



BiocharCoalition.org

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Dear Board of Forestry,

My name is C. Tabor Teachout, I am a resident of Nevada County, California, situated near the Middle Fork of the Yuba River. I am writing to you on behalf of Biochar Coalition, to urgently advocate for the inclusion of biochar production as a vital practice in the management and recovery of our forest ecosystems. Many Biochar Coalition organization members live under the constant threat of wildfires and their devastating impact on our forests, watersheds, and air quality.

Biochar, although not yet defined in the Forest Practice Rules, directly aligns with the Board's objectives regarding carbon management and forest health, as outlined under the Z'Berg-Nejedly Forest Practice Act and the Forest Practice Rules (**PRC § 4511 et seq.**). Given that carbon is already defined 39 times within the Forest Practice Rules, biochar presents an opportunity to build on these established principles, enhancing carbon sequestration and soil health while also mitigating wildfire risks.

Biochar is produced using controlled fire, converting forest slash, timber harvest residues, damaged trees, and excess brush, into stable carbon rich charcoal that can be retained in forest soils. As documented by Wilson Biochar Associates and other biochar researchers, the use of portable flame cap kilns (**as described in the *Biochar in the Woods demo report***) allows for efficient, in-place biochar production, providing significant ecological benefits over traditional slash pile burning (**Wilson, K.J., Bekker, W., Feher, S.I. (2024)**). This method not only reduces harmful particulate emissions but also preserves the soil's organic layers, which are otherwise incinerated by burn piles and wildfires.

Incorporating biochar production into forest management directly addresses several critical goals outlined in the Board's regulatory priorities, including reducing wildfire intensity and enhancing forest resilience to climate change. Biochar retains the carbon content of the original biomass, significantly mitigating carbon off-gassing during woody debris life cycles. Furthermore, studies conducted in collaboration with Oregon State University have shown that biochar increases soil water retention, thus bolstering forest resilience against drought (**Storage through In-forest Biochar Production. (2021)**).

Research also highlights the critical role biochar plays in enhancing soil structure, nutrient cycling, and supporting soil microbiomes. The CM002 Component Methodology described by Wilson Biochar Associates offers a standardized approach to quantifying greenhouse gas benefits, ensuring biochar projects meet stringent carbon removal standards (**Wilson, K.J., Bekker, W., Feher, S.I.** (2024)). This approach, coupled with field-based biochar production, provides a cost-effective, scalable solution to forest biomass disposal while simultaneously enhancing soil organic material.

The Board of Forestry's mission to maintain an effective system of regulations protecting both public and environmental interests must evolve to include the innovative and scientifically-backed practice of biochar production, as well as rational grazing management practices (**Bastani, M., Sadeghipour, A., Kamali, N., Zarafshar, M., & Bazot, S.** (2023)). This will not only contribute to carbon sequestration but also to forest restoration, fire risk reduction, and long-term ecosystem health. The urgency of incorporating place-based biochar technologies is underscored by the escalating frequency and severity of wildfires, which threaten to erase decades of progress in carbon reduction (**Hoffman-Krull, K.** (2021)).

In light of the carbon specifications within the Forest Practice Rules, **we implore the Board of Forestry to adopt biochar as a recognized tool in forest management**, as outlined in the Life Cycle Assessment of Biochar's CO2 Removal Calculation. This will strengthen California's forests role in the state's carbon sequestration strategy, biochar will foster healthier, more resilient ecosystems and high quality timber stands (**Life Cycle Assessment of Biochar: CO2 Removal Calculation.** (2022)).

We hope this letter conveys the importance of the role biochar can play in California's forest management policies. Please reach out if you need more information. Thank you for your consideration.

Sincerely,



C. Tabor Teachout

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References:

1. Wilson, K.J., Bekker, W., Feher, S.I. (2024). *Producing, Characterizing, and Quantifying Biochar in the Woods Using Portable Flame Cap Kilns*. JoVE, (203), e65543, doi:10.3791/65543. Available at: <https://jove.com/video/65543>.
2. Hoffman-Krull, K. (2021). *Increasing Resilience and Carbon Storage through In-forest Biochar Production*. Fire Adapted Communities Learning Network. Available at: <https://fireadaptednetwork.org/forest-biochar-production>.
3. Board of Forestry and Fire Protection. (2022). *Forest Practice Rules and Act (FPA)*. Sacramento, CA: State of California. Available in: 2022_Forest_Practice_Rules_and_Act_ada.pdf.
4. Kelpie J. Wilson, Wihan Bekker, Stephen I. Feher. (2024). *Biochar in the Woods: Using Portable Flame Cap Kilns*. Butte Community College and Wilson Biochar Associates. DOI: 10.379165543.
5. Life Cycle Assessment of Biochar: CO2 Removal Calculation. (2022). University of Washington. Available in: Life-Cycle-Assessment-of-Biochar-CO2-Removal-Calculation.pdf.
6. Research Thursday: Increasing Resilience and Carbon Storage through In-forest Biochar Production. (2021). Fire Adapted Communities Learning Network. Available in: Research_Thursday_Increasing_Resilience_And_Carbon_Storage.pdf.
7. Bastani, M., Sadeghipour, A., Kamali, N., Zarafshar, M., & Bazot, S. (2023). How does livestock graze management affect woodland soil health? *Frontiers in Forests and Global Change*, 6, 1028149. <https://doi.org/10.3389/ffgc.2023.1028149>