



SANTA CLARA COUNTY FIRESAFE COUNCIL ANNOUNCES PARTNERSHIP WITH NASA AMES RESEARCH CENTER TO ANALYZE REGIONAL VEGETATION FOR EMBER CAST RISK

Weekly image data collected from space by the Landsat 8 and 9 sensors will use a new vegetation ember index to inform fuel treatment selected for Santa Clara County FireSafe Council projects.

February 14, 2025: Saratoga, CA: Today, Santa Clara County FireSafe Council announced a unique collaboration with NASA Ames Research Center in Silicon Valley to predict vegetation most at risk for casting of burning embers, and to incorporate this technology into Santa Clara County FireSafe Council's fuel treatment assessment. This collaboration will provide a critical lens on which communities and vegetation project treatment areas are most at risk for producing dense embers that are likely to ignite a destructive wildfire spreading into the urban interface zones.

Scientists at the NASA Ames Research Center are using satellite images to improve the assessment of wildfire causes and effects throughout California. Weekly image data collected from space by Landsat 8 and 9 sensors uniquely reveals the patterns of several crucial factors, before, during, and after wildfires including:

- The precise location of overgrown vegetation cover most likely to produce relatively large masses of dense burning embers that can travel long distances in high wind wildfire events,
- The severity of burning during a wildfire incident in terms of the heat generated daily and the percentage of vegetation cover consumed, and bare soil exposed on steep hillslopes and canyons,
- The daily rates and amounts of aerosols and other toxic gases emitted from the burning of both wildlands and residential structures that can cause adverse health

impacts for residents of cities and towns located downwind of a major wildfire incident.

“As the recent Los Angeles wildfires so devastatingly show, embers are a main driver of catastrophic wildfires,” stated Seth Schalet, CEO of the Santa Clara County FireSafe Council. “This is not news, the science and data have been clear on how embers ignite structures and the resulting ember cast driven spot fires facilitate further wildfire spread. Depending on the vegetation types and other conditions such as slope, humidity, and wind impacts from canyons and valleys, embers can be a main contributor to how destructive a wildfire becomes. By partnering with NASA Ames Research Center, we will incorporate their models in our vegetation and fuels analysis on new projects, so that this data can be incorporated into grant applications, providing a new lens of analysis that we hope can increase our likelihood of securing future awards. The goal is to provide Santa Clara County with the mitigations that matter most to keep our community safe from destructive wildfires.”

Schalet added, “Our mutual goal is to pilot test this, demonstrate efficacy, and then make this technology available at no cost, to all Fire Safe Councils statewide. As a board member of the California Fire Safe Council, I believe we are uniquely positioned to bring this valuable tool to scale, and it will enhance the recently announced Fire Safe Vendor List program.”

About Santa Clara County FireSafe Council: As a 501 (c)3 nonprofit with a 20-year history, Santa Clara County FireSafe Council’s core mission is to mobilize the people of Santa Clara County to protect their homes, communities, and environment from wildfires. As a trusted partner across the government, fire service, corporate and WUI residential communities, SCCFSC has led some of the most complex hazardous fuel reduction projects in the region. With a board and advisory council that has a deep expertise across the wildfire ecosystem including wildfire and environmental research, academia, emergency management, regional planning, technology products and wildland firefighting leadership, Santa Clara County FireSafe Council is uniquely positioned to lead cross-sector collaborations, government-private partnerships in Silicon Valley, Santa Clara County and beyond. For more information, visit www.sccfiresafe.org

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