

Special Board of Forestry Meeting

May 10, 2022 | Virtual Meeting



Opening Remarks

Chair Jim Kelly
State Forester Cal Mukumoto



Agenda

- Welcome and Overview
- Presentation on Western Oregon State Forests Habitat Conservation Plan (HCP) Draft Environmental Impact Statement (DEIS)
- *Break*
- Q&A: Opportunity for Board members to ask questions of the National Environmental Policy Act (NEPA) team and Federal Services
- *Break*
- Facilitated Conversation between Board of Forestry members and Forest Trust Land Advisory Committee (FTLAC) members
- Closing Comments



Remote Participation Tips

- Keep yourself on mute when not speaking
- If you have a question or comment, use the “Raise Your Hand” button to get in the queue to speak, or press *9 on your phone
- Use of video encouraged
- Say your name before speaking
- Use the “Chat” feature for help troubleshooting any issues
- Meeting is being livestreamed and recorded



Discussion Guidelines

- Stay on topic: Reflections on the DEIS
- Seek to hear from everyone—share the air
- Focus on interest and values — not positions
- Assume and practice good intent
- Listen to understand
- Be hard on the problem, soft on the people
- Sit in each other's shoes and practice acknowledgement



Western Oregon State Forests Habitat Conservation Plan (HCP) Background

State Forests Division Chief Mike Wilson



HCP Phased Approach



Western Oregon State Forests HCP Phases

Phase 1: HCP Initiation & Scoping

(Timeline: November 2018)

- Engage agencies, county partners & stakeholders
- Refine the species list
- Conduct a Business Case Analysis

Phase 2: Strategy Development

(Timeline: October 2020)

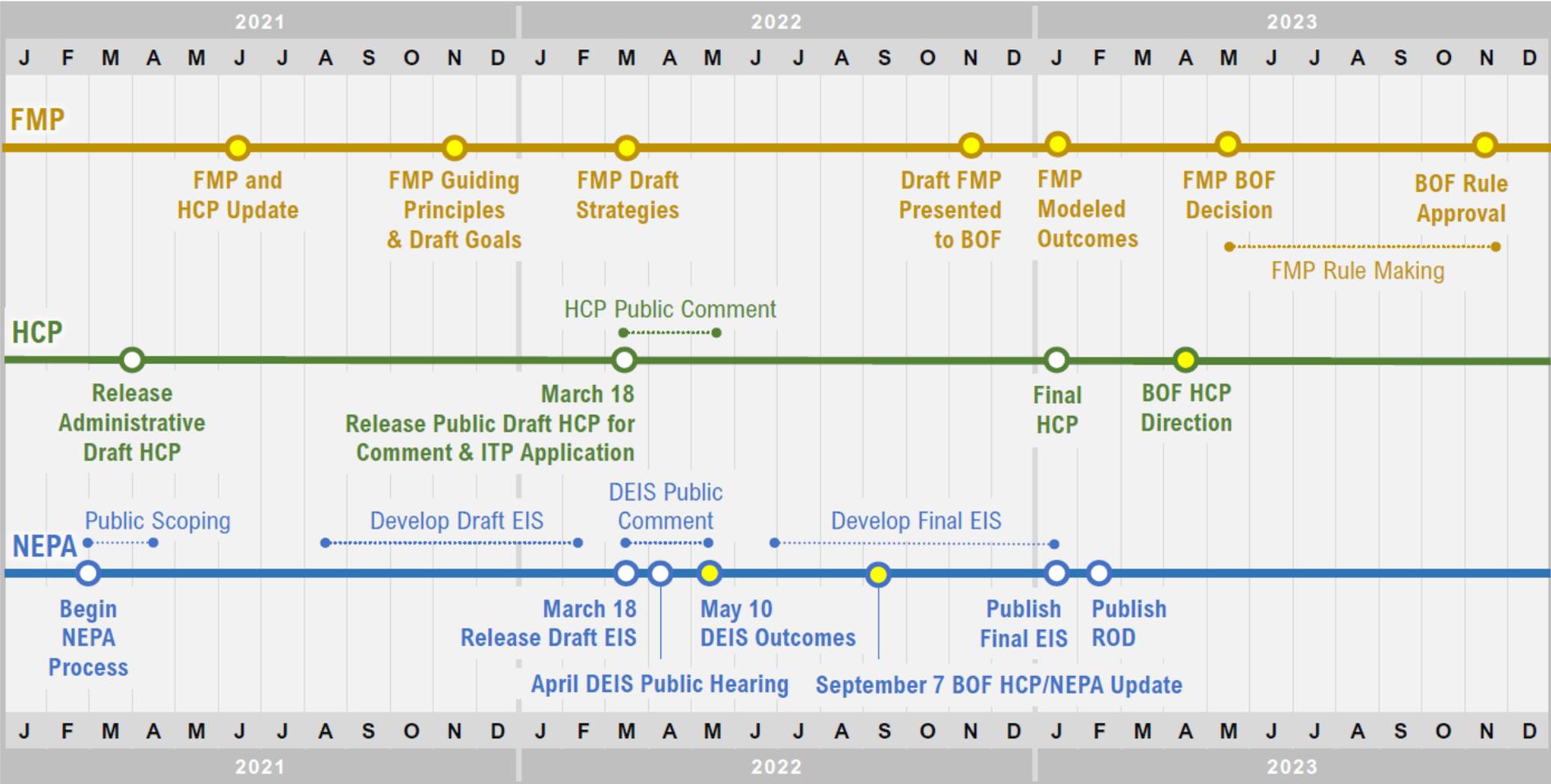
- Develop 1st Administrative Draft of the Western Oregon HCP
- Engage county partners & stakeholders
- Comparative Analysis (Updated BCA)

Phase 3: National Environmental Policy Act Analysis *(Timeline: February 2023)*

- Complete Final Environmental Impact Statement and publish the Record of Decision

Working FMP – HCP – NEPA Timeline

● BOF Presentation / Decision





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**Draft Environmental Impact Statement
for the Western Oregon State Forests
Habitat Conservation Plan
Special Board of Forestry Meeting**

May 10, 2022

Presenters:

Deb Bartley, EIS project manager, ICF

Sarah Reich, Socioeconomics, ECONorthwest

Topics Covered

Background

NEPA/ESA Processes

Draft EIS

- Scoping
- Purpose and Need
- Alternatives
- Modeling
- Effects



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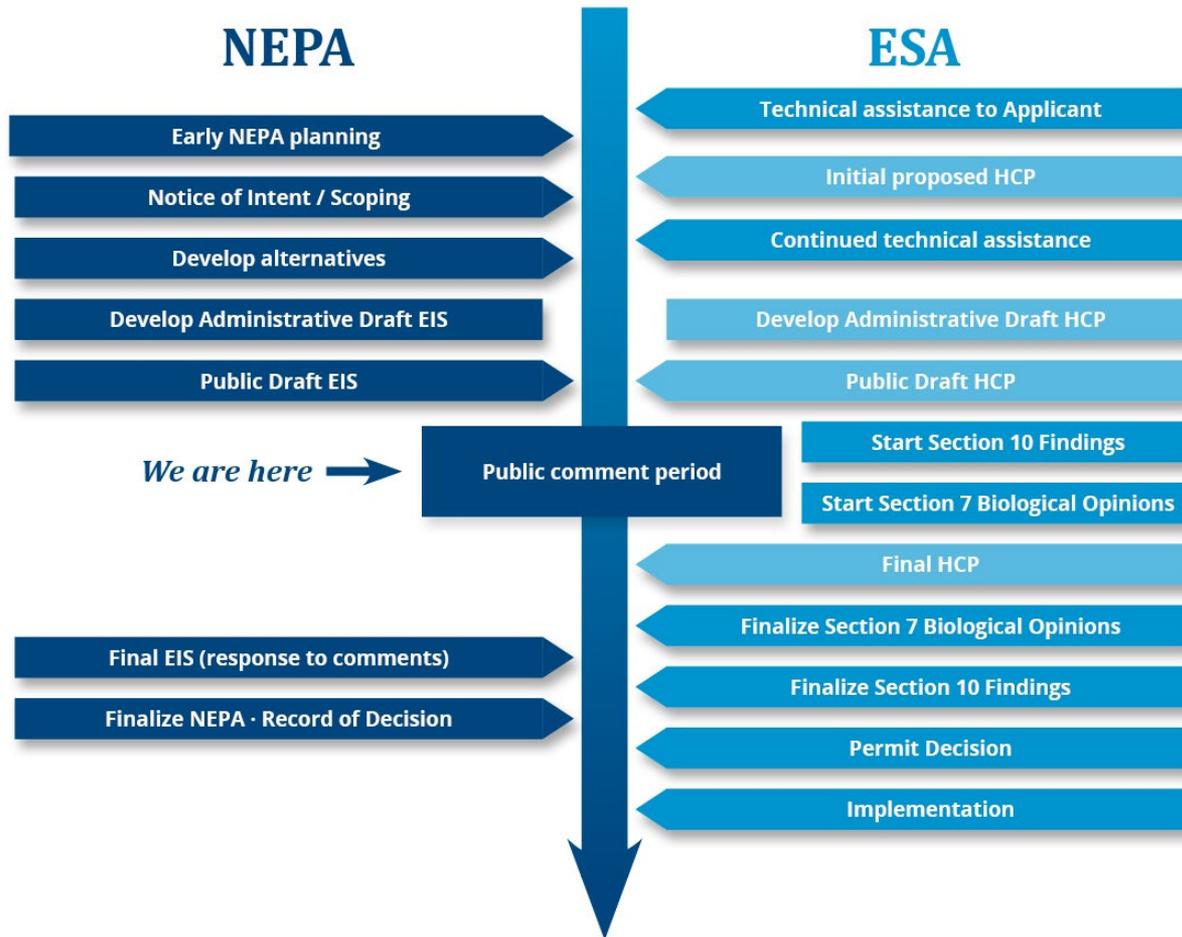
Background

- NOAA Fisheries and the U.S. Fish and Wildlife Service are considering issuing permits authorizing incidental take of listed species that could occur from ODF's forest and recreation management activities in Western Oregon
- The HCP, a requirement of the permit application process, is ODF's plan to avoid, minimize, and mitigate for take
- The proposed issuance of an ITP is considered a federal action under the National Environmental Policy Act (NEPA). NOAA Fisheries is the lead federal agency preparing the EIS, and FWS is a cooperating agency



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NEPA and ESA Processes



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What must the EIS address?

- Input from public, tribes, agencies and stakeholders
- Purpose and need for action
- Reasonable range of alternatives
- Effects of the proposed action and alternatives on the human environment



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Scoping

- NOAA Fisheries published the Notice of Intent on March 8, 2021, to formally initiate the scoping period
- Public comment period was from March 8 to April 21, 2021
- Comments were considered in development of alternatives and in analysis of effects in the Draft EIS
- Scoping report is included as Appendix 1-C of Draft EIS



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Purpose and Need

- The purpose of the federal action, issuance of incidental take permits to ODF, is to protect the covered species and their habitat while allowing ODF to manage the permit area in compliance with the Endangered Species Act.
- The need for the federal action is to respond to ODF's request for incidental take permits for the covered species and covered activities as described in the HCP.



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EIS Alternatives

- Reasonable range of alternatives
 - Meet the purpose and need
 - Are technically and economically feasible
 - Meet the goals of the applicant
- Alternatives screening process
 - FWS and ODF input
 - NOAA Fisheries' decision
 - Screening criteria
 - Draft EIS Appendix 2-A, Alternatives Screening



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EIS Alternatives

- 17 alternatives screened
- 5 alternatives analyzed in detail
 - Alternative 1: No Action
 - Alternative 2: Proposed Action (HCP)
 - Alternative 3: Increased Conservation
 - Alternative 4: Reduced Permit Term
 - Alternative 5: Increased Harvest



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Alternative 1: No Action

- The Services would not issue ITPs
- ODF would continue to implement its forest and recreation management activities consistent with existing laws and plans
- Impractical over the long-term
- Required under NEPA



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Alternative 2: Proposed Action (HCP)

- Issuance of permits authorizing incidental take of covered species from the covered activities in the permit area for a 70-year permit term
- 17 covered species
- Covered activities include:
 - Timber harvest
 - Reforestation and young stand management
 - Road system management
 - Recreation facilities and infrastructure
 - Conservation strategy implementation



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Alternative 2: Proposed Action (HCP)

- Conservation strategy
 - Riparian conservation areas (RCAs)
 - Equipment restriction zones (ERZs)
 - Stream enhancement and fish passage barrier removal projects
 - Habitat conservation areas (HCAs)
 - Upland habitat management standards
 - Seasonal operational restrictions
 - Species-specific actions
- Monitoring and adaptive management program
 - Compliance monitoring
 - Effectiveness monitoring
 - Adaptive management process



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Alternative 3: Increased Conservation

Same as the proposed action with the following modifications:

- Expanded riparian conservation areas (RCAs)
- Broader application of landslide-related leave tree requirements
- Additional requirements for risk inventory and evaluation of roads and motorized trails



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Alternative 4: Reduced Permit Term

Same as the proposed action with the following modifications:

- 50-year permit term



Alternative 5: Increased Timber Harvest

Same as the proposed action with the following modifications:

- Overall acreage of habitat conservation area (HCAs) reduced by approximately 15,500 acres
- Approximately 6,000 additional acres of Swiss needle cast stands available for harvest



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EIS Resources Analyzed

The Draft EIS analyzes potential impacts of the proposed action and alternatives on 12 resources:

- Geology and soils
- Water resources
- Vegetation
- Fish and wildlife
- Air quality
- Aesthetics and visual resources
- Recreation
- Cultural resources
- Tribal resources
- Socioeconomics
- Environmental justice
- Greenhouse gas emissions and carbon storage

The EIS also describes the effects of reasonably foreseeable environmental trends and planned actions



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Overview of Effects

Same *types* of effects under all alternatives

- Harvest of forest stands (primarily clearcutting) has a variety of effects on the natural environment, including:
 - Removal, modification, fragmentation of terrestrial species habitat
 - Increased landslide potential
 - Degradation of aquatic species habitat
 - Reduced carbon storage
- Reforestation offsets some of these effects over time
- Development of facilities removes trees and other vegetation



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Overview of Effects

- Harvest and construction activities as well as facility use and maintenance would involve operation of vehicles and heavy machinery
 - Cause disturbance to species and habitat
 - Emit pollutants, including greenhouse gases
- Management of state lands for forestry provides carbon storage



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Forest Management Model

- Same *types* of effects under all alternatives
- Differences in timing, magnitude, location of effects driven by differences in how activities are implemented
- Constraints on harvest are a primary driver
- EIS analyses use forest management model



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Forest Management Model

- Forest model inputs:
 - ODF's stand-level inventory
 - Regulatory and operational constraints
 - Management prescriptions
 - Financial considerations
- Forest model outputs:
 - Timber harvest volumes and acreages
 - Revenues and costs
 - Forest stand attributes (age, stand type) and distribution
 - Carbon storage potential
- Forest model outputs used as inputs for:
 - New road construction and use projections
 - Covered species habitat models
 - Economic analysis



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Forest Management Model

- Results are not harvest targets
- Results are not precise predictions
- Disturbance events
- Differences in model certainty



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Forest Management Model

Modeled Average Annual Harvest Volume

	No Action	Proposed Action	Alternative 3	Alternative 5
	175 million board feet	226 million board feet	225 million board feet	234 million board feet

Modeled Average Annual Clearcut Harvest Area

	No Action	Proposed Action	Alternative 3	Alternative 5
	4,217 acres	4,665 acres	4,657 acres	4,888 acres



Select Impact Analysis Results

- Forest Structure
- Greenhouse Gas Emissions and Carbon Storage
- Covered Salmonids
- Covered Terrestrial Species
- Socioeconomics
- Environmental Justice



Modeled Changes in Forest Structure

- Under all alternatives:
 - Increase in average tree age and trunk diameter
 - Decrease mid-seral stands (30-79 years)
 - Increase in late-seral (80-174 years)
 - Increase in old growth stands (over 175 years)
- Proposed Action compared to No Action
 - Mid-seral stands decrease less
 - Late-seral stands increase less



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Greenhouse Gas Emissions and Carbon Sequestration

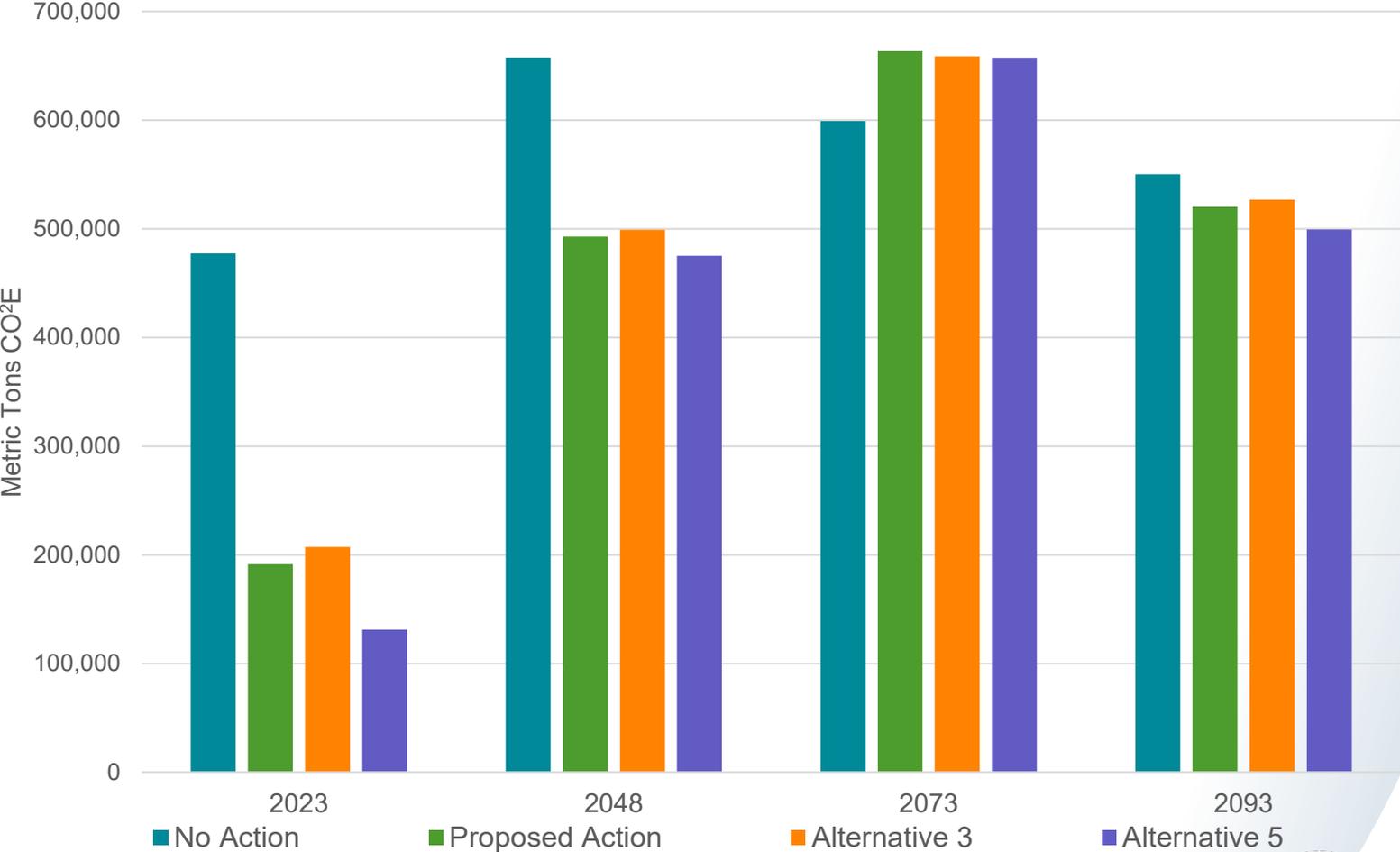
Under all alternatives:

- Covered activities emit greenhouse gases
- Forests, vegetation, soils sequester and store carbon
- Carbon sequestered far exceeds emissions



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Change in Carbon Sequestration



Covered Salmonids—Effects of All Alternatives

Changes in habitat quantity and quality related to:

- Wood recruitment potential
- Stream temperature
- Sedimentation
- Hydrology and channel condition



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Covered Salmonids—Proposed Action

- Model results indicate greater harvest and related activity
- Better minimization and mitigation
 - Wider riparian buffers and additional restrictions
 - Stream enhancement
 - Fish passage barrier removal
 - Monitoring and adaptive management



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Covered Terrestrial Species—No Action

- Dependent on species surveys
- Less harvest certainty
- Increased habitat fragmentation
- No long-term habitat conservation



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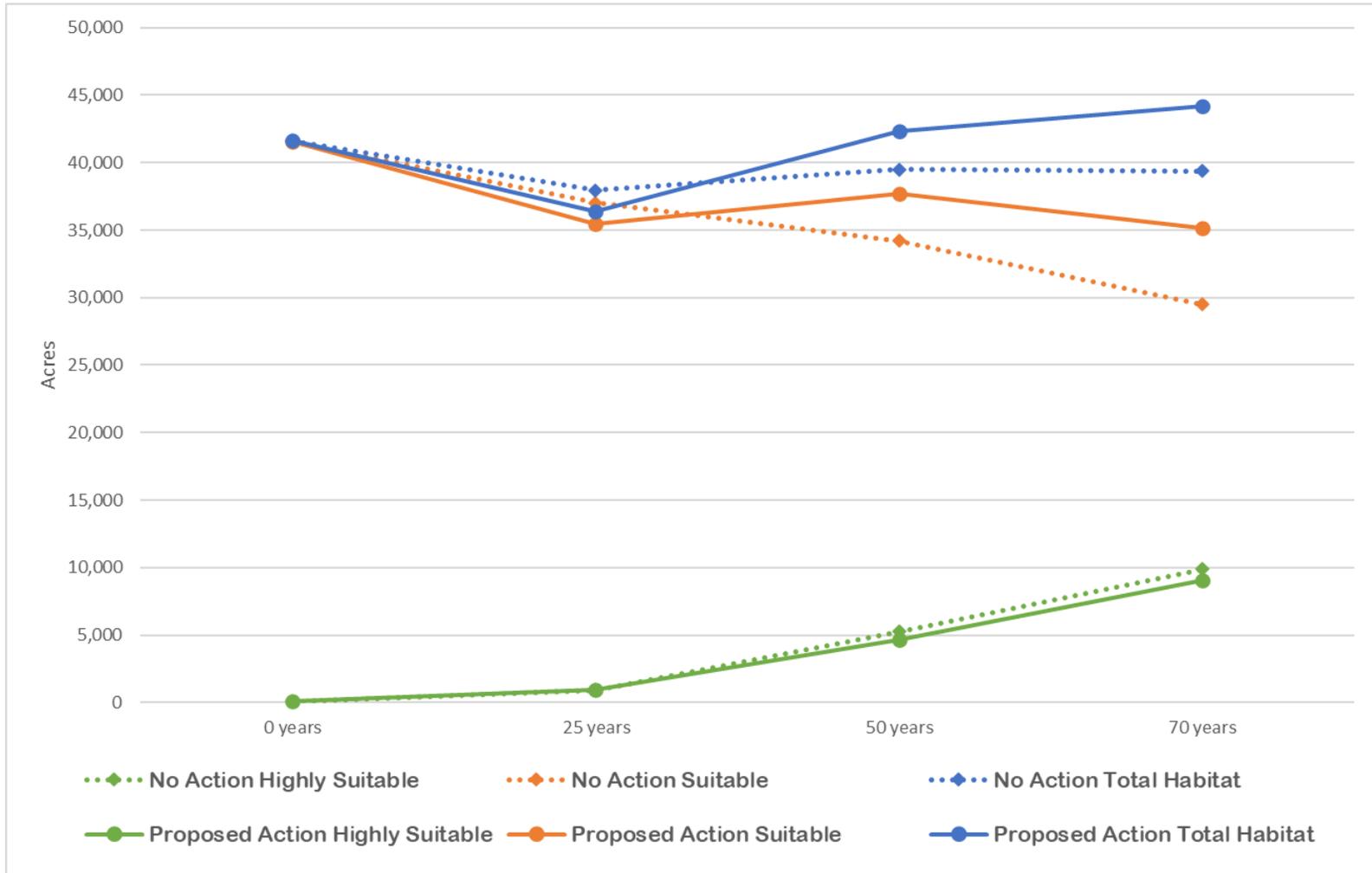
Covered Terrestrial Species—Proposed Action

- Increased harvest certainty
- Harvest outside of conservation areas
- Greater modeled harvest and related activity
- Increased habitat conservation and connectivity
 - Establish habitat conservation areas
 - Managing for species conservation
 - Fund and implement strategic efforts
 - Monitor and adaptively manage

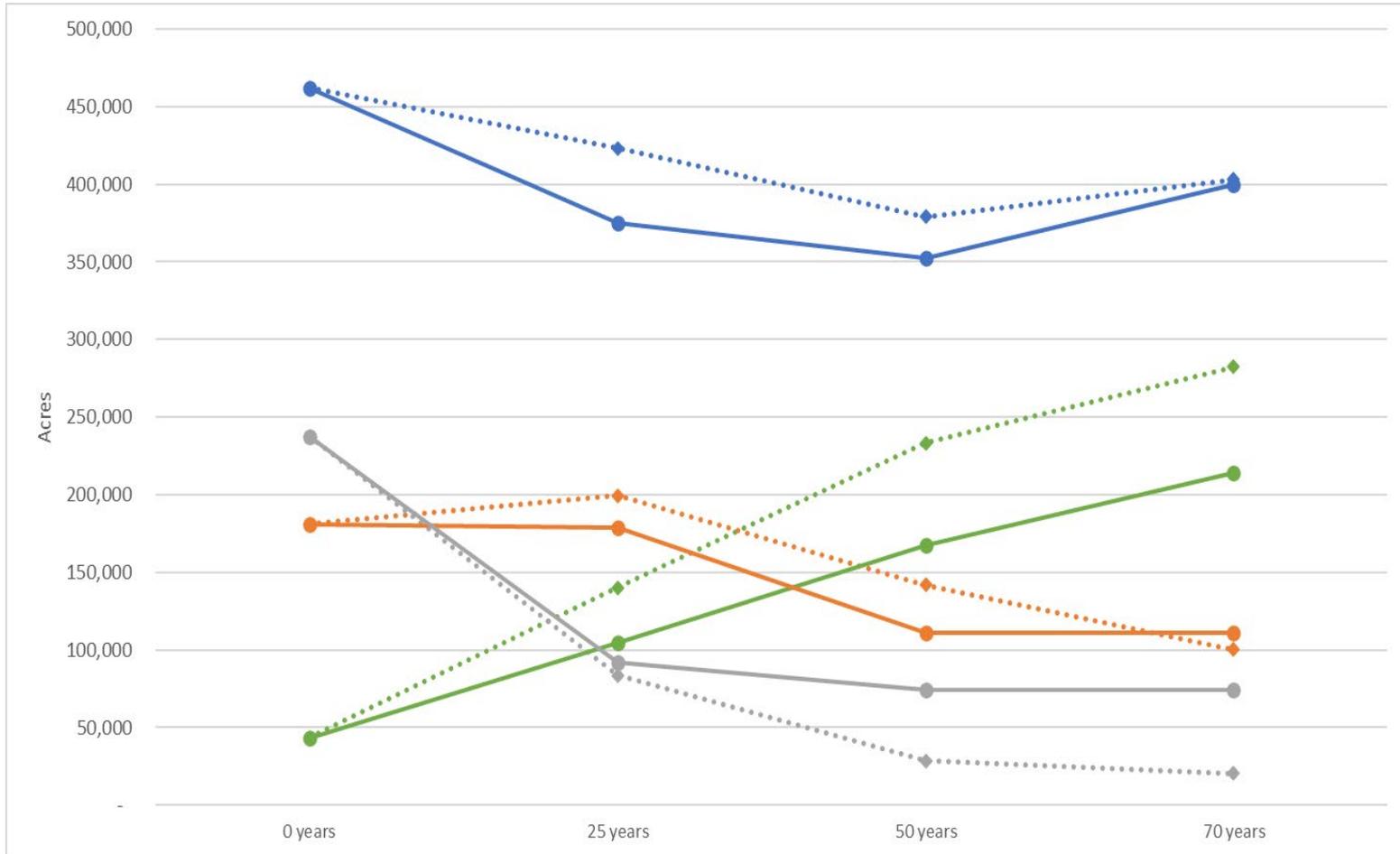


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Modeled Oregon Slender Salamander Habitat

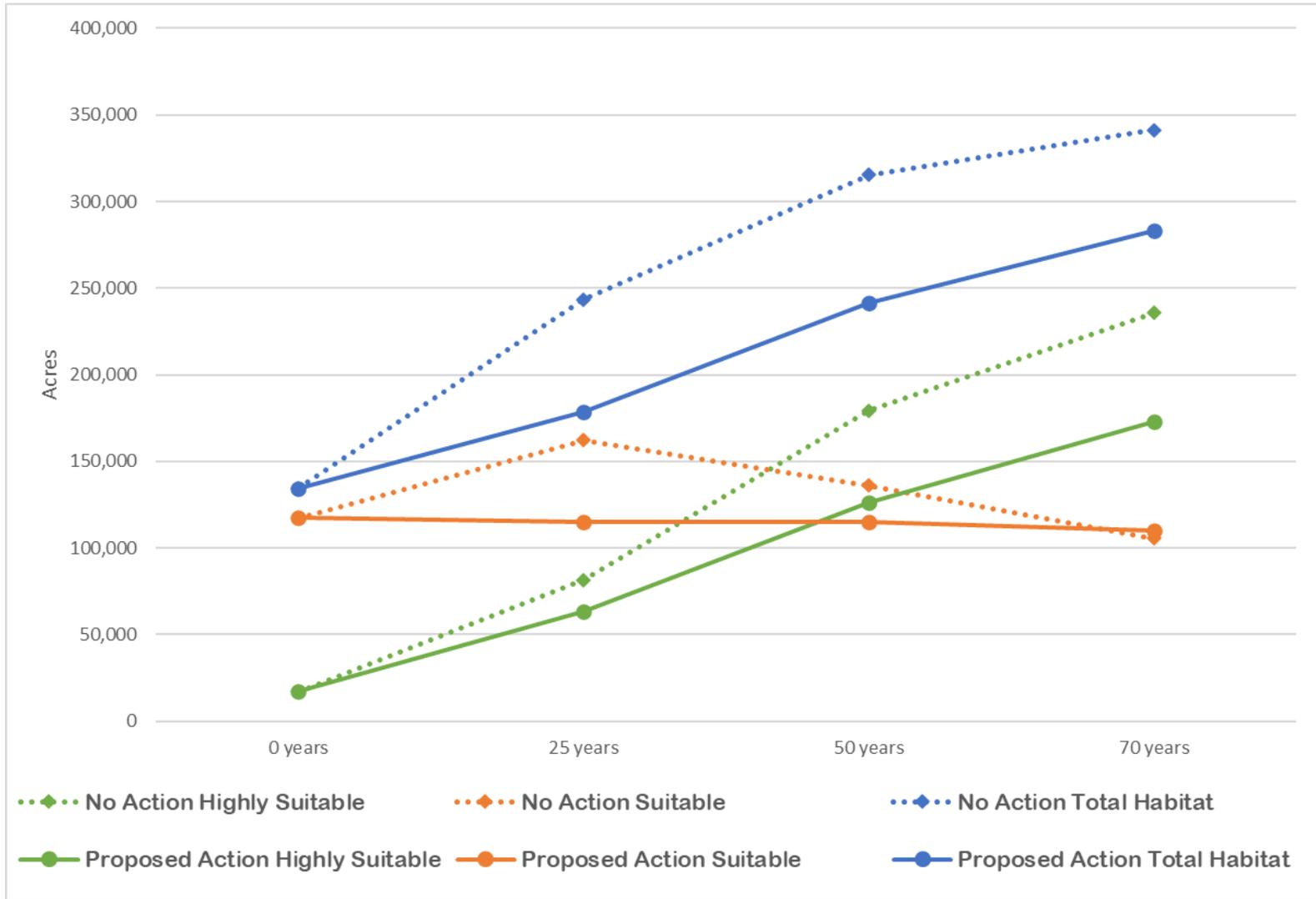


Modeled Northern Spotted Owl Habitat

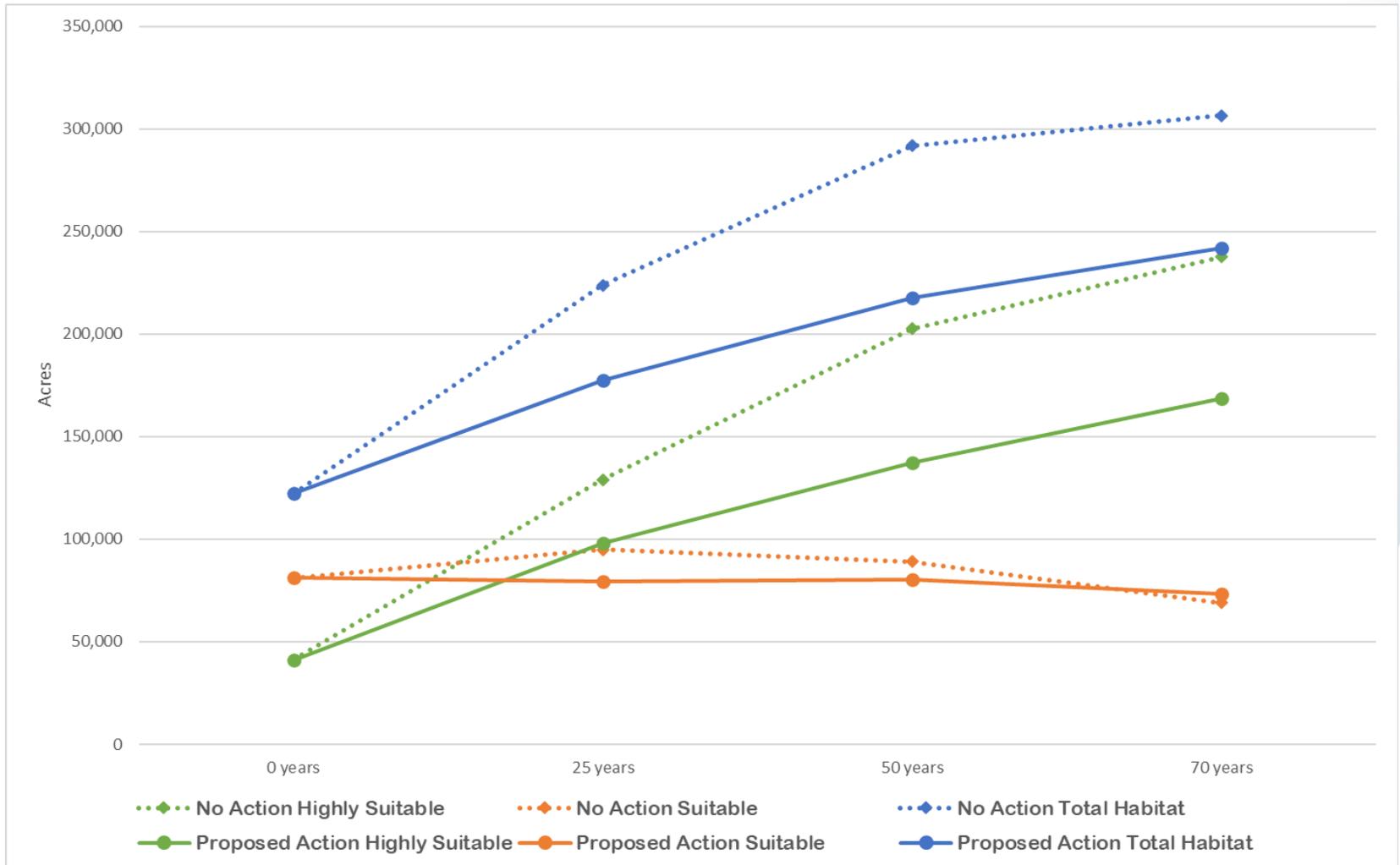


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Modeled Marbled Murrelet Habitat



Modeled Red Tree Vole Habitat



Covered Terrestrial Species—Disturbance

Effects of differences in management response

- Salvage harvest
- Locations of protected areas



Socioeconomics—Methodology

- Model volume to mills
 - Forest management model
 - ODF log flow data
- Jobs and labor income
 - IMPLAN
- Spatial analysis to distribute timber revenues
- Key-informant interviews
- Qualitative analysis of non-timber forest products and ecosystem services



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Socioeconomics—Effects of All Alternatives

Permit area forests would continue to generate value for Western Oregon communities:

- Local jobs and labor income
- Revenue for state agencies, county governments, and taxing districts
- Recreation opportunities
- Valuable goods and ecosystem services



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Socioeconomics – Comparison of Effects

Modeled timber harvest is higher under proposed action than no action, which results in:

- More timber revenue and direct jobs over permit term, variation over time and location
- More total employment and labor income in Western Oregon during the period modeled (2023-2032)
- More revenue to local governments and schools, variation over time and location

The supply and value of ecosystem services under the alternatives would vary locally and over time based on differences in harvest and resulting forest structure



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Socioeconomics – Comparison of Effects

Modeled average annual harvest and direct employment (harvest and milling) by county in the permit area over the permit term (Board of Forestry Lands and Common School Fund Lands)

County	Average Annual Harvest (Proposed Action, 2023–2092) (MBF)	Percent Difference in Harvest Relative to No Action	Average Annual Employment (2023–2092)
Benton	5,382	58%	37
Clackamas	2,583	34%	12
Clatsop	52,945	9%	102
Columbia	5,532	59%	65
Coos	2,520	-8%	10
Curry	0	-100%	0
Douglas	2,136	16%	9
Jackson	0	-100%	0
Josephine	457	-16%	1
Lane	11,043	27%	75
Lincoln	13,765	33%	22
Linn	9,579	20%	45
Marion	6,212	-17%	10
Multnomah	No ODF-managed lands or log processing locations		
Polk	4,184	58%	8
Tillamook	86,587	45%	197
Washington	22,786	54%	101
Yamhill	69	31%	94
Total	225,781	29%	786



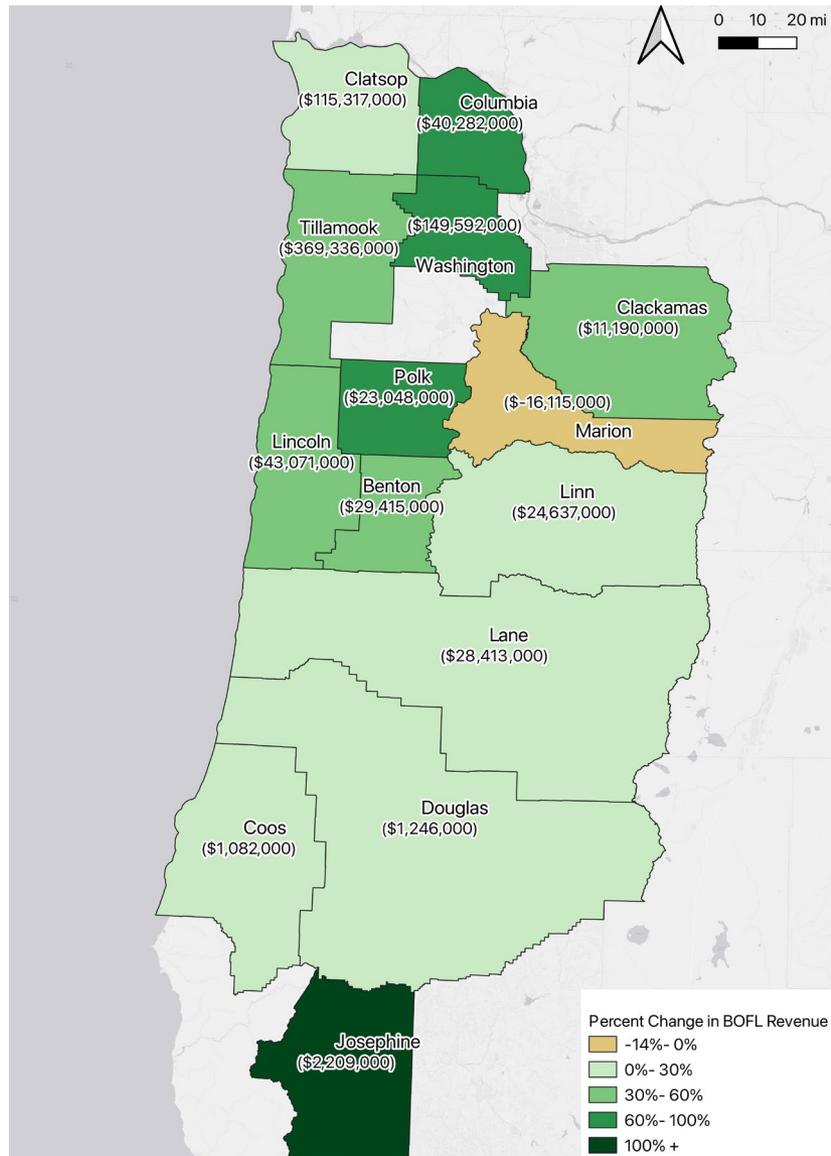
Socioeconomics – Comparison of Effects

Modeled Annual Average Effect in Western Oregon (2023-2032)

Totals	No Action	Proposed Action	Alternative 3	Alternative 5
Total Jobs	2,757	3,230	3,199	3,315
Labor Income	\$170 million	\$201 million	\$199 million	\$207 million



Socioeconomics – Comparison of Effects



Board of Forestry Lands revenue to counties over the permit term (percent change from no action to proposed action)



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Socioeconomics – Comparison of Effects

- Most taxing districts are projected to receive the same amount or more Board of Forestry Land revenues under the proposed action relative to no action
- Increased local Board of Forestry Land revenue for most school districts would increase the amount of state revenue available for all school districts
- Four school districts that have historically received higher timber sale Board of Forestry Land revenues than equalization funding are projected to receive higher revenues under proposed action than no action



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Socioeconomics – Comparison of Effects

Taxing districts projected to experience greater than a 10% decline in Board of Forestry Land revenue over the permit term

County	Districts	Total Payment under No Action	Total Payment under Proposed Action	% Change relative to No Action
Clatsop	Cannon Beach RFPD	\$920	\$830	-10%
Clatsop	Clatskanie School District 6J	\$5,297,147	\$2,293,717	-57%
Clatsop	Elsie Vine Maple RFPD	\$1,670,364	\$1,279,407	-23%
Clatsop	Lewis and Clark RFPD	\$17,315	\$13,975	-19%
Clatsop	Westport Wauna RFPD	\$232,851	\$0	-100%
Coos	Lakeside RFPD	\$34	\$5	-84%
Coos	North Bay RFPD	\$13,840	\$0	-100%
Coos	North Bend School 13	\$2,370,257	\$1,649,950	-30%
Lane	Swishhome Deadwood RFPD	\$2,124,344	\$1,811,493	-15%
Linn	Gates RFD	\$116,558	\$96,985	-17%
Marion	Chemeketa Community College	\$6,121,534	\$5,337,577	-13%
Marion	Gates FD	\$170,817	\$101,553	-41%
Marion	Linn-Benton-Lincoln ESD	\$1,068,522	\$728,541	-32%
Marion	Marion 4-H Ext	\$345,420	\$301,184	-13%
Marion	Marion County	\$20,899,294	\$18,222,818	-13%
Marion	Marion Soil and Water	\$345,420	\$301,184	-13%
Marion	Regional Library	\$565,107	\$492,737	-13%
Marion	Santiam Canyon SD	\$24,670,975	\$16,821,187	-32%
Marion	Stayton FD	\$416	\$233	-44%

RFPD=Rural Fire Protection District; FD=Fire District; SD=School District;
ESD=Education Service District



Environmental Justice—Effects of All Alternatives

Permit area forests would continue to generate value for low-income, minority, and tribal communities in Western Oregon:

- Employment and labor income
- Government revenue used for public infrastructure and services
- Ecosystem services and resources used for subsistence and cultural significance



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Environmental Justice—Comparison of Effects

- Reductions during certain time periods in government revenue for some EJ communities could have adverse effects
- If changes in supply and value of ecosystem services with subsistence and cultural importance result in higher travel costs or lower value to tribes and EJ communities, adverse effects could occur



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Alternative 3: Increased Conservation

- Impacts similar to proposed action, but expanded riparian protections and more stringent road repair and vacating measures would:
 - Further improve riparian health
 - Further reduce adverse effects on water quality and habitat for fish and stream-dependent species
 - Potentially reduce public access for recreation and other uses



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Alternative 4: Reduced Permit Term

- Impacts same as proposed action through year 50



Alternative 5: Increased Timber Harvest

- Impacts similar to proposed action but increased timber harvest would
 - Increase the potential for adverse effects on water resources and habitat for fish and stream-dependent species
 - Decrease modeled habitat for covered terrestrial species over the permit term
 - Further increase timber revenue and related economic effects



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Next Steps

- Public review and comment period ends June 1, 2022
- NOAA Fisheries will consider all comments received in preparing the Final EIS
- NOAA Fisheries and FWS will each issue a Record of Decision





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Thank you

Break: Return at 2:15pm





**Q&A: Board members to ask questions of the
National Environmental Policy Act (NEPA) team
and Federal Services**



Break: Return at 3:30pm



Conversation: Board of Forestry and Forest Trust Land Advisory Committee (FTLAC)



Discussion Guidelines

- Stay on topic: Reflections on the DEIS
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- Focus on interest and values — not positions
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- Listen to understand
- Be hard on the problem, soft on the people
- Sit in each other's shoes and practice acknowledgement



Discussion Questions

When you consider the Western Oregon HCP DEIS and the future of forest management....

- Is the DEIS clear? Does the document make sense?
 - What key outcomes stand out for you?
- What key challenges do you see for forest management and conservation of the species over time?
 - How do we respond to these challenges?
 - What is your understanding of current and future species listings and potential effects on harvest and revenue?



Looking Ahead

State Forests Division Chief Mike Wilson



Closing Comments

Chair Jim Kelly



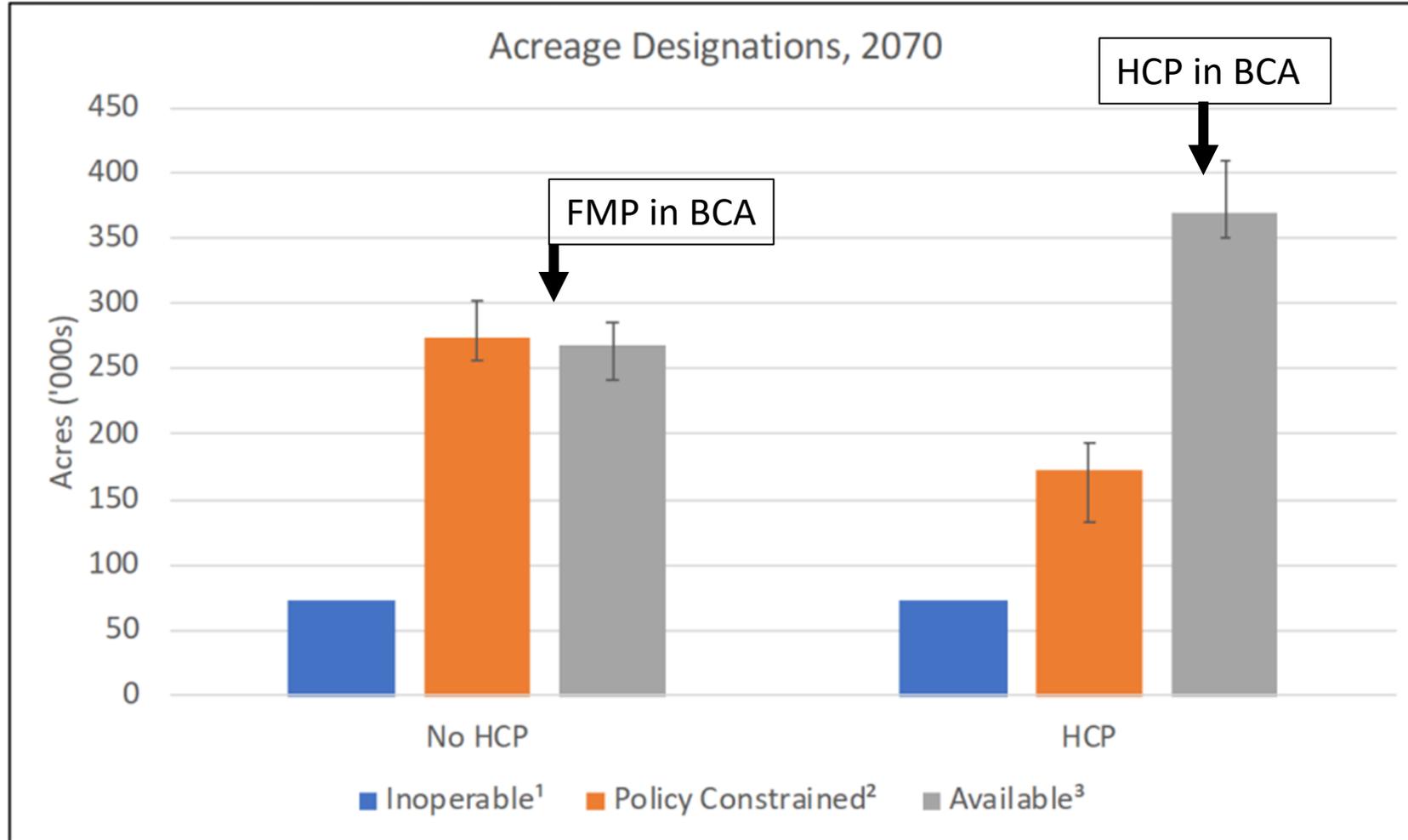
FTLAC/BOF meeting presentation

March 10, 2022

Key questions

- 1) How would threatened and endangered species populations change under the HCP?
- 2) What is the biological potential for timber production of the State Forest Lands?
- 3) How much take of covered species is expected under the HCP and how much mitigation will be provided?
- 4) Why have the assumptions in the business case analysis proven inaccurate?

Figure 6. Final Acreage Designations by Scenario, 2070



State Forest Lands only

Available and constrained acres as reported in the Business Case Analysis for an HCP compared to continued management under the Forest Management Plan.

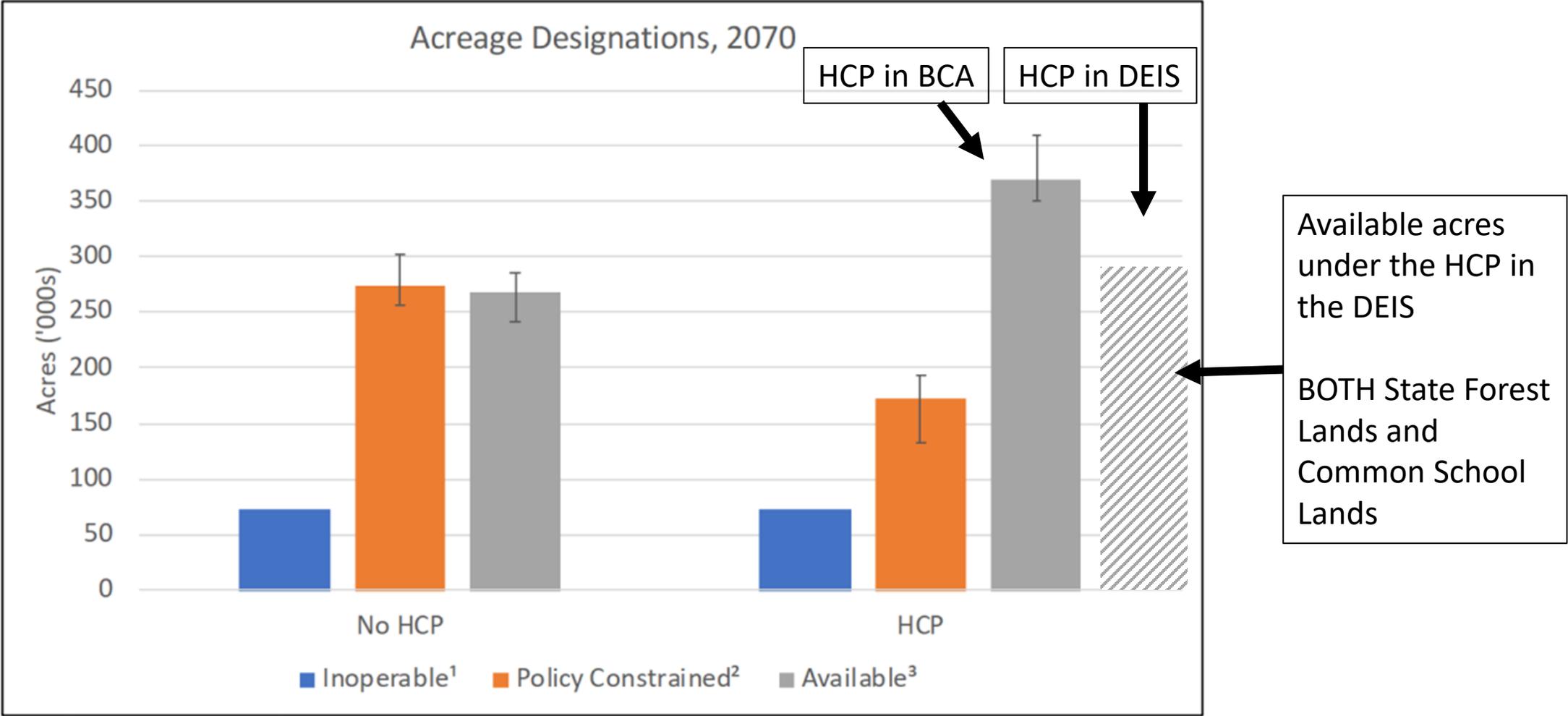
Notes: Error bars show ranges of high and low scenario range estimates.

¹ Inoperable acres either do not hold forest or would be impractical to harvest.

² Policy constrained acres are either unavailable for harvest or severely limited for harvest by policy and regulatory constraints (e.g., Oregon Forest Practices Act, federal Endangered Species Act and FMP stream buffers).

³ Available acres would be available for harvest according to appropriate policy requirements.

Figure 6. Final Acreage Designations by Scenario, 2070



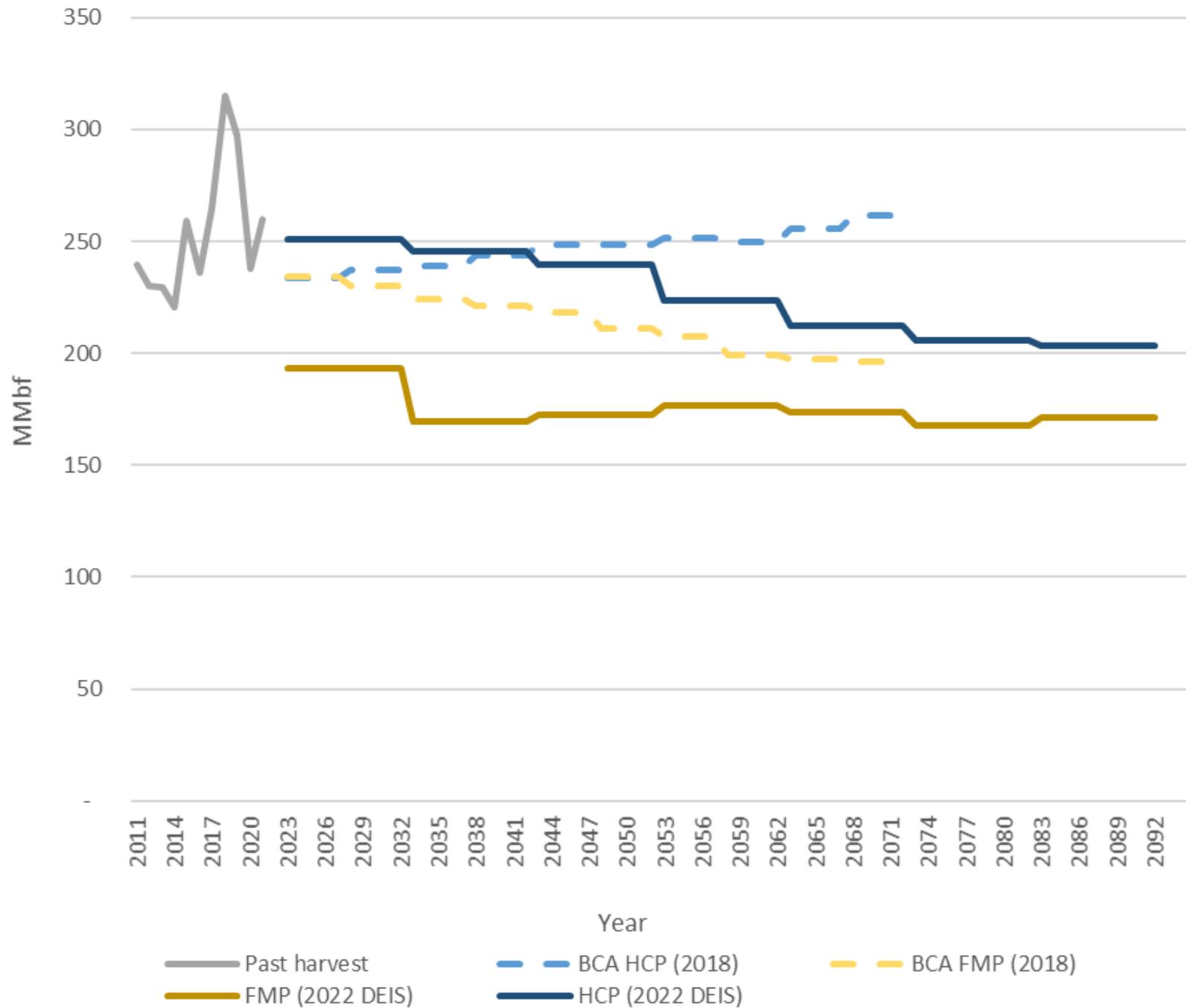
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³Available acres would be available for harvest according to appropriate policy requirements.

Past harvest levels and harvest level projections for the proposed HCP and the current FMP as modeled for the 2022 DEIS and the Business Case Analysis (BCA).





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To: Oregon Board of Forestry
2600 State Street
Salem, Oregon 97310

May 19, 2022

Submitted via email:
boardofforestry@oregon.gov

RE: Written testimony about the Draft Habitat Conservation Plan, 5/10 Board Meeting

Dear Chair Kelly and Members of the Board of Forestry,

As I prepared comments on behalf of 350PDX for the Draft Environmental Impact Statement for the Western Oregon State Forest Habitat Conservation Plan, I found myself returning again and again to the question asked by Board member Chandra Ferrari about how the uncertainty inherent in climate change factored into ODF's creation of the HCP. (BoF meeting 5/10). In response, she was assured that the Habitat Conservation Areas were planned larger than needed to account for losses due to more extreme weather events. While I appreciate that approach, I dug a bit further into the HCP to understand exactly how ODF determined the extent of predicted impact, and how it prepares for uncertain losses. Below are my findings, which conclude that the HCP as written does not sufficiently account for climate instability and needs to be improved to ensure the long term survival of listed species.

Impact of climate change on species covered by HCP

The DEIS contains very detailed descriptions of how the changing climate will adversely affect habitat for all the species covered in the HCP. *See DEIS Appendix 3.2, Disturbance and Climate Change.* The Appendix lays out a chilling view into our climate-uncertain future, clearly and concisely noting that both large-scale disturbances and localized changes will have major impacts on the ecology and hydrology of western Oregon. *See, eg, Ap. 3.2, 11-14.*

Building the climate justice movement.

The DEIS also notes that a measurable increase in disturbances of all kinds that meet or exceed previous conditions can be expected by halfway through the analysis period. Substantial further increases in both disturbance frequency and severity can be expected by the end of the analysis period. *Ap. 3.2 at 14*. In short, climatic and habitat conditions are getting bad and they could become exponentially worse during the life of the HCP.

In a time of vast uncertainty, being tied into a 50-70 year plan seems like a risky decision for the species, especially in light of the federal “No Surprises Regulation” which provides assurances to Section 10 permit holders that “no additional mitigation in the form of money, water, or land, or restrictions of land or water will be required should unforeseen circumstances arise once the permit is in place” unless the plan is amended. *HCP at 7-1*. As this is the case, you must be certain that *this* HCP is robust enough to ensure species survival.

Changed Circumstances vs. Unforeseen Changes

“Changed circumstances” describe what changes can be anticipated over the permit term and thus bind the Permittees’ commitments to address those changed circumstances as opposed to “unforeseen circumstances”, which are “changes in circumstances affecting a species or geographic area covered by a conservation plan that could *not reasonably have been anticipated* by plan developers and the USFWS or NOAA Fisheries at the time of the conservation plan’s negotiation and development.” *HCP at 7-2* (emphasis added). By definition, any circumstance not described as a changed circumstance in the HCP is considered an unforeseen circumstance. **ODF is not obligated to respond to an unforeseen circumstance.**

Thus, discerning what are knowable “changed circumstances” and what is “unforeseen” is a critical part of the HCP’s success in a climate-uncertain future. However, while the HCP claims that “because of the variability of climate change and because it is so interconnected to fire, storm/wind events, and invasive species, thresholds discussed below for setting changed circumstances take into account any potential implications of climate change” (*HCP at 7-4*) this does not seem to have occurred.

1) Stream Temperature

Given that 10 of the covered species are fish, climate-induced changes to water quality and quantity are particularly troubling. The HCP recognizes that, “based on climate change model scenarios, water temperature in streams and rivers can be expected to **increase on average by 2°F and 3.5°F** (0.73°C and 1.4°C) by 2040 and 2080, respectively.” *HCP at 7-8*. Given that many of the streams covered by the HCP are

currently 303(d) listed for excessive summer water temperatures that reduce the quality of rearing habitat for chinook, coho and chum salmon, the prospect of the temperature increasing by an additional 3.5° is potentially lethal.

Despite this knowable changed circumstance, the HCP minimally addresses water quality and quantity issues in its “Assurances”. For example, while the HCP includes “changed circumstances” for fire, storm and invasive species for HCAs, it has no changed circumstances defined for RCAs, stating that RCA buffers “will be maintained throughout the permit term.” *HCP at 7-6*. Why does ODF expect that RCAs will somehow remain in a static state, while the rest of the forest is affected by fire, storm and invasives? Because no changed circumstances are described for RCAs, no response is required when an RCA burns, or blows down, and is unable to provide habitat or shade.

Similarly, the HCP acknowledges that warmer water will enable the spread of **both** aquatic invasive plants and fish, but only includes the spread of invasive plants in the changed circumstances. *HCP at 7-7*. This is an important omission, because as the spread of invasive fish is categorized an “unforeseen circumstance,” ODF doesn’t have any obligation to ensure adequate funding or support to address the issue.

2) Fire

The phrase that kept coming to my mind regarding the HCP’s assurances around fire is “cognitive dissonance.” As noted in both the HCP and DEIS, climate change is increasing the frequency, severity, and extent of disturbances, particularly drought, fire, and invasive species. There is a long history of stand replacing fires in the wet forests of Oregon, driven by drought and wind; “[f]orest fires have burned hundreds of thousands of acres in western Oregon over the past century”. *HCP at 7-4*. While most fires burn a very small amount of acreage, wind-driven fires are the cause of the vast majority of burned forests, indeed **only seven fires caused 58%** of the burned area analyzed in the DEIS. *Ap. 3.2, p6*. The fires that have the most impact are the same ones that do not change behavior because of land management practices.

Despite acknowledging the long history of large, weather driven fires in western Oregon and the likelihood that climate change will increase the frequency of such fires, the HCP inexplicably labeled the 2020 Labor Day fires “an anomaly”, did not include them in the chart showing “normal” amounts of fire, and picked the dates 1960-2019 as the dates upon which to base what would be “changed circumstances”. *HCP at 7-4*. These dates omit the Tillamook burns and the Labor Day fires – dates seemingly picked specifically to avoid including large fires that are absolutely predictable on this landscape. The omission of large weather-driven fires from a foreseeable “changed circumstance” is a

near fatal flaw of this HCP, and brings us back to whether the answer given to Board Member Ferrari's question was accurate.

In his answer, Mike Wilson stated that HCAs were designed to provide more habitat than needed for species survival, so that if some of the habitat was disturbed the species would still have enough habitat to meet its needs. This is true only to the extent that the future disturbances would be no greater than those over the last 60 years (omitting 2020). Rather than basing HCA size on that needed to meet **future** levels of disturbance, the HCP's thresholds for changed circumstance "account for functionality of individual HCAs and HCAs at a landscape scale, and more than account for the average acreage of disturbance events on ODF-managed lands **over the past 60 years.**" *HCP at 7-5.*

To be clear, the current HCP predicts that all fires over the next 70 years will average 2 acres, with a total average of 2,775 acres burned per year. *HCP at 7-4.* This treats stand-replacing fire in western Oregon as an "unforeseen circumstance" that neither ODF nor the permittee are obligated to address *when* it occurs during the life of the HCP. This is neither legally sound nor adequate to ensure the continued persistence of threatened and endangered species in the state forests.

Both the HCP and DEIS are missing an in-depth review of whether the assurances and adaptive management included in the HCP would be effective at maintaining suitable habitat for both terrestrial and aquatic species throughout its term. The fact that the HCP seems to intentionally exclude known future events from its list of "changed circumstances" is particularly troubling and raises further doubt that this HCP will succeed at its aims.

In close, I believe that the HCP is on the right track, but its poor discernment as to what is a knowable future change, and its failure to fully prepare for our deeply uncertain climate future, are flaws that should be addressed before it is finalized.

Thank you for all the time and care you are giving to this process, and to the future of Oregon's forests.

Sincerely,

A handwritten signature in black ink that reads "Brenna Bell". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

Brenna Bell,
Forest Climate Manager, 350PDX
brenna@350PDX.org

From: [Darlene Chirman](#)
To: [ODF DL Board of Forestry](#)
Subject: Written Testimony for May 10, 2022 Virtual meeting
Date: Monday, May 23, 2022 1:32:09 AM
Attachments: [EIS HCP Western OR State Forests GOB Comment 2022-5-22.pdf](#)

Chair Kelly and members of the Board of Forestry:

I am submitting to the BOF the comment letter from the Great Old Broads for Wilderness, Cascade Volcanoes Chapter just submitted to NOAA Fisheries on the dEIS for the Western Oregon State Forests HCP, to be considered as testimony for your May 10, 2022 meeting where you received a presentation on the dEIS. I was able to review the Questions and Answer portion of your meeting with the ODF staff, EIS consultant and agency personnel, regarding the process for the EIS and issuance of take permits.

Our comments contain many recommendations for improved conservation management of the HCP-proposed Habitat Conservation Areas (HCAs) and Riparian Conservation Areas (RCAs) that might be incorporated in the final EIS, possibly as conditions of approval of the HCP and issuance of take permits. But many of these recommendations will not be, some because they don't "fit" in the HCP/EIS process of the agencies, because they weren't evaluated in the draft document, cannot be evaluated within the time constraints of the agencies or for other reasons unrelated to their potential value for management of our state forests.

However, it is our opinion that the Board of Forestry has the authority to include recommendations you consider valuable into the companion Forest Management Plan. If measures are more protective of natural resources and especially of the covered species, such measures would not violate an approved HCP. We urge you to use your authority to improve protection of covered endangered and threatened species within the designated conservation areas. In addition, we urge you to designate these conservation areas, HCAs and RCAs, as "Carbon Reserves" and co-manage them for endangered species habitat and for climate mitigation--carbon storage and sequestration. Since many of the covered terrestrial species require mature and old growth forests for their survival, and these same stands store the most carbon, co-management for these goals can be very effective, and be a major implementation strategy for the Climate Change and Carbon Plan approved by the BOF.

Thank you for your consideration of comments.

Sincerely, Darlene Chirman, M.S.

Ecology

Leadership Team Cascade-Volcanoes

Chapter

Great Old Broads for Wilderness

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May 22, 2022

National Oceanic and Atmospheric Administration
to be submitted via website

RE: dEIS HCP Western OR State Forests

The Great Old Broads for Wilderness is a national organization with a mission to protect public lands, forests and wilderness. We also advocate for climate action. The Cascade-Volcanoes chapter has been involved in the Oregon Western State Forests, commenting on the draft Habitat Conservation Plan (HCP), and are now submitting comments on the adequacy of the draft Environmental Impact Statement (dEIS). We support the implementation of the HCP, and urge adoption of Alternative 3, with modifications. This Increased Conservation Alternative is the alternative most likely to aid in recovery of the covered species, while providing certainty for the Oregon Department of Forestry in responsible management and sustainable harvest of the state forests. The modifications we suggest primarily would change conservation practices within the Habitat Conservation Areas (HCAs) and to a lesser extent in the Riparian Conservation Areas (RCAs).

The **Climate Change** section and evaluations of the dEIS provide detailed predictions of ways in which climate change may impact the forests through the permit period of 70 years. What is missing from the environmental analysis is how the forests can mitigate climate change. We find this a major deficiency of the dEIS, evaluation of ways in which forest management can promote climate mitigation. Implementation of the Climate Change and Carbon Plan (CCCP) approved by the Oregon Board of Forestry (BOF) on 11/3/2021 needs this analysis. We recommend adding a goal of carbon sequestration and storage (“Carbon reserves”) for Conservation areas.

Our detailed comments to follow focus primarily on management of Conservation areas: Habitat Conservation Areas (HCAs) and Riparian Conservation Areas (RCAs). Included are requests for analysis of co-management of the conservation areas for endangered species recovery and carbon sequestration and carbon storage.

The analyses in the dEIS compare the various alternatives across the whole forests. What we would like to see is a better breakdown of impacts of the various alternatives within the Conservation areas (HCAs and RCAs), since these are the areas set aside for habitat of the covered species under the HCP.

Management of Conservation areas—HCAs and RCAs.

Carbon storage and sequestration. What conservation practices will promote both habitat value for covered species **AND** carbon storage and sequestration? Since the most carbon is stored in older trees, this is consistent with the habitat value for covered terrestrial species that depend on old growth and late-seral forests—Northern Spotted Owl (NSO), Marbled Murrelet, and Red Tree Vole.

Appendix 3.14, Table 1 of the dEIS estimates carbon sequestration and emissions for each alternative at various times during the permit period. What we find missing from the analysis is **carbon storage**. In addition, there is no breakdown of carbon sequestration and emissions for conservation and production areas. Carbon storage will be greatest in the conservation areas, meeting both terrestrial species requirements and concurrently providing climate mitigation. We would like to see the management of the HCAs to maximize carbon sequestration and storage where this is consistent with habitat for covered terrestrial species. The carbon analysis in the dEIS doesn't help with determining the best Conservation management. There are some management strategies designed for the harvest areas, in order to provide dispersal habitat for covered species that will also provide carbon storage, but co-managing conservation areas for endangered species and carbon storage/sequestration will put fewer constraints on harvest practices in production areas.

Clearcut harvest. We request an addition to Alternative 3, that no clearcut harvest be allowed within Conservation areas, HCAs or RCAs; this could be a condition of issuance of take permits. Clearcuts can delay for decades the desired forest structure of complex mature forest, which is the primary habitat for covered terrestrial species such as NSO and Marbled Murrelet. While the HCP and dEIS are silent on the type of harvest, 30,000 acres are proposed for harvest within the HCPs within the first 30 years. We request more discussion of this proposed harvest in conservation areas, which we strongly oppose.

Thinning of trees within HCAs. Thinning is proposed in the HCAs. No details of the extent or analysis of the benefits of thinning within the HCAs are provided. We recommend restricting thinning, with goals *not* for harvest value but for achieving complex mature forest structure and wildlife habitat value for covered species dependent on old growth and late-seral forests.

These are essentially non-harvest areas, so there is no need to thin for promotion of harvest. The dEIS should evaluate the reduced carbon storage from proposed thinning within Conservation areas. A new study from Portland State University researchers evaluated the 2020 East Wind Wildfires¹ (Evers et al. 2022), found that most of the burn occurred during high wind conditions, and fuel reduction treatments did not help. The most severe burns occurred in young, managed plantations. Thinning for reduced wildfire in Western Oregon forests may not reduce wildfire severity, but does reduce the carbon storage capacity of the forest; the carbon lost is often greater than if the forest burns.² Most forest carbon is lost by post-fire logging, not by wildfire.

Limited thinning of ladder fuels may be justified near recreational facilities, where ignition sources are greater. Thinning to convert plantation stands to complex mature forest structure can be a legitimate strategy within HCAs, and doing so can promote habitat for terrestrial covered species such as Northern Spotted Owl and Marbled Murrelet.

The 1997 Final Recovery Plan for the Threatened marbled murrelet urges protection of both old-growth and mature forests: "Thinning within Late- Successional Reserves should be restricted to stands younger

¹ Evers, C., Holz, A., Busby, S., Nielsen-Pincus, M. 2022. Extreme Winds Alter Influence of Fuels and Topography on Megafire Burn Severity in Seasonal Temperate Rainforests under Record Fuel Aridity. Fire Journal.

² Law, B.E. and M. Harmon. 2011. Forest sector carbon management, measurement and verification, and discussion of policy related to climate change. Carbon Management 2:73-84.

than 80 years. ... [Recovery Action 3.2.1.2] **Protect 'recruitment' nesting habitat** to buffer and enlarge existing stands, reduce fragmentation, and **provide replacement habitat** for current suitable nesting habitat lost to disturbance events. Stands (currently 80 years old or older) that will produce suitable habitat within the next few decades are the most immediate source of new habitat and may be the only replacement for existing habitat lost to disturbance (e.g., timber harvest, fires, etc.) over the next century. Such stands are **particularly important because of the vulnerability of many existing habitat fragments to fire and wind and the possibility that climate change will increase the effects of the frequency and severity of natural disturbances**. Such stands should not be subjected to any silvicultural treatment that diminishes their capacity to provide quality nesting habitat in the future. Within secured areas, these "recruitment" stands should not be harvested or thinned. (emphasis added.)³

Hardwood harvest HCAs. There is planned 15,000 acres of hardwood harvest within HCAs. What is the justification of this harvest? Are these mixed species stands or dominant red alder stands? The dEIS provided no rationale that this harvest would provide covered species habitat value. Hardwoods are primarily red alder trees in the permit area. In fact, deciduous trees have high habitat value for many wildlife species (mostly non-covered species). They may have less timber value, but conservation areas should be managed for habitat value (and carbon storage), not for timber as harvest is restricted for the permit period. Section 3.5.3.1 on Forest Structure described hardwood release practices, where red alders are removed to ensure conifer dominance (under Alternative 1, No action). We recommend deletion of this harvest, except for hazard trees close to recreational facilities such as campgrounds, trailheads, boat launches, parking areas. There might be some value in limited felling or snag creation in dominant hardwood stands to promote mixed stands with conifers that could become preferred habitat trees for NSO and Marbled Murrelet; we found no discussion in the dEIS of such a strategy.

The EIS should evaluate the application of restrictions for HCAs similar to RCAs, hazard trees felled and left in place, or topped to remove sections that could fall in areas of high human use. What is the increase in value of downed wood (nutrient cycling, amphibian habitat, carbon storage), if *not* removed from the forest?

If the Conservation areas are to be co-managed as carbon reserves, as we recommend to meet CCCP goals, then keeping older trees and allowing them to further grow, sequestering and storing additional carbon, would seem an optimal management practice.

Swiss Needle Cast. The HCP plans harvest of 15,000 acres of Douglas fir (DF) trees infested with Swiss needle cast (SNC) with HCAs. What is the approximate total acreage of infested DF trees within Western Oregon State Forests? How much is within RCAs? How much in HCAs, where this harvest is proposed? SNC reduces growth rate of infected trees, does not kill trees, although some stressed trees may die in drought conditions⁴ (Shaw et al, 2021.) All research I found addresses growth rate impacts, which relate primarily to harvest value. But for trees in HCAs, what is the impact to the habitat value for covered and non-covered terrestrial species? The draft EIS fails to address this important question. We have been unable to locate any research on the impact of SNC to habitat value. Our recommendation that no harvest of SNC Douglas fir trees inside HCAs be done until a study is conducted (unless such research is

³FWS. 1997. Recovery Plan For The Threatened Marbled Murrelet (*Brachyramphus Marmoratus*) In Washington, Oregon, And California. http://ecos.fws.gov/docs/recovery_plans/1997/970924.pdf

⁴Shaw, D., Ritóková, G., Lan, Y., Mainwaring, D., Russo, A., Comeleo, R., Navarro, S., Norlanbder, D., Smith, B. 2021. Persistence of the Swiss Needle Cast Outbreak in Oregon Coastal Douglas-Fir and New Insights from Research and Monitoring. *Journal of Forestry*, Volume 119, Issue 4, July 2021, p 407-421.

available) to determine impact to habitat value for covered species. What infected areas are DF dominant, mixed conifers, mixed hardwood/DF? What areas are heavily infected, moderately infected, lightly infected—with varying impacts to length of needle retention and growth impacts? What would impact of harvest have on carbon storage? Older trees appear to be more resistant to SNC impacts. Our recommendation is for no clearcut harvest within HCAs—clearcut will delay desired mature forest structure and carbon storage. Retention of older infected DF trees, for habitat and carbon storage value, and age class diversity. Replant as mixed conifer species composition.

Alternative 3 modified practices. We request that the EIR provide some carbon analysis to compare Alt 2 proposal for HCP management with stand thinning, 15,000 acres of Swiss needle cast harvest and 15,000 acres of hardwood harvest, with a modified Alt 3 that would minimize all three of these practices within the HCAs. In addition, it would be important to analyze the impact of these changes on the recovery/persistence of the covered terrestrial species for which the HCAs are created.

Wildfire. Closing recreational facilities during extreme hot and dry conditions and windy conditions can protect forests from human-caused ignition sources, in addition to campfire restrictions. These measures also protect the public, if fires do occur.

The use of roads also increases ignition risks. The EIS should evaluate the benefits of road closures during hot, dry periods of increased wildfire risk. Roads can also be closed post-fire during times when falling tree risk is the greatest, as an alternative to felling burned trees for safety.

Post-fire logging. We request that Alternative 3 explicitly severely restrict post-fire logging in the conservation areas. The alternatives already restrict post-fire logging in the Riparian Conservation Areas, but we want to ensure the same restrictions in the Habitat Conservation Areas, which is about 275,000 acres. The dEIS does state that “**SALVAGE HARVEST IN HCAS AND RCAS WOULD BE LIMITED TO WHAT IS DEEMED NECESSARY FOR SAFETY.**” (page 95). We have seen that “safety” post-fire logging from 2020 and 2021 wildfires was very extensive. For example, ODF proposed post-fire logging, including clearcut logging, in the Santiam State Forest *within proposed Habitat Conservation Areas*.

“Hazard trees” can be felled and left in place, keeping carbon and nutrient cycling in the forest, providing habitat for amphibians, with less soil disturbance than extracting the logs for timber. Dead trees can also be topped if the fall zone could be unsafe for recreational facilities such as campgrounds, picnic areas, boat launches, or parking areas.

Reasons to restrict post-fire logging in Conservation Areas. Within HCAs (and RCAs) management goals should include:

- Promotion of natural regeneration after fire; logging disturbs this process.

- The goal is for mature, complex forests in HCA's, especially to support Northern Spotted Owls, Marbled Murrelets, and Red Tree Voles. Naturally regenerating forests reach this stage sooner than forests logged post fire.

- Logging post-fire disturbs fragile burned soils, increasing sediment into streams, harming “covered” aquatic species, inhibiting natural regeneration of diverse forest species.

- Streams have a downed wood deficit; burned areas can provide woody debris, for in-stream habitat for fish, including endangered and threatened species.

- Carbon loss is greater from post-fire logging than from wildfires; HCAs and RCAs should serve as carbon reserves, for carbon sequestration and carbon storage.

- Snags and downed trees are habitat for wildlife. Snags provide perching habitat, used by NSO, and

naturally regenerating forests provide a prey base for Northern spotted owls and many non-covered species.

Fish Passage Barriers.

4.7.4 Conservation Action 4: Remove or Modify Artificial Fish Passage Barriers.

The draft HCP states that “one of the biggest sources of salmon decline in the Pacific Northwest is the presence of a large number of artificial barriers, such as small dams, culverts or levees that block or reduce access of salmon to large portions of their historical habitat”⁵ (O’Hanley and Tomberlin 2005; HCP p191).

The HCP also states that over 23 years, 1995-2018, 284 fish passage improvement projects were implemented. This opened up or improved more than 216 miles of stream, mostly in the Astoria area. This is more than 12/year. Table 4.5 in the HCP shows that in the permit area there are currently 169 impassable fish barriers and 93 partial barriers, with the majority occurring in the northwest portion of the permit area. However, there are an additional 72 culverts listed as “unknown, anadromous”, so a total of 334. ODF commits to repairing or replacing at least 50% of these over the permit period (HCP p192). These same numbers are found in the dEIS (p49).

This data is different from Table 2 in Appendix 3.6-A of the dEIS. The discrepancies are in higher numbers of complete and partial fish passage barriers—195 and 110 respectively, and 269 unknown status (vs 72). This table also lists 133 passable structures, although the HCP states that ODF has implemented 284 improvement projects. What is the correct data?

The commitment of ODF is to repair 50% of the much smaller number of barriers listed in the HCP. Although 72 have not been evaluated to determine if fixes are needed. Even if 334 is the correct number, what is the rationale for *reducing* the annual fish passage improvement projects from approximately 12/year to 2.4/year? First, we request that these data discrepancies be resolved. Secondly, we request that Alternative 3 be modified to repair or replace at least 10/year, which is still less than the 23-year period average, but in light of the added stressors of climate change for covered species, this could make the difference in decline or thriving of threatened and endangered aquatic species. If the smaller number of 334 is accurate, this would complete the task halfway through the permit period. However, if the larger number from Appendix 3.6-A is accurate, it could take 50-60 years to complete the task. In addition, if some roads crossing streams in the conservation areas are vacated, no longer being needed in the non-harvest area and contributing sediment to the stream, this would reduce the number of culverts requiring replacement, as they could be removed.

Beavers. The dEIS mentions “encourage beaver habitat” as a measure that could be taken as an adaptive response to increases in stream temperature that is determined to be impacting covered aquatic species (App3.6A, p1481). Given that an impact of climate change will be increasing stream temperatures, as stated in the dEIS, we recommend including expansion of beaver distribution and the creation of maintained beaver-dam complexes as a proactive conservation action in RCAs in Alternative 3, as a conservation action to forestall negative impacts to covered aquatic species.

⁵ O’Hanley J.R., and D. Tomberlin. 2005. Optimizing the Removal of Small Fish Passage Barriers. Environmental Modeling and Assessment (2005) 10:85–98.

The dEIS fails to evaluate beaver along with other “non-covered riparian dependent wildlife”—see Table 2 in Appendix 3.6B, despite the recommendation to enhance beaver habitats as a possible conservation action.

Beavers are considered a keystone species, and there is interest in increasing beaver distributions and numbers as inexpensive “watershed engineers” for salmonid restoration. In many places beavers can improve habitat conditions for Coho salmon, a covered species. Beaver ponds store water, releasing it slowly which can extend the summer flow, and reduce stream temperatures. The ponds provide over-wintering habitat for juvenile coho salmon and according to Hoffman and Recht (2013)⁶ there have been documented declines in beaver dams and ponds over the past 2 decades.

NOAA’s Recovery Plan for Oregon Coast Coho (2016)⁷ says the following about beavers as a conservation tool:

“Improving ecosystem function by increasing the number of beaver dams and beaver dam analogues (human-made, channel-spanning structures that mimic or reinforce beaver dams) is an important tool in the overall strategy to restore habitat. These dam structures support creation of coho salmon rearing habitat by impounding water and retaining sediment, and generally facilitating fluvial geomorphic changes that can result in increased stream sinuosity, pool formation, and reconnected and expanded floodplains. Besides increasing stream complexity, beaver dams and beaver dam analogues act to raise water tables in alluvial aquifers, thus helping to increase summer stream flows, reduce stream temperatures, and expand riparian areas and wetlands.”

The expanded riparian areas provide wildlife refugia during wildfires, as they are much less likely to burn than surrounding dry forests. Moist riparian areas can also serve as natural firebreaks, trap eroding sediment post fire, and help maintain water quality.

The Coho Recovery Plan references The Beaver Restoration Guidebook⁸ (Pollock et al 2015) for tools to increase beaver activity, and their associated benefits.

Conservation Measures recommended:

- 1) Prohibit beaver trapping and hunting in the permit area. Where infrastructure conflicts arise, use non-lethal coexistence strategies that have been shown to be longer term solutions and more cost effective. Lethal removal should be a last resort. This prohibition should be included in Alternative 2 as well, if that is selected.

A bill was introduced in the 2021 Oregon legislature to provide protection for beaver from trapping and hunting on public land, which failed to pass out of committee for a vote.

However, we believe that landowners, including ODF, can prohibit these as a management

^{6,9} Beavers and Conservation in Oregon Coastal Watersheds. 2013. A background paper by Dr. Wayne Hoffman, MidCoast Watersheds Council, and Fran Recht, Pacific States Marine Fisheries Commission

⁷ National Marine Fisheries Service. (2016). Recovery Plan for Oregon Coast Coho Salmon Evolutionarily Significant Unit. National Marine Fisheries, West Coast Region, Portland, Oregon. Available at:

<https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/oregon-coast-coho-salmon>

⁸ Pollock, Michael, Jordan, Chris, Castro, Janine, Lewallen, Gregory, Woodruff, Kent. The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. 2015.

US Fish and Wildlife Service. NOAA, Portland State University, US Forest Service. Online at:

<https://www.fws.gov/sites/default/files/documents/BRG%20v.1.0%20final%20reduced.pdf>

- strategy to address water quality issues with minimal cost, and to enhance stream flows.
- 2) Survey of RCAs to map beaver activity and vacant suitable habitat.
 - 3) Cooperative efforts with ODFW, NGOs and municipalities, providing relocation sites for “nuisance” beavers in urban or other habitats, as an alternative to lethal measures.
 - 4) Where stream temperatures are increasing, take an adaptive management approach by taking measures to encourage beavers to occupy vacant territory with “pre-dam” structures such as constructed log jams to provide deeper water or a foundation for a dam⁹ (Hoffman and Recht 2013), or other low-tech restoration strategies.
 - 5) Establish a stream temperature monitoring program to assess the effectiveness of the conservation measures using DEQ protocols and recommended equipment.

Road Construction and Vacating Roads. The dEIS states that “Potential reasons for road vacating could include proximity to a fish-bearing stream, high erosion potential, or landslide hazards that could affect covered species.” In addition, “Road projects would occur at sites determined to be a risk for covered species.” Projects will be determined in Implementation Plans, every 10 years. In addition, roads constructed before the current Oregon FPA standards were instituted pose a greater risk of erosion and sedimentation into fish-bearing streams, or in upstream reaches where the sediment can be carried downstream to impact habitat for covered aquatic species.

Conservation Action 5 covers road improvement standards and possible reasons for vacating roads. Alternative 3 would increase road vacating in conservation areas—HCAs and RCAs. However, the dEIS provides no metric to evaluate the effectiveness of road vacating in protecting covered species, no metrics for a goal of “increased” road vacating in HCAs and RCAs. What has been the average miles of roads vacated in prior 10-year implementation cycles within the permit area? What percentage of increase is planned?

We recognize that Conservation Action 5 states that it “would include a requirement for ODF to adopt a risk inventory and evaluation program that includes motorized roads and trails in RCAs. The program would support road drainage improvement and vacating-related target setting, project-level prioritization and decision-making, and reporting for compliance.” What about the evaluation of roads in the HCAs? But having no provisional target makes the plan very difficult to evaluate. Because the RCAs and HCAs encompass most of the covered-species habitat, and harvest will be minimal in these conservation areas, there will likely be the potential to greatly accelerate vacating unneeded roads, with great benefit to the covered species habitat. What would be a reasonable goal for “increased” road vacating in the HCAs and RCAs? Maybe 50% increase over the first 30 years of the permit period? Perhaps as a forest stand is thinned to promote complex forest structure the access road can be evaluated for vacating. No new road construction should be needed or allowed in the conservation areas, with the exception of relocation of needed roads that are too close to fish-bearing streams and are causing negative impacts such as sedimentation into the streams, or reducing potential shade for temperature moderation. As mentioned in the section on Fish Passage Barriers, evaluation of stream crossings for vacating roads would also reduce fish barriers.

Vacating roads with RCAs and HCAs will have beneficial impacts for the habitat for covered species, and we strongly support this component of Alternative 3.

Steep Slopes. The dEIS states that the frequency of shallow-rapid landslides is high on slopes of 70-80%. Moderate frequency of landslides are observed on 50-70% slopes. Alternative 3—Increased conservation: ODF would leave trees on moderate hazard landslide initiation sites likely to deliver debris to a fish-bearing stream, as well as high-hazard sites. (p51) Much of the permit area is steep mountainous terrain (p61). What

percentage of the study area is subject to landslides and thus protected by current Forest Practices Act (FPA) policies? How prevalent are these steep slopes (70-80% and 50-70%) within the study area? What is the approximate additional area where logging would be prohibited under Alternative 3? Table 2 in Appendix 3.3 does show Landslide Density within the Plan Area in the various ecoregions, but this is difficult for a layman to understand as applied to the landscape.

Landslides adjacent to Riparian Conservation Areas contribute sediment to streams, which can severely impact water quality and support for covered aquatic species. Landslides cause loss of soil structure and soil carbon with residual impacts lasting decades, even if replanted (p64). The dEIS describes an increased frequency of shallow-rapid landslide as a result of root decomposition is higher in the 3 to 15 years after tree harvest, known as the window of vulnerability. The landslide recurrence interval (i.e., average time between landslides at a particular location) during the window of vulnerability at clearcut sites in the Coast Range in Oregon was determined to be approximately three times that of the landslide recurrence interval in undisturbed forest¹⁰ (Benda in prep.). Given this data, Great Old Broads strongly supports the Alternative 3 component of restrictions on logging on moderate slopes, wherever this could impact fish-bearing streams and on high hazard sites.

Alternative 5—Increased Timber Harvest. No evidence is presented in the dEIS that would indicate the preservation or recovery of covered species would be assured under the increased timber harvest and reduction of Habitat Conservation Areas by 23,500 acres. This would be “compensated” by adding 8000 acres of low productive value forests. However, the value of the 8000 acres as habitat for covered species is not evaluated in the dEIS. This Alternative should be rejected as ineligible for take permits for covered species.

Summary. The Great Old Broads strongly supports the Habitat Conservation Plan for the protection of endangered and threatened species and for certainty for the Department of Forestry in planning harvest of production areas of the Western State Forests. We urge some modifications of Alternative 3, Increased Conservation, and adoption of this Alternative as the greatest chance for persistence and recovery of covered species in the permit area. We urge that enhanced conservation practices within the Conservation Areas, HCAs and RCAs, such as suggested in these comments, should be conditions for issuance of take permits for covered species as part of the HCP.

In order to implement the adopted Climate Change and Carbon Plan, we urge that a goal of carbon sequestration and storage (“Carbon reserves”) for Conservation areas be added to the Plan. Co-managing Habitat Conservation Areas and Riparian Conservation Areas for persistence and recovery of covered species and as carbon reserves is feasible, as both require late seral and old growth forests for optimal effectiveness.

Sincerely,

Darlene Chirman

Darlene Chirman, MS Ecology
Leadership Team, Cascade-Volcanoes Chapter
Great Old Broads for Wilderness

¹⁰ Benda, L. In prep. Rates of Shallow Landslides, Effects of Forest Management and Implications for the Supply of Sediment and Wood to Fish Streams.