

**“The Five-STEPS” San Mateo County takes--Eliminate weed grass fire fuels, and become carbon neutral, when native grasslands produce carbon offsets.**

**Convert WEED GRASSES to wildflowers, Ban COWS, NO BURNING, and use GRASSLANDS to start producing carbon credits, and replant Pseudomonas native host plants, so SMC can become carbon neutral naturally.**

**1. WEED GRASSES GONE** --50,000 acres of Weed grasses gone forever--excellent for fire safety, restarts carbon sequestration by restoring the natives. The weed grasses do not sequester any carbon in the soil, and grazing the weed grasses converts plant material and soil carbon into methane--20X worse greenhouse gas than CO<sub>2</sub>.

Use Craig’s monthly spring mowing method at 8-12 inches high, to get rid of the weed grasses completely in 3-4 years, at [www.ecoseeds.com/firesafe.pdf](http://www.ecoseeds.com/firesafe.pdf)

***Two papers presented at 2022 Cal-IPC meeting, confirm this is the best method.***

**2. COWS GONE** --No more grazing of San Mateo County grasslands with cattle. Our 1,000 Cows, gone from San Mateo County forever. Our County becomes a No-Cow-Zone. The cow grazing maintains the solid cover of weed grass fire fuels, converts that material to methane, and stops the sequestration of any soil carbon, plus grazing has already destroyed 99.99% of the native grassland and wildflower ecosystem in San Mateo County in less than 10 human generations.

**3. GRASSLAND BURNING projects ended** --No more burning of San Mateo County weed grasslands—burning converts the vegetation immediately into CO<sub>2</sub> plus is the taller weed grasses are 10-20X too hot for the native perennials. Burn taking the natives a decade or more to recover, if they do at all. My before and after transect data for the 2007 burn at Russian Ridge killed 2 million natives and allowed 2 million weeds to replace them, and certain species were exterminated like the Melica grasses that never returned.

**4. NATIVE GRASSLANDS PRODUCE CARBON OFFSETS**, to balance off the CO<sub>2</sub> produced elsewhere in the County -- Ranchers use the grasses to sell carbon credits, and make 10-20X their net income. Current unirrigated rangeland after expenses only produces \$1/acre per inch of annual rainfall. Use our grasslands for a more lucrative purpose, and make our County to be the first in the USA to become carbon neutral using natural means, with the native plants returning the CO<sub>2</sub> to the soil.

**5. REPLANT the NATIVE PSEUDOMONAS HOST PLANTS** to create more rainclouds and increase the annual rainfall, to save our forests and produce more water in the County’s watersheds. See the article at:<https://www.discovermagazine.com/planet-earth/does-rain-come-from-life-in-the-clouds>

Copyright © 2022 by Craig Carlton Dremann, The Reveg Edge, P.O. Box 361, Redwood City, CA 94064 – Office 650-325-7333 – Restoring grasslands since 1992.

## Replacing non-native grasses with herbaceous native plants to reduce ignition potential of fuel breaks and roadsides

8:30 AM-8:50 AM

### Description

Fuel breaks and roadsides are often invaded by non-native annual grasses. Annual grasses grow at high density and cure in spring creating easily ignitable fuel which increases fire spread rates, expands the fire season, and increases fuel continuity. In Southern California national forests, most wildfires start along transportation corridors. Thus, reducing the ignition potential in these areas to increase the resilience of California wildlands to anthropogenic wildfire is critical. Our goal is to eco-engineer fuel breaks and roadsides with native herbaceous species that reduce ignition risk, meet fuel management objectives, and enhance native ecosystem services. We conducted a plot-scale restoration experiment within a fuel break in the Los Padres National Forest, Santa Barbara, California. Plots were restored by either directly seeding a community of annual forbs, or by hand planting a community of bunchgrasses and perennial forbs. Control plots were dominated by non-native annual grasses and forbs. **The different plant communities were monitored for three years including: live fuel moisture, fuel load, live: dead biomass, and litter depth; as well as ecological traits—invasion resistance and floral availability. Native communities retained live fuel moisture over summer and created less litter**, whereas the non-native community lost all live fuel moisture in spring and generated more litter. Thus, the native communities would be more difficult to ignite and propagate fire, giving credibility to using native species on fuel breaks to meet fuel management goals, while supporting desirable ecosystem services.

### Speaker

- **Robert Fitch**(Speaker)University of California, Santa Barbara

## Timed mowing of invasive grasslands in Santa Monica Mountains National Recreation Area

8:55 AM-9:15 AM - Description

Development at the urban-wildland interface has swelled in recent years due to population growth and urban sprawl. As a result, fuels reduction efforts are on the rise to protect life and property. Traditional fuel safety practices leave buffers of cleared vegetation around housing and include multi-acre fuels reduction zones that are placed in strategic areas to control the travel of wildfire. Although fuels work is necessary to protect life and property, the timing of clearance activities facilitates invasive spread as treatments occur annually during late spring and summer when most weeds have already set seed. This study proposes a digression from late season mowing and instead investigates the efficacy of early season mowing to prevent seed set of flammable invasive vegetation that tend to dominate fuels reduction areas. **By managing non-native grasslands through repeated early season mowing, we predict a reduction in the cover of invasive grasses and forbs, and over time a depletion of the non-native seedbank.** Preliminary results from this study show that timed mowing reduces cover and litter of invasive grasses and encourages passive recovery of low growing native forbs, which reduces fire risk by lowering relative fuel loads. Although there is an initial labor investment associated with timed mowing activities, the lower fuel load and higher habitat quality resulting from the establishment of native communities will ultimately reduce labor needs, and provide a long-lasting solution to fuels treatment areas, which are otherwise written off as wastelands.

### Speaker

- **Matthew Wells**(Speaker)Santa Monica Mountains NRA