



## Carbon and Forest Management Work Group

Meeting 2: December 6, 2023 | 9:00 am – 3:00 pm

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### Meeting Summary and Notes

#### Meeting Overview

The second meeting of the Washington Department of Natural Resources (DNR) Carbon and Forest Management Work Group took place on Wednesday, December 8<sup>th</sup> from 9 am – 3 pm, via Zoom Webinar. The purpose of this meeting was to continue developing a common understanding of budget proviso goals 1 and 2. Representatives from BluePoint Planning, the firm hired to facilitate the work group in partnership with DNR staff, opened the meeting with an overview of the agenda:

1. Welcome and Updates
2. Draft Work Group Charter Review
3. Context Setting: Presentations on Habitat Conservation Plan and Stand Development Stages
4. Discussion of Budget Proviso Goal 1
5. Discussion of Budget Proviso Goal 2
6. Outline Priority Considerations and Criteria
7. Next Meeting Discussion

Work group members and DNR staff gave brief self-introductions to the group. Duane Emmons, Assistant Deputy Supervisor for State Uplands at DNR, then gave an update on questions raised at the first work group meeting. These questions and answers can be viewed on the DNR [work group website](#). BluePoint Planning used an online polling tool called Mentimeter to obtain feedback on the revised event announcement process for work group members.

Work group members reviewed the updated draft of the work group charter that clarified and simplified aspects of the decision-making process. Work group members recommended additional changes that were incorporated into the charter. Later in the meeting, the charter was voted on using Mentimeter and approved by work group members based on the decision-making described in the charter: seven members voted “thumbs-up,” and three members voted “thumbs-sideways.”

Staff from the DNR gave two presentations: State Trust Lands Habitat Conservation Plan (HCP) and Understanding Stand Development Stages. BluePoint Planning then facilitated a discussion with work group members about the presentations and the budget proviso goals 1 and 2. Comments and questions were recorded on a digital whiteboard and raw notes and are attached at the end of this summary.

After a review of the next steps, BluePoint closed the meeting. All meeting materials, including the presentations and recording, are posted on DNR’s Carbon and Forest Management [Work Group website](#).

#### Attendees

##### Work Group Members

- Matt Comisky, American Forest Resources Council
- Heidi Eisenhour, Jefferson County
- Russ Pfeiffer-Hoyt, Washington State School Directors Association
- Olivia Jacobs, Xyla Land and Resource Advisors (alternate for Jason Spadaro, Washington Forest Protection Association)
- Randy Johnson, Clallam County
- Hannah Jones, Firelands Workers United
- Ed Murphy, Sierra Pacific Industries
- Bryan Pelach, Washington Conservation Action
- Paula Swedeen, Conservation Northwest
- John Talberth, Center for Sustainable Economy





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- Pat Tonasket, Confederated Tribes of the Colville Reservation

#### Washington DNR Staff

- Cathy Chauvin
- Cameron Crump
- Daniel Donato
- Duane Emmons
- Allen Estep
- Csenka Favorini-Csorba
- Glynis Gordon
- Kristoffer Larson
- Sharon Lumbantobing
- Breanna McTeague
- Denise Roush-Livingston
- Justin Schmal

#### BluePoint Planning

- Nora Bayley
- Mindy Craig
- Lauren Schmitt
- Chris Mendoza, Mendoza Environmental (sub-consultant to BluePoint Planning)

Work group meetings are public, meaning that members of the public may join the meeting to observe. No public comment is allowed. Nine members of the public attended the second work group meeting.

#### Key Feedback

- Work group members gave feedback regarding the announcements of upcoming meetings and meeting materials and requested that agendas and presentations be sent out via email to all work group members at least one week in advance of the scheduled meeting date.
- Work group members requested revisions of the draft work group charter, which were added to the charter that was ultimately approved:
  - Clarifying that a supermajority for a vote is the same as a supermajority of the work group (75%, or 9 of the 12 work group members).
  - Ensuring that work group members will be alerted well in advance of when a meeting with a formal vote will occur.
  - Removing the page limit for minority reports.
  - Allowing work group members to serve as alternates for each other and to place votes. Work group members who are also an alternate would be acting as two people and would vote twice.
  - The approved charter can be viewed on the [work group website](#).
- Work group members discussed how the two presentations given by DNR relate to the work group and its goals, specifically regarding structurally complex forests. Members focused on rates of carbon sequestration and carbon storage in different stand development stages, including soil carbon stocks.
- Members gave initial considerations for budget proviso goals 1 and 2, which included prioritizing elements of potential management approaches and of calculating carbon. but quickly identified the need to develop a framework to better discuss and define these issues. The discussion is summarized in the next section.





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- Work group members noted that differing interpretations of science were occurring. DNR proposed adding a resource library to the DNR website and encouraged work group members to email relevant sources and studies to be added to the library.
- Work group members requested additional information regarding the overall purpose and next steps of the work group. This information was provided during the meeting and will be reiterated in a presentation at the next meeting. The proposed next steps for the January 2024 work group meeting are listed below; more detail is provided in the raw notes section of this document.
  - Bring three higher-level scenarios to the work group that optimize different variables and represent a spectrum of harvest intensity.
  - The work group can use these ideas as a starting point to develop the scenarios that will be provided to the carbon modeling and wood basket supply contractors that will begin work in early 2024.

### Context Setting: Budget Proviso Goals 1 and 2 Discussion

This section of the meeting began with a conversation about budget proviso goal 1, with a round-robin of all present work group members to identify components of structurally complex forests that should be considered and included in future proposed management approaches. A summary of the responses and themes is listed below.

#### *Round-robin summary and themes*

- Structural diversity varies based on many factors, including the type of forest, variety of tree species, age, size diversity, the management history of a forest stand, and the productivity of land.
- Should focus on stands designated in habitat conservation plan (HCP) areas but recognize that heavily managed lands and HCP areas are very interlaced and interact with each other.
- Managing forests to be more structurally complex could mean more labor required, meaning more jobs.
- Storage of carbon is not a standalone reason to conserve structurally complex forests. Other considerations include wildlife habitat and biodiversity. It's also about water supply, hazard resiliency, and impacts on communities.
- A net reduction in carbon storage could come from producing forest products or energy, not just on the site of the forest stand from harvesting.
- Should geography influence management decisions and how we think about structural complexity?
- Non-plantation forest stands have a higher diversity of plants and animals than plantation stands.

#### Data Requests

- Carbon sequestration storage potential across different sites and based on different management styles, DNR and private.
- Carbon sequestration potential of older structurally complex lands versus younger stands over time; the ratio of structurally complex forests on DNR lands compared to 40-80-year-old stands.





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- Geographic distribution of structurally complex forest across the state.

Following a break for lunch, work group members continued the discussion, focusing on key themes identified in the discussion of budget proviso goal 2 from the first work group meeting. Members were polled using Mentimeter on how important the elements identified in the first work group meeting are in potential management approaches. Members were also asked to prioritize a list of critical elements of calculating carbon. The conversation highlighted the complexity of these issues and the need for further discussion to balance considerations for the modeling. Members also requested more information about carbon accounting methodology, as a possible presentation at the next meeting.

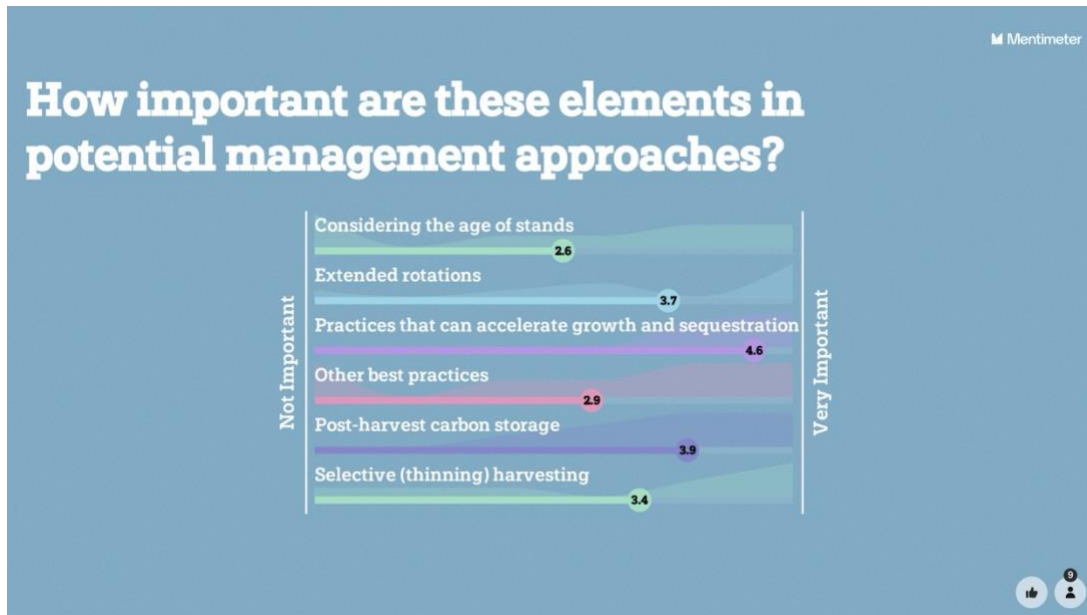


Figure 2 - Mentimeter polling results

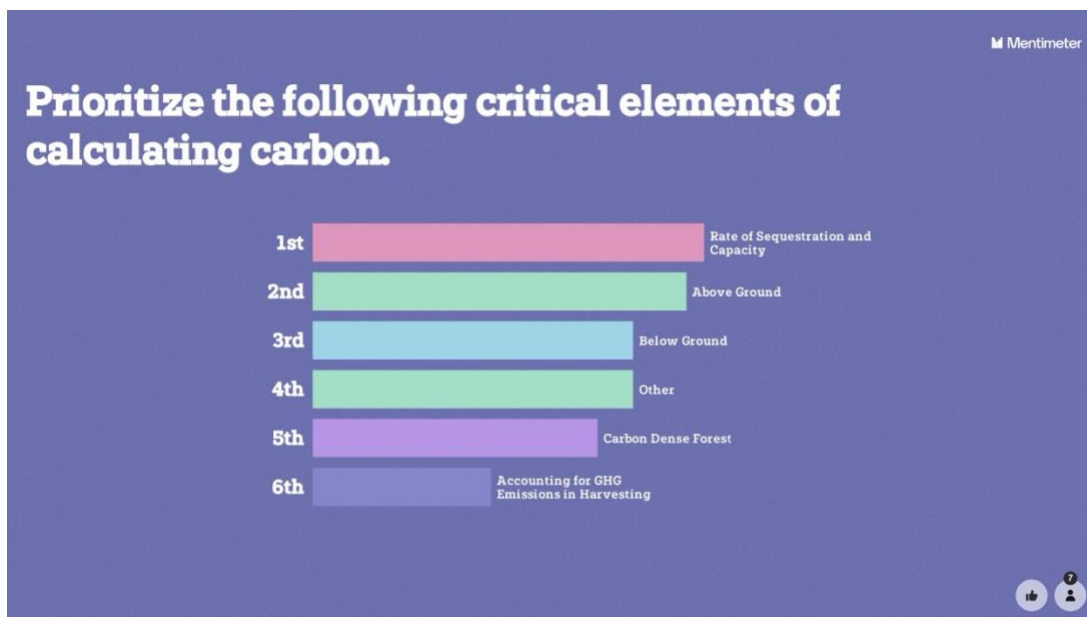


Figure 1 - Mentimeter polling results



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After the Mentimeter polling, work group members asked several questions about the short- and long-term tasks of the work group, including what the members were being asked to develop and how the work group can get at the intent of the budget proviso. This discussion is summarized in the next section and detailed in the raw notes section of this document.

### Next Steps

Work group members requested additional information regarding the overall purpose of the work group. This information was provided during the meeting by DNR staff and will be reiterated in a presentation at the next meeting. The carbon modeling contractors will begin work in early 2024 and are on a tight timeline; the point of the first few work group meetings is to give sufficient background to work group members so they can better work with the contractors once they begin.

Work group members requested clarification about the best way to achieve the budget proviso requirements and to get at the intent of the proviso. DNR responded that the ultimate deliverable will be recommended management scenarios that achieve the goals laid out in the budget proviso. The work group is composed of a diverse group of stakeholders; members should come in with perspectives about what is important to them and to their stakeholders.

The proposed next steps for the January 10<sup>th</sup>, 2024 work group meeting are listed below:

- Bring three higher-level scenarios to the work group that optimize different variables and represent a spectrum of harvest intensity.
  - Draft scenarios will range from heavy on one side of the spectrum, to a 'middle' scenario, and a scenario that leans towards the other side of the spectrum.
  - DNR will bring questions to ask about the scenarios, to help refine and inform future scenarios.
  - Scenarios may be 'straw men;' initial scenarios will not necessarily be the ones modeled by the contractors.
  - DNR and the work group could ultimately end up recommending 5-7 scenarios to the modeling contractors. The set of scenarios should be achievable by the modelers.
- The work group will then discuss the scenarios and refine them. The scenarios will then go to the modelers.

Work group members provided feedback on these next steps, listed below:

- Scenarios should not be built around past practices/dichotomies.
- The scenarios should be built around specific questions.
- Scenarios should not create sides - one shouldn't be all about volume and one all about carbon storage. Or at least there should be one that is more nuanced.
- There should be a status quo scenario.
- There should be at least one scenario with multi-parameter optimization.



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### Raw Notes: Mentimeter

These are notes taken live during the meeting to supplement the recording available on the [Carbon and Forest Management Work Group website](#). Questions and comments from the Zoom platform’s chat log are also incorporated.

Work group members asked questions during the meeting, especially following the presentations and regarding the next steps. DNR staff will provide written responses to work group member questions raised during the meeting. The written responses will be posted to the Carbon and Forest Management Work Group website and will supersede any verbal responses provided during the meeting.

### Event Announcement Process

A Mentimeter anonymous poll was held to solicit feedback on the current event announcement process. Feedback included:

- Sending out an email to the entire work group when important documents are finalized (agenda, meeting summary).
- Sending documents as attachments to emails so they are easier to access.
- Providing the agenda earlier to allow for more prep time (at least seven working days in advance).

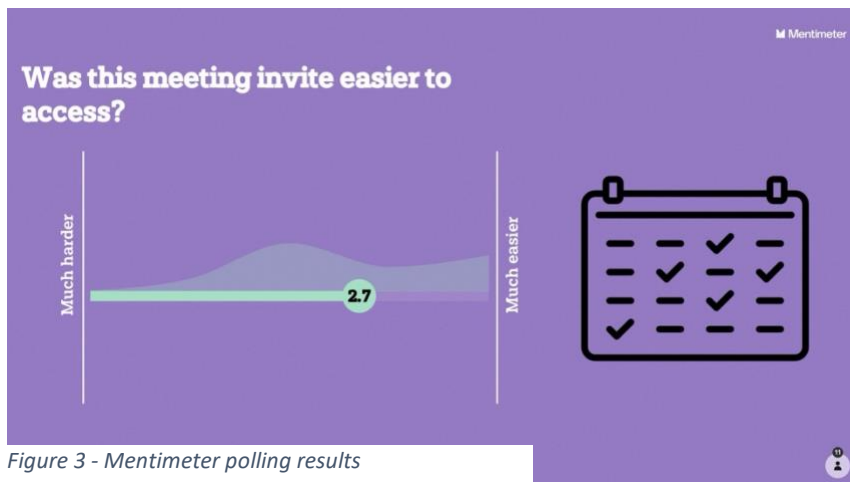


Figure 3 - Mentimeter polling results

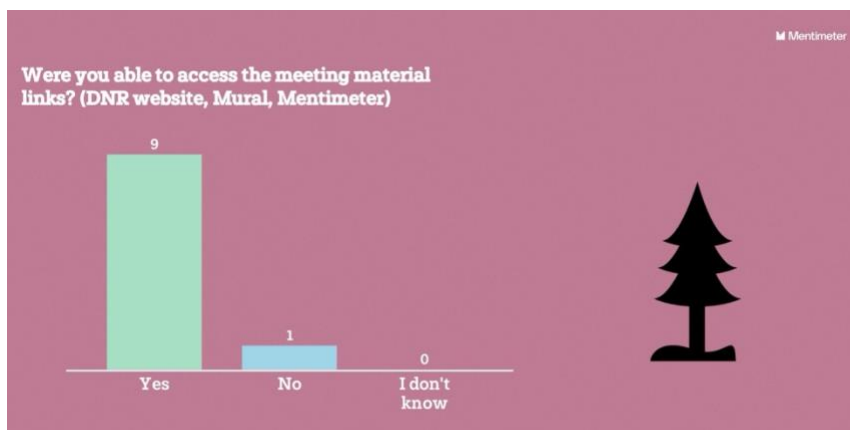


Figure 4 - Mentimeter polling results



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Figure 5 - Mentimeter polling results

### Charter Vote

Work group members requested revisions for the draft work group charter, which were added to the charter that was ultimately approved. Detailed discussion on the charter amendments can be viewed below in the raw notes section of this document.

- Clarifying that a supermajority for a vote is the same as a supermajority of the work group (75%, or 9 of the 12 work group members).
- Ensuring that work group members will be alerted well in advance of when a meeting with a formal vote will occur.
- Removing the page limit of minority reports.
- Allowing work group members to serve as alternates for each other and to place votes. Work group members who are also an alternate would be acting as two people and would vote twice.

Following the inclusion of those revisions into the work group charter document, the work group voted on and approved the charter using the online polling site Mentimeter. Seven members voted “thumbs-up/full endorsement of approach”, and three members voted “thumbs-sideways/consent with reservations.” No members voted “thumbs-down/formal disagreement/block proposed approach.”

The approved charter can be viewed on the [work group website](#).



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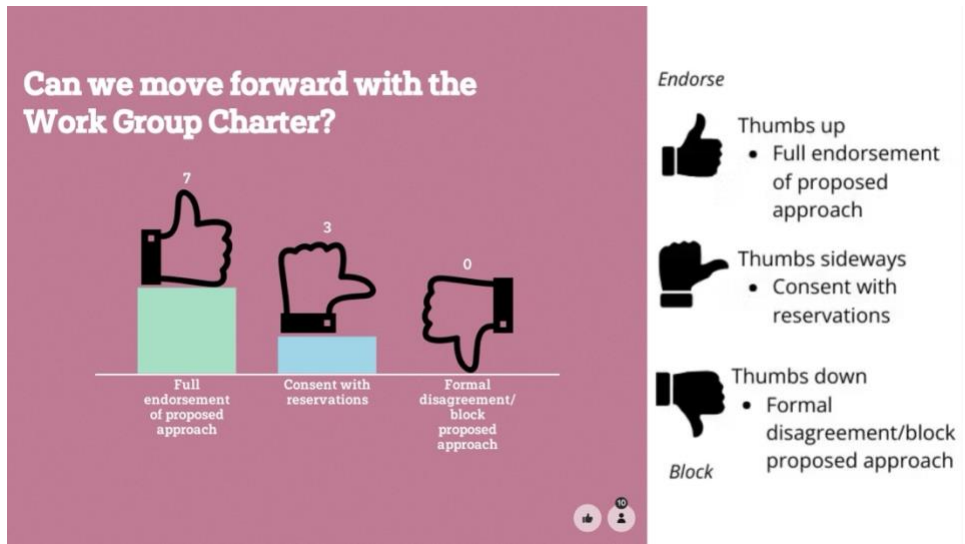


Figure 6 - Charter Mentimeter polling results





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#### Raw Notes: Verbal and Written Communication

These notes include verbal and written questions and comments from the Zoom chat log. Comments from the Zoom chat are denoted with (chat) at the beginning of the comment or question.

- Welcome
  - Introduce all Department of Natural Resources (DNR) and Bluepoint staff, and work group members
  - Questions will be officially be answered post-meeting, to ensure correctness.
  - Ed Murphy never received emails or updates
    - Ask Ed to email [cfmworkgroup@gmail.com](mailto:cfmworkgroup@gmail.com) to test email
    - Matt Comisky also having issue
    - Didn't receive email with link to documents
  - All information should be in the calendar invitation
    - Email in outlook when you accept the update.
    - Project team - We can also send both, didn't want to overwhelm
    - Russ – if on every email include the link to the website
    - Possibly over streamlined communication process
    - (chat) An email with all materials sent a week in advance. Not links but attachments
- DNR Updates
  - Required legislative reports – submitted to the legislature, available on the work group website
    - Report required on Dec 1 2023 was a bit of an error, but still submitted the report. Update on timeline, composition of work group, contractors
    - Work group report:  
[https://www.dnr.wa.gov/publications/bc\\_cfm\\_wg\\_legrep\\_2023.pdf](https://www.dnr.wa.gov/publications/bc_cfm_wg_legrep_2023.pdf)
    - Land repositioning report:  
[https://www.dnr.wa.gov/publications/bc\\_cfm\\_lr\\_legrep\\_2023.pdf](https://www.dnr.wa.gov/publications/bc_cfm_lr_legrep_2023.pdf)
    - (chat) Can we as the workgroup provide input to the 2024 report?
      - (chat) Yes
  - Questions & Answers document – uploaded to website
    - Link to Q&A document:  
[https://www.dnr.wa.gov/publications/bc\\_cfm\\_m1\\_qa.pdf](https://www.dnr.wa.gov/publications/bc_cfm_m1_qa.pdf)
  - Contractors – received 4 proposals on carbon work, 3 proposals on wood basket. Team will be working on the selection process over next week.
    - Request For Qualified and Questions (RFQQs) can be released, not going to post on the website but can send it out if people are interested.
      - (chat) Yes, please send the Request For Qualifications (RFQs) that Duane just offered to provide.
        - (chat) Will do, during one of the breaks
    - Can work group members participate in the selection of contractors?
      - No, not possible. Won't be able to release information until after the contractors are selected.
    - (chat) A scheduling issue to consider: meetings are going to be challenging during legislative session.



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- IPCC (Intergovernmental Panel on Climate Change), standards – updated RFQQ language to capture the intent from the legislation. ‘and emerging peer-reviewed research’
- Updated how Zoom works and how members of the public are able to participate. Members of the public are not able to use the chat.
- Questions?
- Work group Charter
  - Tried to capture feedback from work group members on the updated version of the charter.
  - More detail and information about minority reports, voting method (thumbs up, thumbs down, thumbs sideways)
  - Question – following up on idea of quorum for meeting vs supermajority for a vote.
    - Is a supermajority of those who attend the meeting? Or is it supermajority of the whole work group
      - Missing the logic of the supermajority, if it’s only the people who are able to attend.
      - Can edit this, to make it clearer
  - Question – possible solution – when having an important vote, need to make sure all members can attend. If voting on a report, then count votes for people at the meeting and give time after the meeting for those who didn’t attend to vote. Going to be some complex conversations, hard to understand and have a good vote if not in attendance.
    - Communicate that the next meeting will be a ‘voting meeting’ to emphasize the importance.
    - Alternates are also a good option –
  - Question – Supermajority vs quorum, could lose the perspective of part of the work group if they don’t attend. Good to be able to name their own alternates, but hard if you miss a meeting and don’t get the full report from the alternate. Still struggling of overall structure of the charter and how it meets the full intent of the proviso. Legislature was clear, looking for stakeholder group, if report doesn’t capture a balanced perspective (dissent) doing disservice for legislatures who requested this and beneficiaries who will ultimately be recipients of this.
    - DNR: Communicating in advance that it’s a ‘voting’ meeting is important, only a handful of those meetings. If concerned that alternate option won’t work, some responsibility to attend and participate. Certain realities of these meetings, can’t mitigate every circumstance. Make sure that alternates can really vote in your interest. Should prioritize the voting meetings.
    - (chat) I know the current make up will not change but wanted to flag the lack of beneficiary representation. Do not need to go further.
    - (chat) What about the fire districts in west Jefferson County?
  - Comment – leaving voting period open for a few days after the meeting, work group members were chosen because of their expertise. Yes to making it clear which meetings are going to be voting.
  - Comment – for key voting meetings, need to give lots of warning so that time is available and they can attend. For alternates – difficult for county commissioners to pick another alternate.



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- Comment – agree that these are all high-priority meetings. Requested list of dates – only January. Sooner we can get the proposed dates on the calendar is important. Commissioners will struggle to shift calendars around.
  - Proposed dates are scheduled and will be in presentation today.
  - Leaving vote open for a few days – recording is available, along with the summary notes for those who miss a meeting.
    - Valuable to build relationships and move towards a common aim, if there's a vote and dissention, want to work as a facilitator to figure out what is the issue and work to find agreement. If someone votes outside the meeting and votes against something, then don't have a chance to have the dialog about the issue
    - Will alert everyone in advance that a vote meeting is upcoming.
- Sending out the work group charter suggested edits – review during the DNR presentations then vote afterwards?
  - Two proposed edits – vote on the charter with the edits included.
- Comment – second point – working group will be alerted well in advance (two months?)
- Comment – Why can't we be working in the actual document? Devil is in the details. Haven't talked about the minority report being limited to 2 pages. Is consultant helping DNR to write the report? Stakeholders who are trust beneficiaries who are not represented by this group. Want to list out the seats in the charter. Won't vote in favor until it is in the actual document.
  - Challenges to working group member composition – can't change at this point.
  - Response – stakeholder seat could be added to the list.
  - Composition of the work group – people represent several perspectives, could spend a lot of time trying to spell it out
  - Beneficiary representatives – have representatives who are beneficiaries, representatives who align with conservation, timber industry, tribal members, lacking on environmental justice representatives. Shouldn't be question if we are meeting the balance required by the legislature.
- Comment – Russ – two official roles, state-wide and school district. Role here is limited to two official roles, not private landholder status. Would be fine to describe both names in the charter, chosen because he represents the two beneficiary groups
- Comment – Heidi – met with other fire districts and others to talk about this and other news. Consider them colleagues, trust them. Concerned that we are not going to get to the work, want to understand the current timber supply by region. Want to get beyond the administrative issues and get to the work. Handful of WG members who have served on other work groups.
- Two edits to make – supermajority is the majority of the work group, and notifying 2 months in advance of a vote meeting. Missing anything?
  - Add to introduction of work group members in charter, add quote from the proviso about the balanced composition of the work group.
  - Going to go into the presentations from DNR, and then add the edits into the charter and review, so hopefully get to the vote today.
- Comment – need to get to work fast, need to vote on structure of meetings. Strike 2 months, something less constricting.



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- DNR Presentation – Habitat Conservation Plan (HCP)
  - Presentation posted to DNR website
  - Trying to provide opportunity to hear how the DNR is thinking about a structurally complex forest, not focusing on the specifics of the HCP
  - (chat) Murrelet numbers are declining by 4.9% per year, spotted owls by 2.9%, it would be good to hear DNR's explanation of why it continues to log off the best replacement habitat.
    - (chat) We are going to focus the conversation today to how the HCP relates to this working group and the goals related to the structurally complex forest. A separate answer can be provided to your question in the formal Q&A
  - Question – latest murrelet numbers are even higher than that. Does monitoring suggest that habitat was effective, anything in HCP about barred owl?
    - Two types of monitoring – validation monitoring, is species responding as we had hoped? Populations are very low. Difficult to demonstrate if what we are providing is effective. Barred owl – USFWS (United States Fish and Wildlife Service) working on barred owl management plan, need permit to protect barred owls in west coast. EIS (environmental impact statement) out in draft form
    - Underlying question – has HCP with Barred owl control, upward population, going up 2% / year. Wanted to see if barred owl responded to HCP interventions
  - (chat) For those not aware the timber being harvested that is of concern for some members of this group were stands released by the MMLTCS (Marbled Murrelet Long-Term Conservation Strategy) and deemed not needed by USFWS and DNR under the HCP Amendment. There was an attempt to take these acres off-base during the Solutions Table. That effort failed. So here we are.....
  - (chat) The Draft EIS on barred owl just got released.
  - Question – Areas of designated spotted owl management but not habitat, not Structurally complex. Companion budget proviso to give \$10 million to DNR to do thinning where they couldn't before. Want to know where DNR is in spotted owl habitat management in regards to HCP goals? Related to Structural complexity, stands that need management.
    - SOMU – spotted owl management units, some are below, some above threshold. Based on site, forest conditions, fluctuations of thresholds across the state. Documented in the annual report, available on the website. Identified what is a suitable habitat by SOMU. Also – If SOMU is at 25% habitat, have a plan on how to achieve next 25% of habitat, next best habitat areas. Going to talk about - Is a certain habitat structurally complex
    - Strategy to talk about – supporting DNR in habitat creation, restoration, thinnings. Help achieve intent for HCP, habitats for spotted owl. Also, commercial thinning that could be done, HCP has areas under conservation strategies and seen as black holes for timber, underutilized potential to perform commercial thinnings and still benefitting habitats.
  
- DNR Presentation – Stand Development Stages



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- Comment – Thank you for presentation. What are the ways that DNR is currently or could increase the structural complexity of young forests?
  - Simple answer: thinning. Valuable, primary tool. Thinning out density of overstory trees, could put in gaps to break up horizontal continuity, promote shade tolerant layers. Also, develop epicormic branching. Intentionally downing trees, Not done non-commercially very much.
  - Follow up – data or resources to point to impact of manual increasing of structural complexity? Does it have the impact that you hope?
    - Long-term monitoring sites, clearing out at 5-10 year intervals. Suite of literature that forests ecologists have made, university led research – Connie Harrington + thinning, habitat development study. Doug Maguire, from Oregon state. Generally does work.
- Comment: Important for group to have data on this, post-activity growth rates, boost growth rate and thus carbon sequestration. Getting data in a digestible fashion is important, structure and growth rates
- Comment – Goals in budget proviso – relationship between structurally complex forests and rate of sequestration?
  - Structurally complex forest and carbon storage: very high correlation. More complex = more carbon stored. More biomass in the stand.
  - Structurally complex forests and carbon sequestration – maximum sequestration happens in competitive exclusion zone, maturation 1 zone. But not storing the maximum amount of carbon that complex stages do.
- Comment – Stages are ideals, seems that legacies left from prior stands – either from fire or logging – are more part of stand in Maturation 1 stand, but still have big trees that survived a fire, reality is even more complex than simple explanation of stand development stages
  - Structurally complex forests sequence is the ideal sequence, kind of the backbone but lots of variation still. Could be a ‘mostly’ stand replacing disturbance, instead of complete. Still have remnant old growth trees that survive the disturbance. Called 2 cohort stands. Have a threshold when 2 cohorts exist, are there enough old growth trees to call it an old growth stand or is it a younger cohort with remnants of older stands?
  - Where to put the line for the structurally complex forests is a big discussion/debate.
- Comment – confirming heard Dan correctly – storage is more important than sequestration? Since this group is so focused on carbon, currently concerned about removing carbon from atmosphere from last 50-100 years. Why is one better than the other? Improving sequestration seems like it should be just as important as storage.
  - Trying to maximize the amount of carbon stored from the atmosphere, old stands reach steady state of sequestration, rarely reach point of being net source of carbon to atmosphere (from dead and down, rotting wood). The bigger the sponge/pool of stored carbon is the key. When looking at 20-year-old plantations, individual trees are high rate of sequestration but a lower maximum rate of sequestration. Would you rather have a bank account with \$1 million making 1% interest, or \$1 with 100% interest.



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- (chat) Large amounts of research shows that if those high storage stands are harvested, the CO<sub>2</sub> emissions persist in the atmosphere for more than 100 years.
  - (chat) To this statement: Which emissions from the harvest of stands you mentioned are held in the atmosphere for more than 100 years. Emissions associated with the harvesting/manufacturing process? Or something else?
  - (chat) It is the emissions associated with disturbing the forest carbon pools: branches, needles, organic duff layer, non-merchantable trees that are harvested and left on site or burned as slash. Only around 40% of forest carbon goes into wood products production. In older stands, the biomass accumulation is very high and a lot of this decays more quickly when disturbed from logging.
  - (chat) Clearly those "sub-pools" emit carbon but I was confused by what the timeline was. It seemed to me that you were implying that the carbon was all released at the moment of logging. Which of course is not really the timeframe it will occur in.
- (chat) Soil carbon stocks in these forests are massive.
- Soil carbon – difference with soil sequestration in different stand types?
  - Soil carbon responds really slowly to change and disturbance cycles, pretty steady. If convert to shorter rotations would eventually decrease carbon
  - (chat) Yes that has been empirically demonstrated
- Comment – Hemlock – different species and carbon sequestration/storage?
  - Different types of old-growth stands with no Douglas Fir – hemlock on the coast tends to be not as long lived, more pathogens/fungus, wind, so because tree structure is hemlock, going through maturation phase sooner, old growth conditions begin earlier than Douglas fir stands.
- Question – doesn't retention substantially shorten reaching other complexity cohorts? Significant number of management inputs that can shorten this down. Re: soil – Soil carbon is stable, comes from reforestation, extremely resilient on the carbon side, as long as not converted to agriculture. Other ways to get to structurally complex forests quicker. Not just looking at how carbon is stored in the forest but also how it is used in the cycle.
  - Not sure if it would be a greater effect but certainly part of the conversation.
- Comment – take issue that every wood product taken comes at a carbon cost. Sequestration cycle being positive throughout successional stages when looking at natural disturbances – big difference when looking at harvesting/timer industry. With intense logging pressure, loss of carbon, data is consistent.
- (chat) Do you have an estimation of the distribution of DNR forests in these different classes?
- (chat) Question for DNR. What work will the Department provide on the carbon sequestration and storage and emissions from these older stands. I am more interested in the impacts dead and down has on carbon.
- (chat) A question for DNR and BluePoint. How will the group avoid the situation I see building of "my science is better and more 'right' than your science"?
  - (chat) One point of this work group is to share, discuss, and debate scientific findings. We have (or will once we vote on the charter) an ultimate mechanism for dissenting opinions. We shouldn't seek to avoid disagreements about



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science. What we should have is a central location where all research referenced by work group members is made available for the others to review.

- Please feel free to share links to studies or reports in the chat, or after the meeting with [cfmworkgroup@bluepointplanning.com](mailto:cfmworkgroup@bluepointplanning.com).
- (chat) While I agree that providing citations is important, I would encourage folks to seek them out and provide them outside the work group meeting time so we can all focus on the discussion itself. We will have a repository for folks to peruse on their own time, rather than multitasking during the meeting.
- (chat) A site where we can all add citations so we can have a common set of literature is a great idea.
- (chat) Can [work group members] please provide citations for claims please?
  - (chat) Yes! Negative net ecosystem productivity after clearcut harvesting. The literature is quite deep.
  - Grant, R.F., Black, T.A., Humphreys, E.R., Morgenstern, K., 2007. Changes in net ecosystem productivity with forest age following clearcutting of a coastal Douglas-fir forest: testing a mathematical model with eddy covariance measurements along a forest chronosequence. *Tree Physiology* 27: 115-131.
  - Turner, D.P, Guzy, M., Lefsy, M.A., Ritts, W.D., Van Tuyl, S., Law, B.E., 2004. Monitoring forest carbon sequestration with remote sensing and carbon cycle modeling. *Environmental Management* 33(4): 457-466. DOI: 10.1007/s00267-003-9103-8.
- Goal 1 Discussion
  - Round robin of work group members
  - Structural diversity varies on the type of forest, age, always going to be nuances. Missing from structurally complex forests presentation that is important: need to look back at the history of management of individual stands. Too often take scientific, academic definitions but don't talk about site-specific management that occurred previously. People assume things without walking on the ground to see what is happening.
    - Response: inputs will eventually be put into the calculator modeling
  - Lay of the land in terms of site classes on DNR lands. How does site class overlap with structurally complex forests? What would be lost or gained if we protected older structurally complex forests on DNR land? What is the ratio of acres of those lands compared to 40-80-year-old stands? What is the carbon sequestration potential of the older structurally complex forests vs the younger stands over time. Looking for data, analysis to review
  - Focus on stands designated HCP, recognizing that those are very interlaced, interact with heavily managed areas of the forest
    - (chat) When there are multiple pathways to reach similar goals, the structural complexity and sequestration goals should be developed to fit with trust obligations.
  - On personal land, many species that people don't think about. Component is age, species, productivity of land.



## Carbon and Forest Management Work Group

Meeting 2: December 6, 2023 | 9:00 am – 3:00 pm

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### Meeting Summary and Notes

- Taking in presentation, going to review resources people are sharing. Thinking about jobs available, in managing forests to be more structurally complex. Requires more labor in the woods, probably, which is an exciting prospect.
    - Opportunity to create structurally complex forests
  - Question – are we seeking structurally complex forests for the fact that they are structurally complex, or for another reason? Storage of carbon is not a standalone reason. Could have net reduction in carbon but from forest products, energy, just not on site of the forest stand. Net environment productivity will reach net carbon after restoration.
  - What to see what carbon sequestration storage potential across different sites in general. And based on different management styles, by DNR and private.
  - Olivia: Paying attention to species and size diversity and management history. Would also like to talk about the geographic distribution of structural complexity across the state, and if those are all valued equally. Should geography influence management decisions and how we think about structural complexity?
  - On ‘why structurally complex forests?’ – driving factor is stands that have not been converted to plantations have higher diversity in plants and animals. Raising issue over harvesting of small patches of structurally complex forests on DNR-managed land. On a small scale, life boating aspects of diversity that don’t get talked about as much. Also – really different interpretations of scientific literature about impact of higher carbon density stands, and what are the carbon impacts of harvesting those stands. Depth of studies exist, going to run into issues about scientific interpretations. Raises need for some sort of process or discussion to look through the literature and ask why there are different interpretations.
  - DNR goals are not near reaching. Hundreds of species to also consider that live in those stands and need the structurally complex forests stands to exist. Already have management plans to move towards those goals but need more. Sequestration – need to look at how much of the landscape is a ‘carbon sequestration dead zone’ – about 1/3 of landscape might be in this position on managed forest land. Important to look at. Also, structurally complex forests – not just habitat, carbon, but also water supply, fire resilience, impacting communities.
  - More technical, not as much of a science person. Appreciate the comments. How does it affect the soil composition, microorganisms, how long does that take for the complexity to happen in the ground. If only talking about DNR-managed lands, seem like small islands of habitat in the sea of privately owned land – want to know more about that. Can’t say what old growth stand looks like on reservation, managed 700 acres on strict rotation. Have questions for DNR, will share.
    - (chat) To follow up on some comments & questions, although the work is focused on DNR trust land management the evaluation of changes in carbon sequestration & storage, impacts to wood supplies & rural economies will translate to the state as a whole and our reports to the legislature will aide in those larger discussions.
- 
- Vote on Charter





## Carbon and Forest Management Work Group

Meeting 2: December 6, 2023 | 9:00 am – 3:00 pm

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### Meeting Summary and Notes

- Designate other member of the work group as an alternate?
  - No issue as long as there are enough people there for the vote.
- Comment – well in advance = more than a month. Hard to rearrange things less than a month out.
- Comment – appointing another member of work group as alternate? Messes up supermajority number, would actually have 11 people in the group voting.
  - Would be acting as 2 people, voting twice.
  - (chat) And the alternate CAN be another member of the workgroup, but it doesn't have to be.
    - (chat) So, does that comment mean a member of the group can be another member's alternate for voting? I think that's what I heard. I would be much more comfortable with this approach...
    - (chat) Yes, the conclusion was that another member of the group can be your alternate, if that's what you prefer. And that person would count as 2 votes in that instance. Otherwise, your alternate would be someone outside of the group that you designate and they would vote on your behalf.
- Other things to add? No, sounds like we made progress.
- Comment – minority report being limited to 2 pages? What is the logic behind that?
  - Should be a briefing, with links to more studies maybe, should be a policy position paper so the legislature can understand the issues.
  - Chris M – typically the minority report is better authored by the dissenter so that your words and thinking are captured in the writing. Length can be changed but in most cases position cases are handled by the minority reporter.
  - Not simple, going to be complex, seems arbitrary.
  - Seems mature, haven't had a discussion about the final report, put on agenda for next meeting.
  - Vote is for charter with page limit eliminated.
  - Re: mentimeter – hopefully can keep using
  - (chat) I'm good with author of minority report but not page limit.
  - (chat) I support removing the page limit for minority reports.
    - (chat) Yes - there will be no limit on the minority report.
    - (chat) This vote is for charter with page limit eliminated...
- Goal 2 Discussion
  - Mentimeter question – prioritizing critical elements of calculating carbon.
    - Question – is rate of sequestration and capacity referring to storage?
      - Not going to storage specifically
    - Have issue with this – good carbon accounting will take into account all of these things. Overall storage amount is important, emissions from harvesting, storage in wood products. Frameworks exist for forest carbon accounting. Not sure this is the right approach, not getting a complete picture.
    - Also – offsite storage, very important to cycle.
    - Storage important, and, logical ways to go around answering questions about carbon accounting,



## Carbon and Forest Management Work Group

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### Meeting Summary and Notes

- Trying to use this as a conversation starter.
- What are other things here that are important, to consider?
  - Valuable to remove anonymity from these votes, because we are going to be working together for so long. Want to share openly perspectives and where we are coming from.
- Maybe need information session about carbon accounting? Methodology that is legible and being used.
- Mentimeter question – potential management approaches
  - Comment – important to define what is meant by ‘practices that can accelerate growth and sequestration’. Not clear, need to make clear what the practices are
    - Share some practices to consider?
      - No, time and space coming.
  - Good to consider how each approach interacts with trust revenue. In keeping with trust responsibilities/mandate. Can maximize carbon values and revenue.
    - Talked about creating criteria to understand things better.
  - (chat) That's an interesting app. In the future we should use a tried and true physical vote next time. Votes don't need to be anonymous and we've wasted multiple minutes with this exercise.
  - (chat) I think there is broad scientific agreement on the pools that are part of carbon process modeling. There are different approaches to calculating the pools and dynamics, and more uncertainty on some of the pools than others (e.g., soil more uncertain than carbon in the main boles of trees) and different results on rates of decay of harvested wood product pool.
- Discussion
  - Places to start aligning about structurally complex forests when looking at it from a high level? Need more data?
  - Comment – every single timber sale has its own set of carbon potential, revenue potential. Are we trying to come up with decision points at which decisions can be made about different timber stands / harvests? Or coming up with a recipe that can apply to every forest? Starting to feel that time is being wasted.
    - Want to prepare conversations to muddle through these topics, so that contractors can quickly begin modeling when they are brought on.
    - DNR – unclear – was the question about the process happening today? This is an early stage in trying to home in on figuring out what to tell the contractor to focus on. In order to be able to say to the contractor ‘these are the scenarios to look at’ we have to identify what is important to the work group. Some things can't be narrowed.
    - Helpful – but – what is going to be the most helpful to get the proviso requirements a, b, c? What will be the most helpful thing that the work group can produce to get at the intent of the proviso? Trying to create calculator for DNR to assess carbon potential?
      - No, not creating calculator. Trying to come up with recommendations for potential management scenarios that meet shared goals. Deliverable will be recommendations for DNR – these types of management scenarios achieve these



## Carbon and Forest Management Work Group

Meeting 2: December 6, 2023 | 9:00 am – 3:00 pm

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### Meeting Summary and Notes

- goals. If truly considering how it impacts trust beneficiaries, might tweak the recommendation group makes. Want WG to come in with perspective about what is important to them and their stakeholders, and then work with other WG members to merge.
- If 'age of trees' is most important to one person, but beneficiary revenue is most important to another, how to incorporate both views? Asking work group members to evolve priorities in a way that they are comfortable with.
  - Helpful in trying to figure out what does success look like for the work group.
  - Comment: if group can come up with set of scenarios that modelers can look at, with set of criteria that we want scenarios to accomplish. Example – can you lengthen rotations with the objective of increasing both carbon storage in forest, in wood products, and long-term increase in available harvestable volume? Is that possible over time with no interruptions to supply to mills?
    - Also – is it possible to conserve remaining patches of structurally complex forests on DNR lands in a way that doesn't cause undue hardship on local milling infrastructure? It is important to figure out ways to conserve structurally complex forests, but still do it in a way that doesn't cause hardship to other stakeholders.
  - Remember, these are scenarios, not specific practices or techniques. Many of us share the same goals, would all be supportive in maximizing all goals, but we live in a world with tradeoffs. Want a spectrum of scenarios that range from not harvesting to harvesting something to maintain something else. How are we turning the dials on the different goals? Each thing ties into another.
  - (chat) Including maximizing multiple elements is helpful framing of the work.
  - (chat) Maybe optimize is better than maximize?
  - (chat) Yes, fair edit!
    - Comment: Dial metaphor is helpful, and scenarios. Would make most sense to get through scenarios and lay out 'puzzles' that the work group needs to work through. Which are we able to work through and which are outside of the scope of the work group. Would be helpful and would help in thinking creatively – might not fit neatly in constraints of the work group – good to see the choice points, where there are tradeoffs or creative solutions needed to make it all work.
  - Question – do contractors have this ability? Need to talk to contractors to see what the parameters that they are working within.
    - Waiting for contractors to come on in January so right now trying to go through topics, issues.



## Carbon and Forest Management Work Group

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### Meeting Summary and Notes

- While looking at qualifications of potential contractors, make sure that they have the technical ability to do all of this.
- Part of the purpose of the work group is to inform the work that the contractors are doing.
- Comment – frameworks are great but what may make sense in one area might not make sense in another. Differences in mill capacity, etc. Framework is good, good place to go.
- Most helpful to come up with approaches and then present to the work group or a different approach? What to do to come up with the scenarios
  - Creating the dials, or straw men. Want to get to something that is more tangible.
  - (chat) straw men for me would be most useful.
- Comment – Questions that were raised today still need clarity. What are we talking about when we talk about the carbon question. Clearly more than the individual stand. What are the boundaries of the carbon pools that we are talking about? To make sense about how a scenario would fit in the boundaries.
  - DNR – would make the most sense for DNR to come to the work group with some scenarios, then can address some questions. Envisioning coming to the group with 3 – ish illustrative scenarios, heavy on one side of the spectrum, something that’s more of a tweak, then something that’s more on emphasizing revenue to beneficiaries. When recommending to contractors, probably 5-7 scenarios. After first three, then can delve into the nuances and find other approaches.
  - Would be suggesting 3 overall categories of scenarios that could break into more specific scenarios that are brought to the contractors.
  - Follow up – general idea of higher-level scenarios and fewer makes sense. Most interested in figuring out- implied that turning up dial on trust beneficiaries means cutting down more forest, want to move on from idea that to reify a goal it has to look like it has for the past decades.
- Comment–like idea of scenarios provided to the group. Suggest creating really specific questions for the group to answer. Lots of ways to look at these questions and being very specific is important.
- (chat) Modeling can be done on all of DNR’s westside lands.
- Comment – worry a bit if the scenarios are too much, could inadvertently create conflicts/sides. Request – at least one scenario with multi-parameter optimization. Would give a platform for finding more common ground. In modeling, take-home lesson, in order to transition to older rotations, need way more thinning than DNR does now. Labor implications from that too – more thinning would need more people.
- DNR: Don’t want to create too much opposition, but starting from the extremes is much easier to move towards a middle. The 3 scenarios don’t have to be the end all be all, can through them out and come back with updated scenarios.
  - Will be helpful for calibrating .
  - Parameters – ‘feasible’ scenarios, so not as far apart, narrow the spectrum of the scenarios to get more balance.



## Carbon and Forest Management Work Group

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### Meeting Summary and Notes

- Question – status quo baseline assessment? We are operating from an assumption that something is going to change.
  - DNR: yes, wood supply contractor starts with baseline, and carbon contractor too. DNR current baseline could be a scenario.
  - DNR: want a baseline, no action alternative.
- More conversations are needed. This conversation is informative in next meeting topics.
- Next meeting topics
  - Next meeting – scenarios and talking about them. Then working with contractors in Feb., March.
  - Other things that work group members want to have presentation on?
    - none
- Finding commonalities
- Close
  - Meeting schedule
    - (chat) Quick clarification - Total of 12 meetings, 2 in 2023 and 10 in 2024/25
    - August meeting skip, and May and June potentially.
    - Feb and March meetings are in middle of legislative session – can't spend 6 hours in one day on this. Difficult to schedule. End of March is end of leg. session.
    - Initial scenarios at the January meeting – even if just high-level. Is that possible?
      - DNR: yes, will be high level but ok. Can also sketch out some of the questions that are important to ask.
      - DNR: Session ends in early March. Will work to see what fits best for everyone.
      - (chat) You are right that session may be over by March 13th
    - February 14<sup>th</sup> meeting will be most challenging – need to reassess.
  - Question: Forest Practices Board meeting is also February 14? Is that an issue.
    - Shouldn't impact any DNR staff.
    - Will send out hold for calendars for all of the 2024 meetings.
  - Next steps:
    - Develop scenarios
    - Resources gathering.
      - Working to get on the work group webpage a library for resources
      - Send resources to work group email as well
    - Recurring webinar set up so links are the same
    - Continue to set up the topic