus is on translating weather and climate information into useful agricultural decisions to support systems tailored to grower needs. Prior to joining the UC in 2015, he was a Cooperative Extension faculty at the University of Nebraska, Lincoln. His PhD, MS, and BS degrees are in agricultural engineering.

More about Dr. Pathak's presentation: Current and future trends in climate including temperature, precipitation, snowpack, extreme heat, frost risks, etc., and how these trends could potentially impact agriculture in California and regionally in and around Ventura.

Matthew Shapero leads the Livestock & Range program in Ventura and Santa Barbara Counties. The program provides locally based extension, education, and applied research focused primarily on the interactions of livestock production systems with rangeland ecology. More specifically, it addresses issues related to the management of rangeland ecosystems, including wildlife habitat, invasive plants, wildland fire, prescribed fire, soil health, and watershed health. Prior to starting as an advisor, Matthew worked for the Rangeland Planning & Policy and the Rangeland Ecology labs at the University of California, Berkeley, and worked as a graduate student researcher at the UC Agriculture and Natural Resources Sierra Foothills Research and Extension Center. Matthew also has experience in small-scale, grass-fed meat production, working as rancher in the Sierra Nevada foothills between 2010 and 2016.

More about Matthew Shapero's presentation: While the hills that surround our urban centers in Ventura County might appear from a distance as wild and uncultivated, many of them are in fact working cattle ranches. These are the lands that are most directly impacted by Ventura County's frequent wildfires. What is the history of wildfire in the county, what are the impacts on livestock agriculture, and how we plan to mitigate impacts in the future?

Dr. Daniel Swain currently holds joint appointments as a climate scientist within UCLA's Institute of the Environment and Sustainability, a research fellow in the Capacity Center for Climate and Weather Extremes at the National Center for Atmospheric Research, and as the California Climate Fellow at The Nature Conservancy. His research focuses on the physics, dynamics, and impacts of the Earth's changing climate system—with a particular focus on how global warming is affecting the character and causes of regional climate extremes such as droughts, floods, and wildfires. Daniel engages extensively with journalists and other partners, serving as a climate and weather science liaison to print, radio, television, and web media outlets to facilitate broadly accessible but scientifically informed coverage surrounding climate change and natural disasters. Daniel also authors the Weather West blog (weatherwest.com), which provides real-time perspectives on California and western North American weather and climate. He can be found on Twitter (@Weather_West).

More about Dr. Swain's presentation: Climate change has arrived in California, and scientific evidence linking the increasing severity of the region's recent droughts and wildfire seasons grows stronger with each passing year. But our warmer future may yet hold some surprises—and that includes the prospect of increasing "precipitation whiplash" that will increase the risk of both severe drought and extreme flood events.

