

JDSF AND CARBON: Managing Forests for the Future [Excerpted]

Carbon Storage vs. Carbon Sequestration

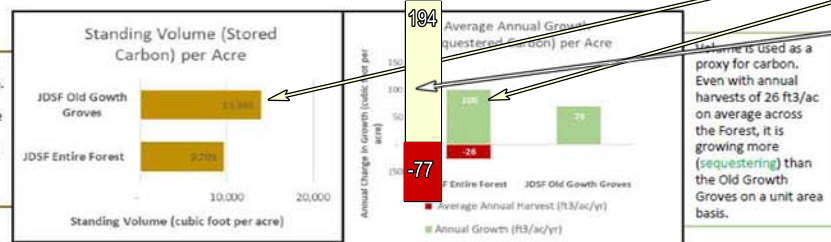
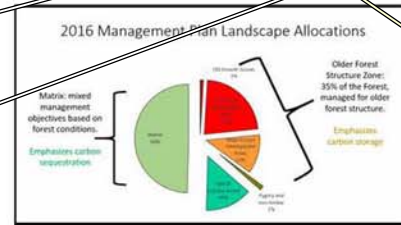
1. **Carbon Storage** JDSF stores ~19 million metric tonnes of CO₂ across the Forests.
- **Carbon Sequestration** – JDSF is sequestering ~200,000 metric tonnes per year.

Carbon in a Managed Forest: Short-term vs. Long-term Carbon Storage and Sequestration

2. Though it may seem counterintuitive, halting all timber harvests might have a negative effect on carbon sequestration as it can lead to overcrowding. . . Forests today, and in the future, facing climate uncertainty, need to be diverse to withstand human caused and natural disturbances.
- Creating more resilient forests by using management activities. . . can address the risk of losing the forest and its carbon benefits [to fire]. . .
- Both California Policy and third parties³ recognize that redwood forest products continue to store carbon and provide a net carbon benefit.
- Management activities will reduce the short-term carbon storage by removing vegetation, but can increase the stability, or resiliency, of long-term carbon storage by reducing the stress of competition for other trees and maintain high rates of carbon sequestration through vigorously growing trees.⁴

JDSF and Forest Carbon

- JDSF manages to foster both higher carbon storage (old growth & Older Forest Structure Zone) and carbon sequestration with vigorously growing stands created through periodic harvests.
- . . . JDSF manages across all size and age classes, including large trees, to control density, provide for long-term sustainability, and maintain high rates of sequestration through faster growing young trees.



1. "Latest GHG Inventory shows California remains below 2020 emissions target." California Greenhouse Gas Emission Inventory Program. California Air Resources Board. July 28, 2021. <https://ww2.arb.ca.gov/our-work/programs/ghg-inventory-program>

2. "Cap and Trade US Forest Projects Protocol." 2014 California Environmental Protection Agency. Air Resources Board. <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2014/capandtrade14/ctusforestprojectsprotocol.pdf>

3. Sahoo and Bergman. 2020. "Cradle-to-Gate Life-Cycle Assessment of Redwood Lumber in the United States." USDA, US Forest Service. https://www.fpl.fs.fed.us/documents/fplr/fplr_rp706.pdf

4. Hurteau et al. 2010. "The Carbon Cost of Mitigating High-Severity Wildfire in Southwestern Ponderosa Pine." *Global Change Biology*. 17(4):1516-1521 DOI:10.1111/j.1365-2486.2010.02295.x

California's Wildfire and Forest Resilience Action Plan. 2021. Forest Management Task Force. <https://www.fire.ca.gov/media/ps4p2vck/californiawildfireandforestresilienceactionplan.pdf>

5. "Natural and Working Lands Climate Smart Strategy - Draft." 2021. *Nature-based Climate Solutions*. https://resources.ca.gov/-/media/CNRA-Website/Files/Initiatives/Expanding-Nature-Based-Solutions/FINAL_DesignDraft_NWL_100821_508-opt.pdf

JDSF Is Worth More Standing Value of Carbon Capture Is Greater than Logging Profits

The monetary as well as ecological, recreational, and tribal benefits of halting logging are greater than the benefits of continuing logging of JDSF. The flyer fails to compare the benefits of these alternatives. It deflects the comparison and seriously understates Jackson's capacity for carbon sequestration.

Carbon Storage - the cited figure is for 2017 and ignores research done on JDSF that found that the estimation used by JDSF understates carbon by 26%.¹ Applying the correction and updating to 2021, JDSF carbon storage is 25.2 million metric tonnes of CO₂ (MMT CO₂).

Carbon Sequestration – JDSF volume grows at 2% per year², adding 2% of 25.2 MMT CO₂, or 504,000 metric tonnes of CO₂ in the first year, more than double the 200,000 number.

Halting all timber harvests will increase not decrease carbon sequestration. JDSF has grown at 2% per year since the 1950s, including the 2001-2009 period when there was no logging. The amounts of forest carbon stored will grow faster if logging is halted; therefore so will the amount of carbon sequestration. Redwood trees grow vigorously for hundreds of years. Logging younger trees sacrifices the years of biggest volume growth.

Need to be diverse – Undisturbed forests will have closed canopies and be less subject to drying out as temperatures increase, making them healthier and more fire resistant.

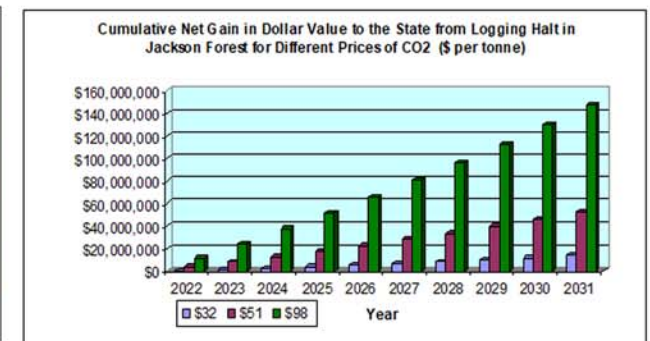
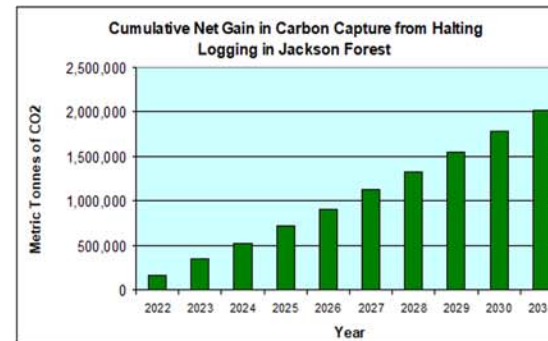
Logging increases fire risk. Logging decreases tree size, creates openings, and adds slash and debris – all of which increase fire risk.³

Redwood products – 84% of the carbon in a standing tree is emitted as CO₂ within a few year of cutting.⁴ The 16% in decking and fencing will last for 24 years or less. Growing a new tree will take 40+ years

Old growth is less than 1% of JDSF, so old growth carbon storage and sequestration has little effect on carbon quantities for the overall forest. The comparisons in the figure are a distraction without meaning.

With correct inventory and growth values, growth and harvests are more than twice the cited number.

Halting logging would increase carbon capture and provide windfall profits to the state⁵



1. Jones, D and O'Hara, K *Carbon density in managed coast redwood stands: implications for forest carbon estimation*, *Forestry*, Vol. 85, No. 1, 06/12/2011

2. *JDSF Presentation to Jackson Advisory Committee*, August 2021.

3. O'Brien, John *The effects of timber harvest versus forest protection in JDSF*, letter to Mike McGuire, et. al., May 5, 2021.

4. John Battles, *California Forest and Rangeland Greenhouse Gas Inventory Development FINAL REPORT*, December 30, 2013;

5. www.jacksonforest.com/carbon.htm