

# Discussion Topics and Questions

## Board of Forestry Special Meeting: Board and FTLAC Engagement

Thursday, December 14, 2023 | 3:25 PM – 4:30 PM

### Desired Outcomes and Purpose

- To develop a common understanding of the modeling process, underlying data and results, utility and limitations.
- To allow time for the FTLAC to inform the Board as it considers options for moving forward with the FMP under the HCP, and to ask questions to help FTLAC members inform their testimony.
- To continue building a relationship between the FTLAC and the Board and consider how best to collaborate moving forward.

### Agenda Items and Discussion Questions

#### Opening and Framing (5 min)

- Purpose of discussion and framing
- Opening remarks

#### Reflection on modeling results (35 min)

*Round robin to hear from all members for two minutes each on the following two questions.*

- Do you have any clarifying questions about the modeling results?
  - Specifically, do you have any questions about the assumptions made or why/how staff came to any of the results in the modeling?
- Are there any benefits or concerns that you would like to discuss related to the modeling results?

*Open discussion with FTLAC on the questions above and responses from round robin.*

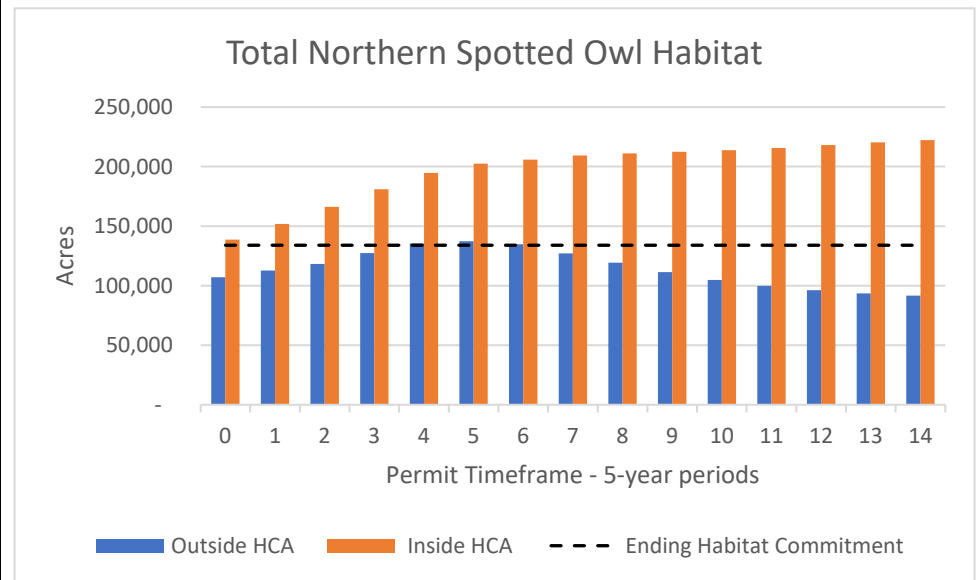
#### FTLAC and County Engagement on FMP (25 min)

- The FMP with an HCP is a mechanism to mitigate legal risk and garner public support for the management of state forests. What is your perception of these risks?
- As the Board considers the modeling results and how to move forward with the draft FMP and draft HCP, how do you envision the counties collaborating with ODF, the Board, and stakeholders to find solutions that allow the agency to manage the public forest in the context of Greatest Permanent Value?
- Looking forward to FMP and HCP implementation, how can the Board and ODF support the counties in actions outside of the FMP to mitigate any potential impacts to the counties and local communities?

**FTLAC Questions on Modeling Scenarios**

<b>List of questions that have been sent in:</b>	<b>Response or Work Required and Timing</b>
<p>Can the following scenario be run: Can even flow apply only to lands outside HCAs, and within HCAs harvest equal to the maximum acres allowed under the HCP in order to maximize forest health treatments within HCAs?</p>	<p>While running the different scenarios, a cursory model run was done for the North Coast georegion scale, maximum volume scenario, to look at just this question. Initial results showed even flow volume outcomes that were about 3% lower compared to the reported run. This cursory run did not include any harvest from within HCAs. We did not pursue this as a full scenario since the difference was minor.</p>
<p>You mentioned during the FTLAC meeting that the modeling was trying to solve the “Tillamook Problem.” Can you be more clear on what the “Tillamook Problem” is and what the financial impact is for Tillamook County and its Special Districts?</p>	<p>Tillamook has unique forest conditions and growth limitations on existing stands due to Swiss Needle Cast infection, sprayed alder, fire history, off-site seed etc. This is coupled with high access and logging cost from difficult road construction and long logging yarding distances on steep long slopes. These challenges on average produce lower net revenues per acre than you will see on other districts.</p>
<p>Do all modeling scenarios generate enough income for ODF to implement the harvests within the given scenario?</p>	<p>No, none of them do long term, but that is a larger revenue model issue that needs structural changes with or without this HCP. For context based on average stumpage values over the last decade, ODF would have to harvest around 289 mmbf annually to fund the current level of State Forests management. That would also require that no additional FTE are required to achieve those harvest levels.</p>

Can you provide a graph of owl habitat outside the HCAs similar to the graph provided inside the HCAs?



This is the projected NSO suitable habitat for the georegion scale maximum volume scenario. Other scenarios are similar with some deviation outside of HCAs.

What other certainty does this plan provide other than ESA certainty for the covered species?

While the principal purpose of the HCP is to provide for management certainty relative to the covered species, the scope of the HCP is expected to provide for many of the other native fish and wildlife species that use forests with the same habitat components. This ancillary benefit will help fulfill overall GPV goals.

What's the floor? What volume can the counties budget around?

The FMP modeling presents a reasonable range of potential harvest, but there is no floor established in the FMP. Performance measures under development for the FMP include timber harvest volumes and will form a basis for conversations with the Board. During implementation planning, ODF will work with our FTLAC partners as part of establishing more specific management objectives, including timber harvest. A key factor in budgeting, for both ODF and the counties, is the fluctuation in timber prices over time, which is outside of ODF and county control.

When do you expect to have an updated inventory? Are any district inventories complete?

Our current Stand Level Inventory (2021) revision is complete, and available upon request.

We are also making progress on our Enhanced Forest Inventory

1. We have an initial set of lidar products for the majority of contiguous ownership for Astoria, Tillamook and Forest Grove Districts and the southern half of West Oregon District lidar acquisitions. Supplemental plots were completed summer and fall 2022 and work is ongoing for the species prediction modeling that will be included in the final inventory across all districts.
2. We are still awaiting two more data packages for the northern half of West Oregon District and Western Lane District lidar. Once received, these will be modeled jointly. We anticipate our contractor will have supplemental plots completed in the spring of 2024. We expect the earliest those data will available is fall of 2024.
3. We are collaborating with the USFS Region 6 biometrics team, BLM, and FIA to model the Beachie Creek-Lionshead acquisition. This presents a great opportunity to leverage the joint FIA dataset across ownerships to create a cross-jurisdictional set of inventory products. We are hoping to have inventory projects from that collaboration in spring or summer of 2024.
4. Finalizing and publishing the EFI inventory will likely occur in 2025.

What % of acres of each district has had owl occurrence data?

The Biological Goals and Objectives for terrestrial species apply to the HCAs, with the exception of NSO dispersal habitat which applies outside HCAs (but includes RCAs).

District	Acres in Owl Sites <sup>1</sup>	Other District Acres	Total District Acres	% District in Owl Sites
Astoria	54,997	81,858	136,855	40.2
Tillamook	56,160	194,430	250,589	22.4
Forest Grove	31,193	83,817	115,009	27.1
Western Lane	23,614	1,642	25,257	93.5

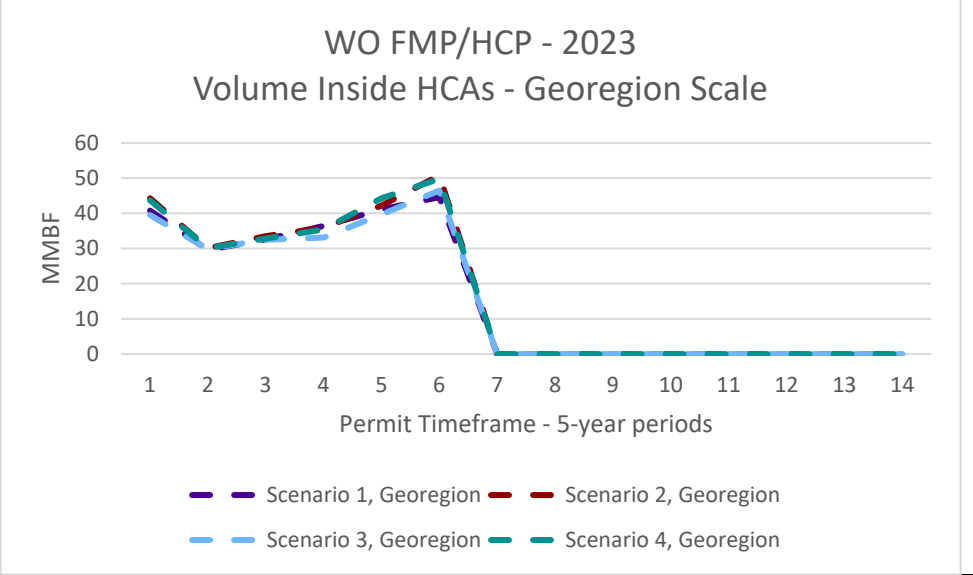
<b>West Oregon</b>	8,812	27,800	36,613	24.1
<b>Coos</b>	9,706	1,280	10,986	88.3
<b>SW</b>	15,172	1,621	16,793	90.3
<b>North Cascade</b>	30,059	17,417	47,476	63.3
<b>Total</b>	229,713	409,865	639,578	35.9

<sup>1</sup> Includes all owl sites (active and historic) since surveys began in the early 90's.

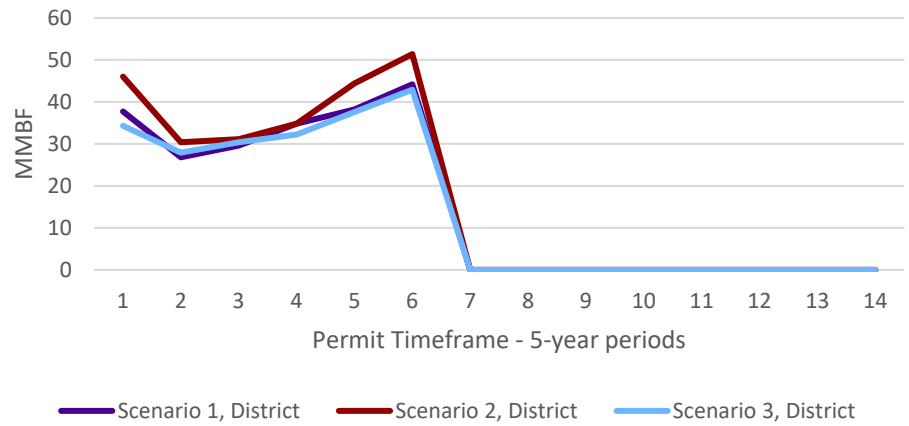
Do the habitat goals count both inside and outside the HCAs?

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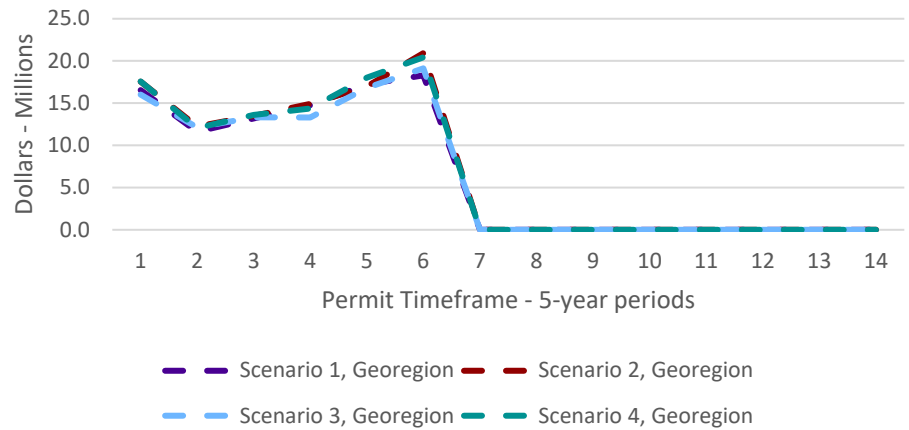
Of the yearly volume amounts, could you provide a graph of how much of that volume is HCAs. How much revenue will be HCA volume?



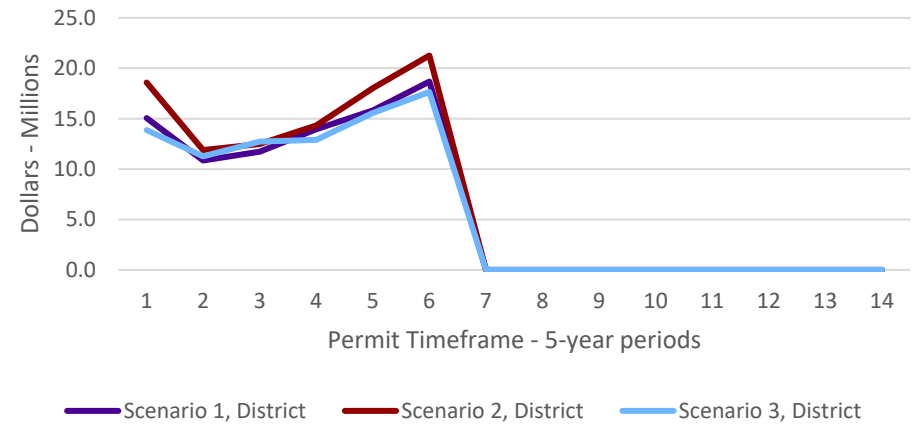
### WO FMP/HCP - 2023 Volume Inside HCAs - District Scale



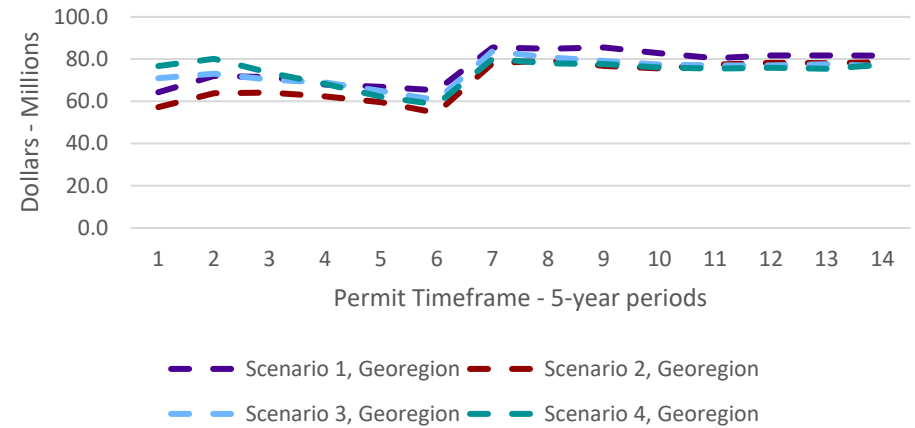
### Revenue Inside HCAs Georegion Scale



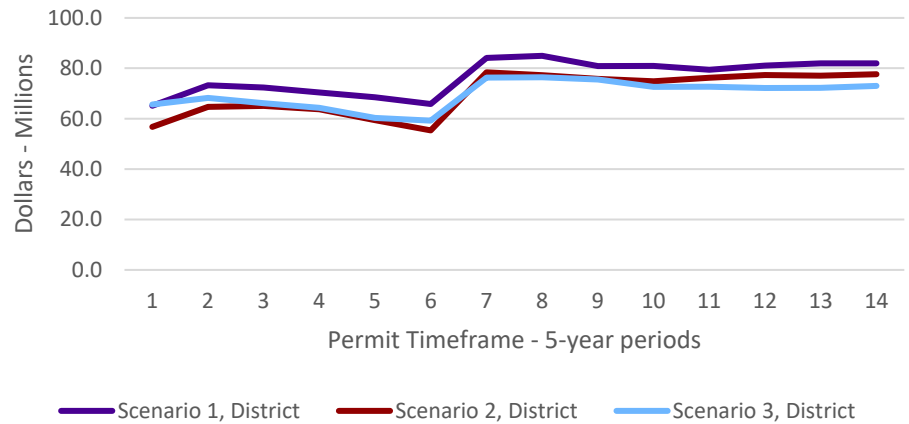
### Revenue Inside HCAs District Scale



### Revenue Outside HCAs Georegion Scale



Revenue Outside HCAs  
District Scale



How much on average is road construction. What are the project costs broken down by district?

Project Work Costs			
District	FY 23	5 Year Avg	8 Year Avg
<b>51 - Tillamook District</b>	\$2,664,359	\$3,301,634	\$3,212,742
<b>52 - Astoria District</b>	\$2,809,303	\$2,775,137	\$3,093,287
<b>53 - Forest Grove District</b>	\$3,070,887	\$2,539,979	\$2,200,198
<b>55 - West Oregon District</b>	\$365,614	\$300,453	\$265,328
<b>58N - North Cascade District</b>	\$573,090	\$929,999	\$984,569
<b>71 - SW Oregon Unit</b>		\$27,689	\$32,649
<b>74 - Coos Unit</b>		\$2,065	\$8,098
<b>78 - West Lane District</b>	\$493,633	\$566,026	\$439,429
<b>TOTAL</b>	<b>\$9,976,887</b>	<b>\$10,589,807</b>	<b>\$10,305,317</b>

Can we count on HCA harvest levels?

Yes, although there is some uncertainty over the actual volumes. Since volume coming from HCAs will be a by-product of habitat enhancement, it is more difficult to model. The model did not accomplish all of the acres that will be accomplished under the HCP, and the volume per acre resulting from those



	activities will be variable, based on prescription. Additional work will occur during Implementation Plan modeling to provide additional confidence around HCA harvest levels.
The Board of Forestry Agenda implies that the IP and AOP have to be redone to coincide with this modeling data. What do you anticipate the new IP harvest level to be in the 2026-2028 biennium, and will it be higher than today?	We need to finish work on the draft WO FMP and have the HCP with ITPs to do IP modeling to know this answer. Until we have that full body of work completed the specific future harvest levels will not be known. We expect that harvest levels will be similar to current IP levels into FY26 – FY28 if this work hasn't been completed.
Whose responsibility is it to report the habitat numbers?	ODF is responsible for reporting habitat numbers, based on habitat criteria agreed upon with USFWS. ODF will be analyzing the habitat suitability metrics in light of the yield table calibrations to determine how the habitat outcomes have changed or not, compared to the draft HCP effects analysis.  While ODF and USFWS will come to agreement on any needed calibrations to the habitat criteria that will be used, the USFWS is responsible for the Biological Opinions that include the assessment of incidental take and mitigation associated with the harvest and ingrowth of habitat over the HCP permit term.
In previous meetings it was mentioned that model solution reviews would be conducted by district offices. Please provide the emails and any attachments that the districts sent in response to this new modeling data.	The Calibration Run model solution reviews were a series of meetings that were held to go over model results. This information was summarized and sent to the districts after the meeting. Those notes are added below.  The Scenarios model solution reviews were conducted individually by each district and meetings were held with recreation staff and staff biologists. Their feedback has been added below.

### Summary of District input to the Calibration Run and response

The Calibration Run is the where the calibrated yields are first used in the modeling and an initial look at how the rules/constraints are working and the resulting outputs. (district input is in bold, response is bullet following)

**Items adjusted within the modeling:**

- **Volume/Acre on stands 120+ is too high.**
  - An additional calibration was completed for older stands which brings them into better alignment with the empirical yield curves. After this calibration, there are still outliers both above and below the curves. Additional calibration for these older stands will be investigated with future modeling efforts.
- **Volume for sprayed alder in Tillamook is too high.**
  - Using a GIS layer from Tillamook, Stand IDs were identified that might contain sprayed alder. These stands were reviewed by Colleen and Kate prior to being submitted to Tod. An additional volume deduction was applied to the alder to the yield tables of these stands, so any stands imputed to measured stands outside the list did not receive the adjustment. This brought the volume for sprayed alder to 15 MBF/acre or less.
- **The model was thinning older stands some of which had been previously thinned and would be considered final harvest candidates.**
  - The model has been limited to 1 thin between the ages of 35-55 years outside of the HCAs.
- **The model was removing too much volume/acre during thinning.**
  - Short term FMP Modeling solution: Thinning regimes that removed more than 60% of the standing basal area have been excluded.
  - Longer term solution: The current set of thinning prescriptions use residual density targets they result in an unreasonable thinning volume. All silvicultural prescriptions within the model should be reviewed and updated prior to IP Modeling.
- **In some instances, the model was carrying out thinnings where too little volume was being removed in younger stands.**
  - Thinnings must harvest  $\geq 6000$  bf/ac to be implemented by the model.

**Items not adjusted in the model that will be addressed in the BOF Report:**

- **The model is harvesting trees older than 120 years. If this can't be done during FMP implementation, then the volume can't be achieved.**
  - Messaging will be included in the BOF Report and BOF presentation that any additional constraints applied to how the FMP is implemented including placing an age limit on harvest will lower the volume achievable.
- **The model is not removing enough for net acres.**
  - Describe the limitations of net acre removal in the model versus on the ground "reality" in the Report.
- **What work will be done inside HCAs is still uncertain and the volume from HCAs shouldn't be included in the total volume achievable for the FMP.**
  - A description will be included in the report that goals/objectives Inside HCAs are for habitat restoration and improvement, not volume. Volume inside HCAs will be reported separately from outside the HCAs.
- **Describe limitations/uncertainty around the inventory within the NC burn.**
  - This will be added to the Report

### Items not addressed:

- **Volume for non-sprayed alder across districts is too high.**
  - No change for FMP Modeling.
  - All alder need a limit for senescence. This was an oversight in the growth modeling that will be corrected for the IPs, or the next time yields are produced.
- **Districts would like to look at the Logging Costs prior to the Scenarios being run.**
  - As the Logging Costs would not have been updated prior to the Scenario Runs (these were updated by input provided by the districts last spring), this was a low priority on the list of things to do. Unfortunately, we ran out of time during the 3 days to make adjustments to the model after the calibration run. Districts can look at the logging costs during the Scenario review. If things are off, we will put a discussion in the report describing errors or updates needed for future modeling efforts.

## **Summary of District, Recreation, and Biologist review and input to the Scenario Runs**

### **What is the impact to your current district workforce to achieve the volumes in the Georegion scenarios?**

- West Oregon:
  - Would need 1 additional forester to handle the increase in volume. This may not be enough to fully implement the volume targets as it would increase sale layout, admin and reforestation. Go from 9-10 currently up to 19.4 MMBF, a 94% increase.
- Western Lane:
  - No changes necessary to workforce for scenarios 1-3. If Scenario 4 was implemented, would need 1 extra person.
- North Cascade:
  - Not a lot of variance in the Georegion runs. No change in staff needed. Don't see much ability to leave the district to assist another.
- Tillamook: Increased volume equals
  - Increased road improvement/maintenance and potential impacts to resources
  - Meeting green up across operations may be difficult for the number of acres needed to meet the volume. Would likely have issues implementing this harvest level and maintaining social license to operate.
  - Shift in harvest to the west of the district, so shift in species to hemlock, spruce & cedar. Need to make sure Seed Orchard is prepared for the shift, especially higher demand for spruce seed.
  - Increase of 15-20 MMBF in first 4 periods. Would need to add 2 NRS2's, 4 NRS1's and 1-2 FMT's
  - Flow to work is crucial to meet volume if additional staffing is not added. Discussions with AT/FG indicate a shift in Marketing District Boundaries may be a wise alternative to strictly flow to work.
- Forest Grove:
  - Not as variable as other districts. Pretty steady volume.

- Current workforce is sufficient for the volume reduction.
- If volume increases, would likely need assistance for sale layout due to the additional steps needed to implement HCP & new FPA rules.
- May be able to assist TL with sales in the Lyda/Archers/Ben Smith area as needed
- Astoria:
  - All geo-region runs would have a significant impact on our staff and are not feasible.

**How does the work force you have today need to change to achieve the volumes in the District Run scenarios?**

- West Oregon:
  - At 14 MMBF/yr, would need to add 1 additional forester to implement.
- Western Lane:
  - same as above
- North Cascade:
  - No change in staff needed.
- Tillamook:
  - Harvest levels increases slightly from current workloads. Suggest additional 4 NRS1's
  - Significant drop in regen acres after HCA management period. (drop from 200-300 acres)
- Forest Grove:
  - Same as above
  - Logging Plans should be developed earlier in the AOP process to assist the Roads Unit in solidifying roads plans as the Coho Settlement, HCP and FPA rules leave little wiggle room for adjustment once approved by specialists through the planning process.
- Astoria:
  - Our current work force is aligned to achieve the volumes and new monitoring requirements under the District Max Even Flow and the District Max NPV Even Flow scenarios. The decreased volume would be offset by the additional staff time required to lay out units to the HCP requirements and maintain compliance monitoring efforts.

**On average, how does the volume look?**

- West Oregon:
  - Thinning volume per acre looks good.
  - Regen volume per acre is too high. Common for the district is 40 to low 50's. There are quite a few stands between 80-100. The maximum volume per acre should be 65 mbf/acre.
  - If doing post processing adjustments, would lower the regen volume by 35% to account for these issues.

- Western Lane:
  - Total volume looks achievable for Scenarios 1-3. Scenario 4 would be challenging, not sure if it would be sustainable.
  - Regen volume per acre is 5% too high. Thinning volume per acre is 25% too high.
  - Worried that Scenario 2 is overestimating total volume due to higher than expected volume in our older stands.
  - Still thinning older stands. Inside & Outside HCAs. (outside during extended rotation run) Outside HCA rule violation.
- North Cascade:
  - Volume averages between 10.5-14 and this number seems ok after calibration. However, since the calibration run, the model is thinning a lot of older stands (90+) inside the HCAs. Thought this was going to be an infrequent thing. This is most likely accounting for a lot of the volume and throwing off the total volume number.
- Tillamook:
  - volume per acre still seems too high. Average is 25 mbf/ac. Model is closer to 46mbf/ac over the 70 years
- Forest Grove:
  - Volumes look reasonable compared to past runs
  - Volumes inside HCAs might be too high, unless treatments can include patch cut opportunities to go with moderate thinning prescriptions.
- Astoria:
  - Thinning volume per acre is too high (30%)
  - Thinning older stands outside HCAs, rule violation

#### **On average, how do the Costs look?**

- All: Thinning stumpage is too high! It shouldn't be more than regen.
  - This makes NPV runs unusable
  - Haul costs are suspect as well. Two similar and adjacent stands have very different log haul costs. (AT)
- Tillamook: Costs look low. \$/MBF AOP average is \$400. Some selected stands will require extensive project work, lowering stumpage.

#### **Watch Outs/Red Flags**

- Tillamook:
  - Increased volumes would flood logging sides/road builders – the workload is already higher than contractors have time for.
  - Higher volumes means increasing operations adjacent to recreation areas, trails, viewsheds (highways & others)
  - Prescriptions inside HCAs (acres, volumes, revenue, stumpage)
- Forest Grove: Not as significant of an increase in volume as one would expect in Georegions.
- Astoria:

- Geo-region runs inhibit our ability to support our local rural economies and public services by reducing a predictable timber supply. This also affects the local workers and infrastructure relying on this supply, as well as our own staff.
- Annual harvest acres include a disproportionate amount of thinning on the Astoria district and targets 45 to 50-year-old stands. They also include large amounts of thinning in the HCA. All other districts target 75 to 85-year-old stands. The Astoria District max NPV even flow is heavily skewed to the younger stands of 45 to 50 years old. The Geo-region extended rotation obtains a lot of volume from partial cuts, approximately 50% of the acres harvested throughout the periods. The Geo-region max even flow for the Astoria District is skewed as well to the 45 to 50-year-old stands. This raises concerns of targeting this level of the age class large harvest of 45 to 50-year-old stands which are not a large portion of the district acres.
- In general, there are significant concerns regarding workforce impact, volume accuracy, cost discrepancies, and the rule violations in the model's results. The reliance on partial cuts and the skewed distribution of harvesting age classes raise red flags. Additionally, the geo-region runs pose challenges to local and social resources, indicating a need for careful consideration and adjustments in the scenarios to ensure trust and community support.
- The District emphasizes that the model's use of outdated inventory raises additional concerns, especially for decisions involving a 70-year commitment, especially when there is a newer inventory available.

### **Social Resources**

- Forest Grove: increasing public use on the district means that there will be impacts to social resources regardless of steps taken to mitigate.
- North Cascade: Nothing any more than the usual managing for greatest permanent value and at least 1 side of the 3-legged stool will have concerns.
- Astoria: Maintaining economic certainty is key in supporting our social resources and maintaining trust in the community. All geo-region runs would have a huge impact on Clatsop County and our staff. Therefore, all the geo-region runs are a huge red flag.

### **Recreation Review**

- Some districts most of the campgrounds/recreation areas are within HCAs (North Cascade). Others it's mixed (Forest Grove)
- Concerns around the facilities. Wind damage from adjacent clearcuts, thinnings.
- Would like to create site specific plans for harvests around recreation sites that address user experience, safety issues.
- Trails are impacted. Will need to work on how to keep trails open or move around the users.
- At the Implementation level, it is imperative to have hard conversations of working around established facilities. Recreation needs to have a voice around the established facilities. Trails not as much. There needs to be thoughtful implementation. May lose some harvest revenue in order to protect monetary investments in facilities.

- Protection of visual resources. Will need to be considered however it can be on non-motorized trails. Case by case of buffering or leave tree strategies especially high-profile trails outside of HCAs. Social license to manage.
- Rehabbing post sale especially with road building is a large impact to trails/facilities. Impacts of temporary closures. Impacts costs/investments to trails and other infrastructure.

### **Biologists Review**

- Lots of thinning of the first period, but then the acres drop off.
- No rules around northern spotted owl circles within HCAs only rules around acres & HSI frequencies.
- Thinning VPA seems high.
- Thinning stands older than expected.
- Thinning prescriptions aren't realistic. Just moderate thinning, however it should even out over time (variable density, patch cuts, etc)
- Northern spotted owl cores are being thinned?
- HCA: over estimating volume per acre but underestimating acres that could be thinned under the HCP
- May only need to present northern spotted owl habitat numbers to the public.
- Model seems improved from the past and seems to present what we would expect to happen.

### **Summary of Response to Field, Recreation and Biologist input to Scenario Runs**

#### **Here's how the district input was used:**

- The pond values were fixed. This also fixed the issue of thinning stumpage being higher than regeneration stumpage.
- Moved maintenance costs under logging costs as this is calculated as a \$/MBF versus \$/MBF/mile as it was being calculated when it was under hauling costs.
- Fixed Forest Grove hauling issue
- Fixed a road segment in Southwest. Freeway was coded as mainline.
- Added Thinning age cap of 55 inside HCAs as a stand in for HSI thresholds
- Changed the discount rate from 4% to 3% for Scenario 4 -NPV with Departure to emulate what was done with the HCP Comparative Analysis run.
- Adjusted Reforestation Costs per John Walter.
- Updated logging costs by using the Producer's Price Index for logging industry (national prices). This put the numbers in line with the district input received.

- Based off the Logging Cost Update report prepared by Jared Christian from 2014 inflated to 2023
- Updated the small non-fish culverts, spur costs per input district input.
  - Spur construction cost/station
    - Gentle: increased from \$600 to \$1000
    - Moderate: increased from \$750 to \$1000
    - Updated Small Non-Fish culvert cost from \$2,500 to \$10,000
- There is more work to do to update the road and reforestation costs. Work groups including field and staff specialists will be pulled together prior to Implementation Plan modeling to get these updated.
- Volumes while better after the yield table calibration are still too high.
  - Instead of presenting a range of volume, it was decided to report the modeling outputs with a description of how these numbers will change over time. The modeling report attempts to walk the reader at a high level through the efforts to calibrate and adjust the yield tables and identifies issues that still need work in the future such as older stands and alder. In addition, there is a discussion on inherent uncertainty around modeling and the assumptions used, including a list of known uncertainties that effect the model outputs such future growth uncertainty, net acres, etc.