



To: California Natural Resources Agency Advisory Panel on Expanding Climate Action Through Nature-Based Solutions

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Response to Panelist Question #1

Why Jackson Demonstration State Forest should be made into a preserve as part of California's 30x30 Initiative

Jackson Demonstration Forest (JDSF) provides an outstanding opportunity for California's 30x30 Initiative. First, it is owned by the state. The state has control over how it is managed. Second, it is a redwood forest, the type of forest with the highest potential for carbon sequestration. Third, it is now being heavily logged. Making it into a preserve will significantly increase its carbon sequestration. Fourth, in economic terms, the value of the added carbon capture from making it a preserve will more or less offset the loss of revenue from current logging.

As shown in Table 1, making JDSF into a preserve will sequester about 1.5 million tonnes of carbon in 10 years. At a carbon price of \$25 per tonne, the price of the September 2021 California Carbon Allowance contract, the cost of making JDSF into a preserve will cost the state about \$1 million per year. At the price of \$51, the interim price for the social cost of CO2 emissions set by Biden's Interagency Working Group, changing to a preserve will produce a gain for the state of about \$2 million per year.

Table 1: Carbon Values of JDSF		CO2 value/Tonne = (1)	\$25	\$51
JDSF Carbon Values with No Timber Harvesting	Metric Tonnes	CO2 value/Tonne	CO2 Value	CO2 Value
2017 Estimated JDSF CO2 (2)	19,000,000			
Value of JDSF Carbon			\$475,000,000	\$969,000,000
JDSF Forest Growth Rate: 2% per year (3)				
First Year Increase of JDSF Carbon	380,000		\$9,500,000	\$19,380,000
JDSF Carbon Values with 40% of Growth Harvested				
First Year Increase of JDSF Carbon with 40% of growth harvested (4)	228,000		\$5,700,000	\$11,628,000
Carbon retained in wood products from harvested timber (5)	24,320		\$608,000	\$1,240,320
Five-year annual average net revenue from JDSF timber sales (6)			\$4,309,777	\$4,309,777
Combined first year net timber revenue and carbon-increase	252,320		\$10,617,777	\$17,178,097
First year gain in JDSF carbon from halt in timber harvesting	127,680			
Ten year gain in JDSF carbon from halt in timber harvesting (7)	1,553,455			

As the monetary costs or gains from making JDSF into a preserve are relatively small for a 50,000 acre redwood forest, the clear choice is to make it into a preserve. A preserve would uniquely allow a degraded redwood forest to heal, providing a refugia for redwood dependent species, provide greater carbon capture, reduce fire risk, protect Tribal values, and enhance opportunities for recreation and spiritual nourishment.

I urge the Advisory Panel to recommend making JDSF into a preserve. In addition, I strongly urge the Panel to recommend management of JDSF be transferred to Parks. This second recommendation is based on my experience with JDSF for over 25 years.

In 2000, I filed suit to halt illegal timber operations in JDSF. The court found in our favor in this and four following suits, halting all timber harvests until 2009. Harvesting was able to resume only because I agreed to a settlement of our lawsuit, an agreement I made based on an assurance from the Director of the California Department of Forestry (CDF) that if all those with an interest in JDSF could reach consensus on a long-term management plan for the forest, CDF would accept the consensus plan.

After 2-1/2 years, a complete consensus was reached, but CDF reneged on their promise. Those in CDF who opposed relinquishing their complete control of JDSF worked in secret with a forester member of the Board of Forestry to make amendments of the plan that gutted the core elements of the plan on silviculture, research, recreation, and herbicide use. The amended plan was brought before the Board on July 13, 2011 without warning to any of the parties to the consensus. Without any opposition, the Board approved the amendments.

As a consequence, JDSF has returned to its business-as-usual approach, which entails logging the biggest trees in the oldest stands – exactly the opposite of what should be done to maximize the carbon sequestration in JDSF.

I relate the story of CDF's treachery on the consensus plan for JDSF to ensure that the panel understands that CDF is not to be trusted as a steward of JDSF for carbon sequestration. **CDF is interested in only one thing: converting what they see as standing timber into logs at the mill.** I see from a recent presentation of theirs that CDF is arguing that continued logging of JDSF will increase its carbon sequestration – in opposition to common sense and independent scientific research. **As long as CDF has any control over management of JDSF, they will work constantly to evade or negate policies that restrict timber harvesting.** For JDSF to live up to its potential contribution to the 30x30 Initiative, JDSF must be made into a preserve managed by an agency other than CDF.

The 30x30 Initiative provides an undeniable justification to do what should have been done decades ago – make Jackson Forest into preserve.

I wrote the proposal reproduced below for making JDSF into a preserve in 1997. The arguments made in that proposal have only strengthened since that time. Now is the time to act. Include a Jackson State Redwood Reserve as a key element in the 30x30 Initiative.

Sincerely,

Vince Taylor, PhD
Trustee

A Proposal to Create Jackson State Redwood Preserve

By Vince Taylor, November 1997

The State of California has an opportunity to create a 50,000 acre redwood forest preserve at no cost to taxpayers. What an incredible bargain for present and future inhabitants of California, the United States and the world. Consider that California and the United States governments are paying over \$500 million dollars for the 2,000-acre Headlands redwood grove. Of course, the Headlands is a virgin, unlogged stand of unparalleled beauty. But in creating the Jackson State Redwood Preserve, we will be creating a redwood preserve of unparalleled size whose beauty and value will continually increase. Our children and grandchildren will thank us for our foresight.

The proposed preserve is a redwood forest that has been logged to varying degrees in various parts, but still contains many beautiful stands of young redwoods. If turned into a preserve, the forest will have the chance to heal itself. Redwoods grow to awesome size quickly. Remarkably soon the forest canopy will become restored. Underbrush will be shaded out and the ground become carpeted with needles. Groves will develop to cathedral size, inspiring visitors with awe. Over time, the preserve will become more and more beautiful, more and more valuable for solitude, species preservation, salmon spawning, ecological research, and recreation.

Quick action to establish the reserve is important, because although now publicly owned, the forest is currently being operated as a commercial logging operation. The longer the delay in establishing the preserve, the greater the destruction of the intrinsic values of the forest and the longer will be the time required for restoration.

The proposed reserve is the Jackson Demonstration State Forest. Located in Mendocino County, the Forest runs from near the coastline between Mendocino and Fort Bragg eastward almost to Highway 101, near Willits. The California Department of Forestry, who under current law manages the Forest, has the policy of cutting each year as much timber as grows in the forest. Although this may sound like a preservation-oriented policy, it is no such thing. When the California Department of Forestry took over management of the forest in the late 1940s, magnificent virgin redwoods constituted the majority of the timber in the forest. By 1980, the California Department of Forestry had cut essentially every old-growth tree in the forest. Current policy gives the highest priority to cutting the largest trees, many of which are over 100 years of age. Thus,

although the volume of timber in the forest has remained constant, or perhaps even increased since the California Department of Forestry took over, the current forest is a shadow of its former self. And, it is getting worse year by year. Every year, more and more older trees are cut, lowering the age of the trees and making Jackson Forest look more and more like a tree plantation.

The case for turning Jackson Forest into a preserve is compelling:

- Jackson State Forest is owned by the people of California. In this day and age, there can be no doubt that the vast majority of Californians would prefer to preserve and enhance the forest for its recreational, ecological, and natural values, rather than to continue to degrade it.
- Jackson State Forest was acquired by the state at a time when there was considerable doubt that it could be managed successfully and profitably for long-term sustainable operation. A primary purpose of acquiring the Forest was to demonstrate that this could be done. At that time, there was no market for second-growth redwood. Today there is a thriving market for second-growth redwood. There is no need for the state to demonstrate that second-growth forests can be managed profitably.
- At the time Jackson State Forest was acquired, Northern California had vast redwood forests, many of them in far more pristine condition than Jackson State Forest. Logging of Jackson State Forest did little damage to the overall redwood forest resources of California.

Today, the picture is vastly different. Almost all of the large commercial redwood holdings of Northern California have been logged almost to extinction. For example in Mendocino County, where Jackson State Forest is located, the average inventory of timber in large commercial holdings is only 7,000 board feet per acre, a small fraction of the 80,000 board feet contained in an unlogged acre of 100-120 year old redwoods. Although not up to the latter figure, Jackson State Forest contains four to five times the timber per acre as the commercial holdings, making it by far the best-preserved large redwood holding in Mendocino County.

In current circumstances, it makes no environmental or political sense to continue to degrade the exceptional resources of Jackson State Forest.

- Because redwoods grow rapidly, many areas of Jackson State Redwood Preserve will become magnificent and awesome within a surprisingly short time. Today within Jackson Forest are incredibly beautiful areas that were logged of their virgin trees one-hundred years ago and then again logged of thirty to forty percent of the second-growth trees in the 1950's. Entering these sections of the forest, one feels like he or she is entering a mature, healthy forest. Of course, the forest does not contain the true ancient giants of a virgin forest, but a 100-year old redwood towers higher than a twelve story building, and a grove of such trees is fully capable of making us mortals feel humble in their presence.

Areas of Jackson State Forest such as the one described above are rapidly disappearing, but they still exist. Further, there are large sections of the Forest

that have the potential to recover to magnificence in fifty years, within the lifetime of our children.

- A potential concern is the loss of jobs in the timber industry that would occur if Jackson State Forest were changed from a logging operation to a preserve. It is important to look in detail at the gains as well as losses in jobs and business that would occur. Gains would occur in many areas and could easily outweigh the losses.
 - Establishing a preserve will not end all cutting of trees in the forest. There are many areas overcrowded with young trees. Thinning of these trees would assist in the recovery of the forest. Thinning would continue to occur as groves moved toward maturity. In keeping with the objectives of the preserve, the cutting of trees would be done so as to minimize the effects on the forest. Such careful management of the forest would require significantly more labor per tree cut; so the loss in logging jobs would be less than the reduction in the cutting of trees.
 - Assuming that restoration and enhancement of the preserve were a priority, new jobs would be created within the forest. In addition to tree thinning, there would be work to restore damaged streams and to eliminate unneeded logging roads.
 - Recreation-related jobs would be created. There will be a tremendous demand for recreation opportunities within the preserve. The exact nature of what will be provided will be part of the task of planning for the preserve, but certainly there will be jobs in constructing recreation facilities and trails and in providing services within the preserve to those who come for recreation.
 - The biggest increase in jobs will probably be outside of the preserve. The increase will occur in the multitude of businesses that serve the needs of tourists: motels, bed and breakfasts, restaurants, retail stores, gas stations, theaters, etc.
- The need for a redwood preserve has increased enormously since the time that Jackson State Forest was acquired. In 1950, the population of California was 10 million. Today it is 30 million. Population has tripled in less than 50 years, and the desire of the population to have places for nourishing themselves with solitude and nature has increased more than proportionally. At the same time, the expanding population has spread out and consumed more and more of the open spaces formerly accessible to urban people. And, the redwood forests have been decimated. Thus, while demand has multiplied, supply has shrunken dramatically.
- As we look to the future, the value of a redwood preserve in Mendocino County is certain to grow enormously. Population and development are rapidly pushing up from the Bay area into Sonoma County and beyond. There is no doubt that within another fifty years, Northern Sonoma County will be essentially one large urban area, and Cloverdale, Ukiah, and Willits will be significant cities. Meanwhile, the population of the Bay area will probably double, adding to the pressures for access to nature by the closer populations.

The State of California was a wise and far-sighted when it acquired Jackson State Forest from the Caspar Lumber Company for \$1.5 million in 1947. It also made good sense at that time to demonstrate that the Forest could be profitably managed for the long term. But, the circumstances in which Jackson State Forest exists have changed enormously. What made sense then is completely out of touch with current realities. What makes sense now is to move quickly to establish the Jackson State Redwood Preserve.

Notes and Sources for Table 1

(1a) \$25/tonne value from <https://www.theice.com/marketdata/reports/142> ; August 31, 2021, September Contract for California Carbon Allowance, per tonne of CO₂

(1b) \$51/tonne value from Interagency Working Group on Social Cost of Greenhouse Gases, "Technical support document: Social cost of carbon, methane, and nitrous oxide, interim estimates under executive order 13990" (US government, February 2021).

(2) JDSF Presentation to Jackson Advisory Committee, August 2021

(3) Ibid

(4) Ibid

(5) Based on 84% of carbon in harvested trees going into atmosphere. John Battles, California Forest and Rangeland Greenhouse Gas Inventory Development FINAL REPORT, December 30, 2013; Minor revision Jan 30, 2014

(6) From JDSF Annual Reports 2016-2020

(7) 10-year gain is more than 10 times first year gain because of compounding

[Link to JDSF Presentation to Jackson Advisory Committee, August 2021](#)

Note on methodology. Generally, when timber harvests are reduced in one place, they increase in others (leakage), but this is not the case for redwood harvests. A review of redwood harvests in Mendocino County within and outside of JDSF from 2008 to 2018 show a positive relation between the two, whereas if there were leakage, the relation would be negative: a fall in JDSF harvests would be associated with an increase in outside harvests.

Redwood is only grown in an area of California. There are no outside sources to make up for a loss in redwood production. Producers' decisions to sell their timber are not affected by the decisions of others, but by their own production capacity, with timing depending upon the market.