

Coast Range Association Comments–C

Cumulative Effects

Northwest Forest Plan Amendments (NWFP)

Draft Environmental Impact Statement (DEIS)

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This document contains the comments of the Coast Range Association (CRA) addressing the Draft Environmental Impact Statement’s (DEIS) **cumulative effects analysis**.

“Cumulative effects are defined by the CEQ as: “the effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.1(g)(3)).”

The DEIS (page 3-157) says in its cumulative effects analysis “*future management on other ownerships are based on existing and proposed or draft plans applicable to those lands, current trends, and the potential effect of existing laws, regulations, and management plans.*” The DEIS then goes on to **not** address Oregon’s industrial land ownership – an ownership category highly relevant to the SNF.

Given that a very high percentage of the SNF’s adjoining ownership is made up of Real Estate Investment Trusts (REITS) or Timber Investment Organizations (TIMOS), describing future management would not have been speculative as as asserted by the DEIS. Such land will continue to be managed on a financial basis appropriate to site class. Or, given the huge percentage of industrial land owned by the Weyerhaeuser Company and several other

firms, Forest Service staff could have easily interviewed top management. Or, read Weyerhaeuser's yearly 10K statement.

The DEIS represents that the **incremental effect** of the alternatives when added to the effects of other past, present, and reasonably foreseeable actions will be assessed (page 3-157). Yet, the word incremental is never to be seen again in both volumes of the DEIS. As far as we can tell, the DEIS assessed cumulative effects only for forest dependent species in a brief Biological Evaluation.

Nowhere in the DEIS is a cumulative effects assessment found for management impacts related to Fire Resistance and Resilience, Climate Change, or the Sustainability of Regional Communities—three of the six topics the DEIS represents as to why amendments are needed.

The Climate Change section, page 3-163 states: *"Climate change results from greenhouse gas emissions, which have the potential to adversely affect the human environment because they contribute, on a cumulative basis, to global climate change. Thus, any evaluation of carbon emissions from greenhouse gases and climate change is inherently cumulative, and the evaluation of environmental consequences Section 3.6, Issue 5 – Climate Change, **is** the cumulative impact analysis related to climate change."*
(emphasis CRA)

What then is Section 3.6, Issue 5 required to do?

A cumulative effect analysis must assess the effects of proposed actions on something in the real world, namely an environment that will be impacted by those actions per Alternative which, in this case, is **climate change**.

The DEIS cumulative effects section is almost entirely written as an assessment of the amendment alternatives. An assessment of amendments is assessing something not real in the material world of the environment. The Forest Service is saying "our plan amendments will have effects on our plan amendments." We believe such an analysis is, among other things, a tautology.

Reading through Section 3.6, Issue 5 causes us to draw one conclusion there is **no cumulative assessment for climate** in the DEIS.

The DEIS states in the so-called analysis: *"current scientific understanding of these factors makes it infeasible to develop reliable, quantified estimates of the potential long-term*

changes in greenhouse gas emissions or carbon sequestration that may result from different types of treatments in different types of landscapes across the NWFP area over time." The section ends with **Table 3-16 Action Alternatives' implications for carbon storage (based on treatment/harvest estimate).**

The fact that the DEIS avoided climate **refugia science** and the lessons learned for forest wildfire **resistance** is papered over with a resilience narrative.

What is relevant is Table 3-16's treatment acres, and the treatment acres subsequent carbon release contributing to more climate warming. The agency's statement that quantitative analysis is not feasible is not credible. The Oregon State Forest DEIS calculated carbon volumes for different forest removal quantities per alternative. We can only conclude that the agency does not want to reveal how much forest volume will be lost in moist forests under DEIS alternatives.

Section 3.6, Issue 5

The section describes the 3.6.1.1 Effects of Climate Change on the NWFP Area.

3.6.1.2 Forest Carbon Storage and Sequestration

"Moist forests in the NWFP area can continue to be a net sink for carbon for several centuries." And so, we ask how much carbon? *"The distribution of carbon across pools varies across the landscape ..."* We ask again, how will carbon pools increase or decrease by Alternative? And *"a study found management was needed to reduce the risk of fire."* And we ask, what management is appropriate to a warming climate that will make wet and rainforest zone forests resistant to wildfire?

3.6.1.3 Disturbance and Carbon Stocks in the NWFP Area

"harvest and ecological disturbances had limited effects on forest carbon uptake and storage across the NWFP area during early decades" Really? Yet, NWFP forests will be a "net sink" for carbon into the future. See DEIS Table 3-15 for a reality check.

Table 3-15. Effects of disturbances on non-soil carbon for 1990-2011

"Harvested timber can serve as a medium-to long-term form of carbon storage when it is incorporated into durable end-use products....." Our response is that forest stands that grow vigorously will sink even more above ground carbon than wood products storage. How much is not found in the DEIS? We suggest the phrases medium-term and long-term be changed to short-term and medium-term for wood products carbon storage.

3.6.2 Environmental Consequences

3.6.2.2 Consequences Common to All Action Alternatives

Effects of the Alternatives on Climate Change Adaptation

"The action alternatives all include plan components that would strengthen the capacity of ecosystems in the NWFP area to adapt to the ongoing effects of climate change." Here is where the DEIS gets into plan elements without stating material effects. Or the plan will have effects on the plan.

"Managing for resilience to disturbances is a key adaptation strategy in light of expected increases in fire, drought, and insect mortality" However, the DEIS avoids managing for wildfire resistance. And in either case, what are the impacts to forests and their values?

"The proposed alternatives also include desired conditions that address the need to increase the presence of native species adapted to future climate in moist forests" And *"Climate change adaptation is also supported by the overall emphasis in the plan components"* Again, the plan will have effects on the plan. What exactly are the cumulative impact to current species much less speculated future species arriving in a warmer climate?

"The proposed alternatives also include plan direction that supports managing for infrastructure, recreation sites, and a transportation network that is resilient to the effects of climate change" Again, the plan will have effects on the plan.

"The proposed alternatives also provide plan direction that sets clear expectations to consider climate change vulnerability and adaptation" Again, the plan will have effects on the plan.

"All action alternatives would result in substantial improvements compared to the No Action Alternative in terms of ensuring that treatments, when they occur, contribute to climate adaptation" What treatments? What improvements? For moist, wet, and rainforest zones plan treatments will not improve conditions unless specific standards are set for stand management based on wildfire science. Again, the plan will have effects on the plan.

Effects of the Alternatives on Carbon Stewardship

"The effects on carbon storage and emissions from fuels treatment activities vary according to multiple factors, including forest type, the amount of vegetation treated per acre, terrain complexity, and the number of workers and number and type of equipment required to implement treatment activities." Based on experience, any time an "its complicated" narrative appears, that's a red flag that nonsense is about to follow. And again, the plan will have effects on the plan.

And here's the problem: *"current scientific understanding of these factors makes it infeasible to develop reliable, quantified estimates of the potential long-term changes in greenhouse gas emissions or carbon sequestration that may result from different types of treatments in different types of landscapes across the NWFP area over time."*

"The action alternatives all include desired conditions for carbon stewardship that recognize the need to manage carbon in line with ecosystem integrity."

"All three action alternatives would provide additional plan direction that protects stands in moist Matrix established before 1825 and substantially limit treatments in stands established between 1825 and 1905. Moist forests in these age classes generally store large amounts of carbon and therefore plan components that support protection in this age classes would likely support increased carbon storage compared to the No Action Alternative. However, the effect would be minimal because carbon losses due to harvest in these older forests have already been quite minimal." The DEIS provides no analysis to demonstrate the validity of the above assertions. Again, the plan will have effects on the plan.

And the 'analysis ends with the following table:

Table 3-16. Action alternatives' implications for carbon storage (based on treatment/harvest estimates)

Plan Component Topic	Implication for Carbon Storage	Alternative A	Alternative B	Alternative C	Alternative D
Dry Forest Stewardship	Carbon Removal	Treat 75,000 acres per decade in Dry Forest	Treat 527,000-643,000 acres/decade across the Northwest Forest Plan area	Treat 104,000-127,000 acres per decade in dry forests across NWFP area	Treat 208,000-254,000 acres per decade in dry forests across the NWFP area
Moist Forest Stewardship	Carbon Removal	Treat 48,100 acres per decade in Matrix	Treat 65,000-81,000 acres per decade in Matrix	Treat 32,000-41,000 acres per decade in Matrix	Treat 130,000-163,000 acres per decade in Matrix
Fire Resistance and Resilience (Mechanical)	Carbon Removal (All Types)	1,800,000 acres/decade	900,000 acres/decade	900,000 acres/decade	2,200,000 acres/decade
Fire Resistance and Resilience Treatments (Wildland fire)	Carbon Emissions from Combustion	700,000 acres/decade	1,750,000 acres/decade	350,000 acres/decade	2,750,000 acres/decade
Sustainable Communities	Carbon Removal and Storage as Wood Products	212,440 acres/decade (4,446 MMBF)	660,000–810,000 acres/decade (5,900–13,500 MMBF)	171,000–211,000 acres/decade (1,500–3,600 MMBF)	474,000–588,000 acres/decade (4,700–12,200 MMBF)

As previously mentioned, the DEIS asserts that it is "infeasible to develop reliable, quantified estimates of the potential long-term changes in greenhouse gas emissions or carbon sequestration....." But the above table is titled **Action Alternatives' implications for carbon storage (based on treatment/harvest estimate)**.

Apparently, treatment harvest estimates for carbon have been done but the Forest Service isn't sharing the analysis. Or we'll just go with a numberless assessment. The column "**implications for carbon storage**" is all we are provided.

What a cumulative effects analysis must do is assess the environment, i.e. climate warming is caused by CO2 build up in the atmosphere. Then discuss quantitatively the cubic volume lost from tree removal and the carbon released minus carbon storage in stuff. Such an assessment must say "*the plan amendments will release X number of tons of carbon into the atmosphere over X period of time per alternative. Therefore, the impacts we can expect are.....*" DEIS Table 3-14 is below.

Table 3-14. Estimates of carbon stocks, density, and distribution across pools National forest	Carbon stock in 2005 (Tg)	Carbon stock in 2023 (Tg)	Carbon stock error in 2023 (+/-; Tg)	Percent change in carbon stock from 2005 to 2023	Carbon density in 2023 (Mg/ha)	Proportion of Carbon Stock: Live	Proportion of Carbon Stock: Soil Organic Carbon	Proportion of Carbon Stock: Down Dead and Detritus
Klamath	164	166	13	1%	316	41%	41%	18%
Mendocino	75	80	8	6%	265	40%	47%	13%
Shasta-Trinity	232	246	14	6%	322	46%	40%	14%
Six Rivers	161	171	12	6%	389	52%	36%	11%
Deschutes	129	132	5	3%	222	33%	53%	13%
Fremont-Winema	178	185	4	4%	230	35%	53%	12%
Mt. Hood	148	160	6	8%	412	51%	34%	15%
Rogue River-Siskiyou	240	259	11	8%	385	49%	37%	14%
Siuslaw	97	110	10	13%	488	59%	30%	11%
Umpqua	144	156	6	8%	406	52%	33%	15%
Willamette	254	276	11	9%	430	54%	32%	13%
Gifford Pinchot	200	218	7	9%	419	52%	33%	15%
Mt. Baker-Snoqualmie	233	251	12	8%	420	51%	33%	17%
Okanogan-Wenatchee	387	375	13	-3%	263	28%	51%	21%
Olympic	99	107	7	8%	450	50%	35%	15%
Total	2,742	2,891	NA	5%	NA	NA	NA	NA

Quantities and metrics are in the DEIS. They just don't show up in a cumulative effects analysis.

SNF's carbon density and percent increase in carbon volume 2005-2023 are the highest of

all national forests in the NWFP area. SNF carbon stock in 2005 went from 97 million metric tons to 110 million metric tons in 2023. It is not a great leap to go from Table 3-14 & Table 3-16 to a clear statement of carbon loss or gain per alternative in the DEIS.

Indeed, such an exercise occurred during the period 1990 to 2011 as seen in DEIS **Table 3-15. Effects of disturbances on non-soil carbon.**

Table 3-15. Effects of disturbances on non-soil carbon for 1990-2011

National forest	Percent change in 2011 non-soil carbon due to all disturbances, 1990-2011	Percent change in 2011 non-soil carbon due to fire, 1990-2011	Percent change in 2011 non-soil carbon due to harvest, 1990-2011	Percent change in 2011 non-soil carbon due to insects, 1990-2011
Klamath	-1.2%	-0.9%	-0.3%	0.0%
Mendocino	-3.6%	-3.0%	-0.6%	0.0%
Shasta-Trinity	-3.0%	-2.4%	-0.6%	0.0%
Six Rivers	-2.2%	-1.9%	-0.2%	0.0%
Deschutes	-5.6%	-2.5%	-3.1%	-0.1%
Fremont-Winema	-3.2%	-0.9%	-2.1%	-0.4%
Mt. Hood	-1.1%	-0.2%	-0.9%	0.0%
Rogue River-Siskiyou	-5.5%	-4.9%	-0.5%	-0.3%
Siuslaw	-1.4%	0.0%	-1.3%	0.0%
Umpqua	-1.6%	-0.9%	-0.7%	0.0%
Willamette	-1.4%	-0.8%	-0.6%	0.0%
Gifford Pinchot	-0.6%	-0.1%	-0.5%	0.0%
Mt. Baker-Snoqualmie	-0.2%	0.0%	-0.2%	0.0%
Okanogan-Wenatchee	-4.7%	-3.5%	-0.7%	-0.7%
Olympic	-0.3%	0.0%	-0.3%	0.0%

What we find for the SNF is exactly what we expect. No loss of carbon stocks due to fire, but a decline of 1.3% from timber removal. Yet, SNF's carbon stock grew between 2005 to 2023 by 13%. How did carbon stocks grow in the face of continued SNF tree removal due from aggressive thinning? For one, from 1990 to 1995 clearcut harvest in large forest stands occurred. And the SNF is transitioning to a period of maximum growth in cubic tree volume and therefore sequestered atmospheric carbon increased.

And now we face a potential increase in large tree forest removal under proposed forest plan amendments. And the DEIS fails to reveal the impact.

CRA Interpretation of Effects of alternatives on habitat/vegetation types (Moist Forests)

Management Change Element	Alternative A - No Action	Alternative B - Proposed Action	Alternative C	Alternative D
Age of timber harvest within moist Late-Successional Reserves (LSR). LSR objectives retained with specified exceptions.	<p>Slower growth of trees stands between 80 and 120 years old, especially plantations under 80 years of age, but overall volume growth remains high.</p> <p>The CRA supports thinning plantations to no less than 75% canopy cover.</p>	<p>Loss of habitat and stand carbon volume from 'treatments' in stands between 80 and 120 years old, especially <80-year plantations; stands that may be providing habitat for some species associated with mid-to late-seral forests are lost. Long-term benefits to habitat due to accelerated development of tree size and other late seral characteristics.</p>	<p>Smaller ultimate tree size potential and continued slower development rates of late seral characteristics in stands between 80 and 120 years old, especially plantations. No additional short-term impacts or long-term benefits to moist forest habitat.</p>	<p>Increased short-term habitat impacts from treatments in stands between 80 and 120 years old, especially plantations; stands that may be providing habitat for some species associated with mid- to late-seral forests. Long-term benefits to habitat due to accelerated development of tree size and other late seral characteristics.</p>
Constraints on timber harvest in old growth forest stands established prior to 1825 in moist Matrix.	<p>SNF timber harvest does not occur in old-growth forest.</p>	<p>Harvest in stands established after 1825 in support of corporate profits and SNF income. Loss of sequestered carbon and late-successional habitat.</p>	<p>Increased constraints on timber harvest resulting in additional conservation of old growth stands; no harvest in stands established prior to 1825.</p>	<p>Increased constraints on timber harvest resulting in additional conservation of old growth stands; no harvest in stands established prior to 1825 with some specified exceptions.</p>
Constraints on timber harvest in mature forest stands established between 1825 and 1905 in moist Matrix.	<p>SNF timber harvest does not occur in LSR forest over 80 years of age.</p>	<p>Timber removal in stands established between 1825 and 1905 in support of corporate profits and SNF income. Loss of sequestered carbon and late-successional habitat.</p>	<p>Increased constraints on timber harvest resulting in additional conservation of mature forest stands; harvest in stands established between 1825 and 1905 to maintain ecosystem integrity with some specified exceptions.</p>	<p>Increased constraints on timber harvest resulting in additional conservation of mature forest stands; harvest in stands established between 1825 and 1905 to maintain ecosystem integrity with some specified exceptions.</p>

The DEIS will become a Final EIS and a record of decision (ROD) will be signed. The FEIS will have a stated preferred alternative. What amendment changes will occur due to the President's Executive Order to go full speed on cutting timber remains to be seen. We urge the Forest Service to stay focused on law and Rule and keep a steady hand on the rudder.

Please improve the cumulative effects analysis to answer the questions we ask and address the lack of evidence and analysis we have pointed out.