Local forester demonstrates large-scale carbon-capture

By J. Stephen McLaughlin news@mendonoma.com

About 80 Northern California foresters, timberland owners, vintners and ecologists gathered Tuesday at the Richardson Ranch east of Stewarts Point for a demonstration of a large-scale operation that converts wood waste and brush into agriculture-friendly biochar, sequestering a significant amount of the carbon that would otherwise contribute to global climate change.

Registered Professional Forester Daniel Falk installed a Tiger Cat Carbonator 6050 in March 2019 at the ranch, a machine that converts about 20 tons of slash, brush and cull logs per hour into about 1,800 pounds of fist-size or smaller chunks of crispy biochar, consisting of about 85% carbon.

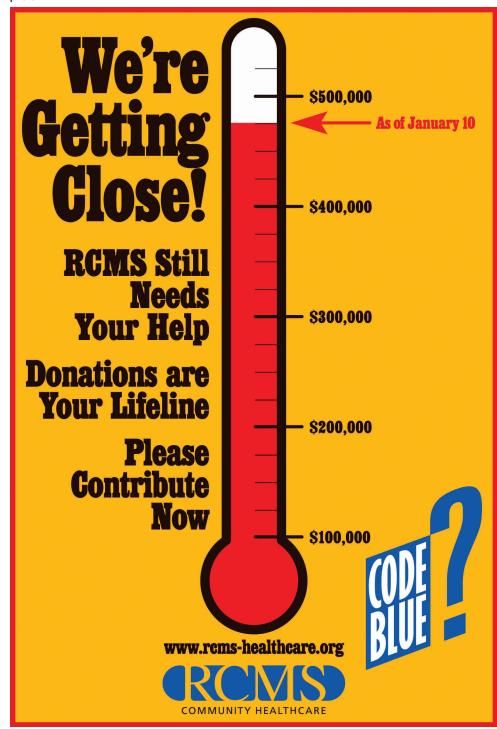
The brush and wood waste is fed continually from the top and burns in a large steel container lined with thermal ceramic. As it burns, the embers fall through a grate onto steel auger conveyors where they are sprayed with water. Matt O'Connor of Tiger Cat said the embers expand "like popcorn" when quenched, and are pushed out from under the chamber onto a belt for removal. Fans recirculate the volatile products of combustion back into the chamber where they are reburned, eliminating most of the smoke.

O'Connor said about 20% to 25% of the total carbon is sequestered which he says is "way better than zero" in a regular burn pile.

At the Richardson Ranch, Falk said the process is part of a larger "Forest-to-Rangeland" strategy. Falk Forestry is experimenting with



The Carbonator 6050 is a moveable unit that converts 20 tons of wood waste and slash per hour into 1,800 pounds of agriculture-friendly biochar, sequestering about a quarter of the total carbon. Steve McLaughlin photo.



biochar from its timber operation to improve the soil quality of the livestock grazing land, combining biochar with compost and also using it as ground cover.

Raymond Baltar, biochar projects manager for the Sonoma Ecology Center, helped present the demonstration Tuesday. He said biochar has been used for thousands of years and is also made on much smaller scale, using carefully-tended burn piles that are quenched before they burn to ash.

According to Balter, one pound of biochar represents 3.7 pounds of

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the homes of employees; accelerating technological change, which has fundamentally altered the ways in which people consume; workforce change, because in the new economy, people tend to be more mobile, and there are a lot of people who can work from wherever they are located.

"You need to get data," Petrillo said. "Why do people come to Gualala and the south coast of Mendocino County? Where do they come from? You can get this kind of data from any events you have. You need to analyze why people are coming here."

"We talk about buying local, but we do a lousy job of telling people what we have," said Murphy, to which Petrillo responded, "Marketing is a deep and dark forest, and now it is much bigger."

ICO publisher Steve McLaughlin, who has



Augers push out steaming biochar, which resembles the crunchy remnants of a quenched campfire. Steve McLaughlin photo.

CO2 that is not released to the atmosphere. In addition, biochar is a valuable substance in itself. His presentation likened biochar to a "condo for microorganisms" which, when mixed with soil, helps retain water to moderate the effects of drought in agriculture, and even reduces methane emissions from cows when mixed with feed another climate change benefit.

been involved in Gualala business for 50 years, observed, "Most new businesses [that fail,] fail because of undercapitalization." Petrillo concurred. "Yes, this is to." really true," she said. "We like to be partnering with businesses before they open. If a problem comes up, the new business owner may not have the capital to ride it out." She listed several ways that new businesses owners could anticipate and hopefully avert damaging early capital

losses. Murphy focused on finding a collective identity for Gualala, "Nothing in Gualala says, 'Hey, this is who we are.' There should be a common way of presenting the town."

Several ideas were floated on how to approach the new consumer. "We have a real opportunity with the streetscape," said Murphy, referring to Gualala's long-planned redevelopment of the downtown area along Highway 1. Petrillo suggested, "Use your artists. Make a mural. They [younger consumers] love to have a place to take an Instagram photo."

GMAC chair Robert Juengling added. "We should also have a map, including a beach access map. And a business map," so that consumers can learn more easily what the town has to offer. "We need a bike shop, with a sign that says, 'bikes welcome," Murphy chimed in. "We should have a sign [at the south end of town] that says, 'Congrats, you have survived the Bay Area."

Several people noted that Gualala businesses are not represented in the community website, VisitMendocino.com. As a result, when tourists go the website, they are not directed to hotels, restaurants, and other businesses in Gualala. Petrillo said the easy fix is for individual busi-*See Businesses...*

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