

CENTRAL COAST FOREST WATCH

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Climate Action Reserve
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Dear CAR Staff and Board,

Thank you for this opportunity to comment on the CAR White Papers regarding the forest protocols.

We believe the current forest protocols need to be amended in order to more accurately reflect the available science and to protect California's forests, watersheds and wildlife while moving towards a reduction in carbon outputs.

The *Accounting for Carbon in Soils* white paper begins with a very strong statement: "Soil carbon accounts for 50-75% of all forest carbon in temperate and boreal regions, so small changes in soil carbon can have significant influence on total carbon storage."

We believe the protocols must take into account the impacts on carbon loss and storage from logging activities that adversely impact the soil. Clearcutting in particular impacts the soil of the whole project area through disturbance from intensive harvesting methods. Accounting for soil carbon is necessary for accurate carbon accounting particularly on intensive harvest sites. Methodologies exist that would make such accounting effective and affordable.

According to the white paper, pre-harvest, harvest, and post-harvest activities all can either increase or decrease the amount of carbon stored. In addition, the paper found that 50 years are needed for a soil to reach pre-harvest levels of carbon. Accounting for the carbon in the soil should be a requirement for all commercial logging projects.

According to *Carbon Accounting and Management for Lying Dead Wood*, lying dead wood can also be a significant source of forest carbon and needs to be included in forest carbon accounting. The percentage varies between 2-5% depending on the region and the type of tree. Removal of LDW would also seem to result in less soil carbon later on.

Emissions from down wood can be substantial, but are spread out over many years and depend on how lying dead wood is inventoried, and how snags and soil carbon are accounted for. The current protocol accounts for none of these. This needs to be remedied.

Even-aged management does not mimic natural disturbance such as fire as claimed. It is dissimilar in the many ways mentioned in the paper. Forest fires differ in intensity and size whereas even-aged management sites are more uniform. Fire burns in mosaics and nourishes the soil through deposition of large amounts of nutrients, whereas even-age practices remove most of the lions-share of nutrients. Burned forests also retain their diversity of flora and fauna unlike even-aged management sites from which all plant species have been removed, herbicide applied, and then the future commercial crop seedlings planted. Larger trees usually survive a fire as do a variety of 'seed plants' of most species. The ecosystem after a fire will recreate itself over time. Even-aged management, on the other hand, removes most of the biomass, returning little of value, and totally transforms a natural diverse ecosystem into a plantation of one or two commercial crops. The forest never regains its original character and can only regain its carbon sequestration potential over an extended period of time.

Fire is part of a regenerative process that keeps forested ecosystems healthy over the long-run. Even-age management totally alters those ecosystems replacing them with fragmented monocultures. They create greater soil carbon disturbance, and removal of more live carbon than unevenage management practices. Clearcutting should not be included under Natural Forest Management. Clearcutting is not about 'forest management', but about replacement of complex ecosystems with simplified crop rotations. In the process, soils are disturbed, levels of down wood and snags are significantly altered, and these must be accounted for in carbon calculations. We strongly believe there is no place for clearcutting or other evenage management techniques in the state's cap and trade program. We should not fool ourselves into believing that clearcutting will help halt climate change.

In addition to removing evenage management, further requirements should be added to the natural forest management section of the protocol to require that projects safeguard our watersheds and protect the state's wildlife.

Given that all certification programs do not adequately address issues of carbon sequestration, may include clearcutting practices and other practices such as removal of old growth trees, we do not support the use of any of the current certification systems as a replacement for meeting specific ,set criteria for carbon sequestration. We believe the protocols should provide strong language that protects forests, watersheds and wildlife, while providing appropriate guidelines for natural forest management that will lead to an increase in carbon sequestration.

Thank you for considering our comments.

Sincerely,

A handwritten signature in black ink that reads "Jodi Frediani". The signature is written in a cursive, flowing style.

Jodi Frediani
Director