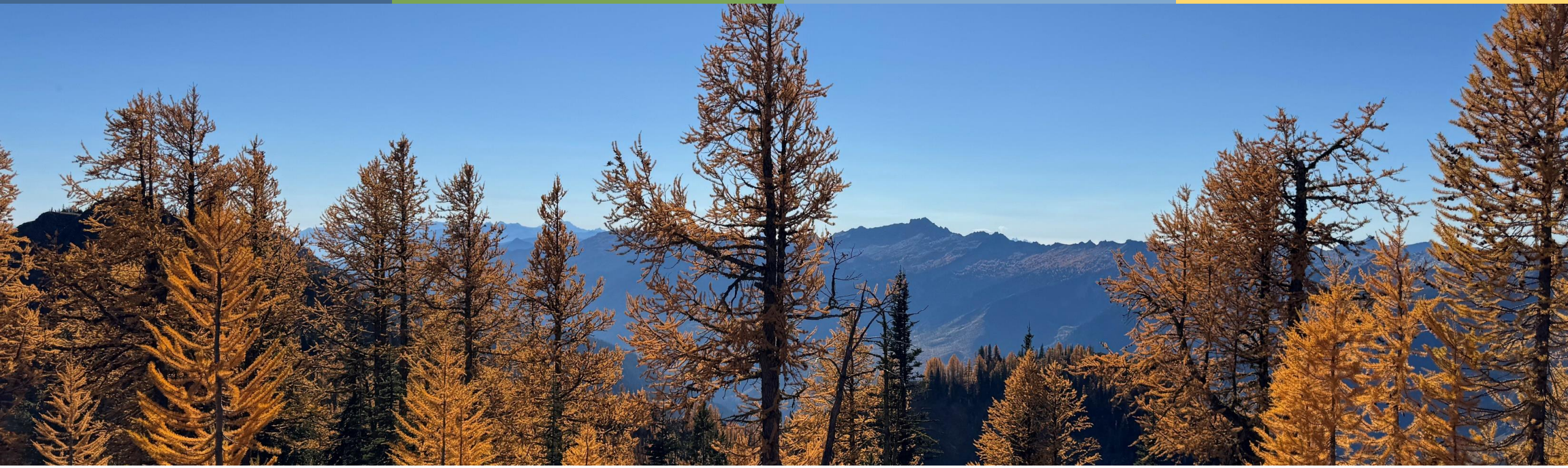


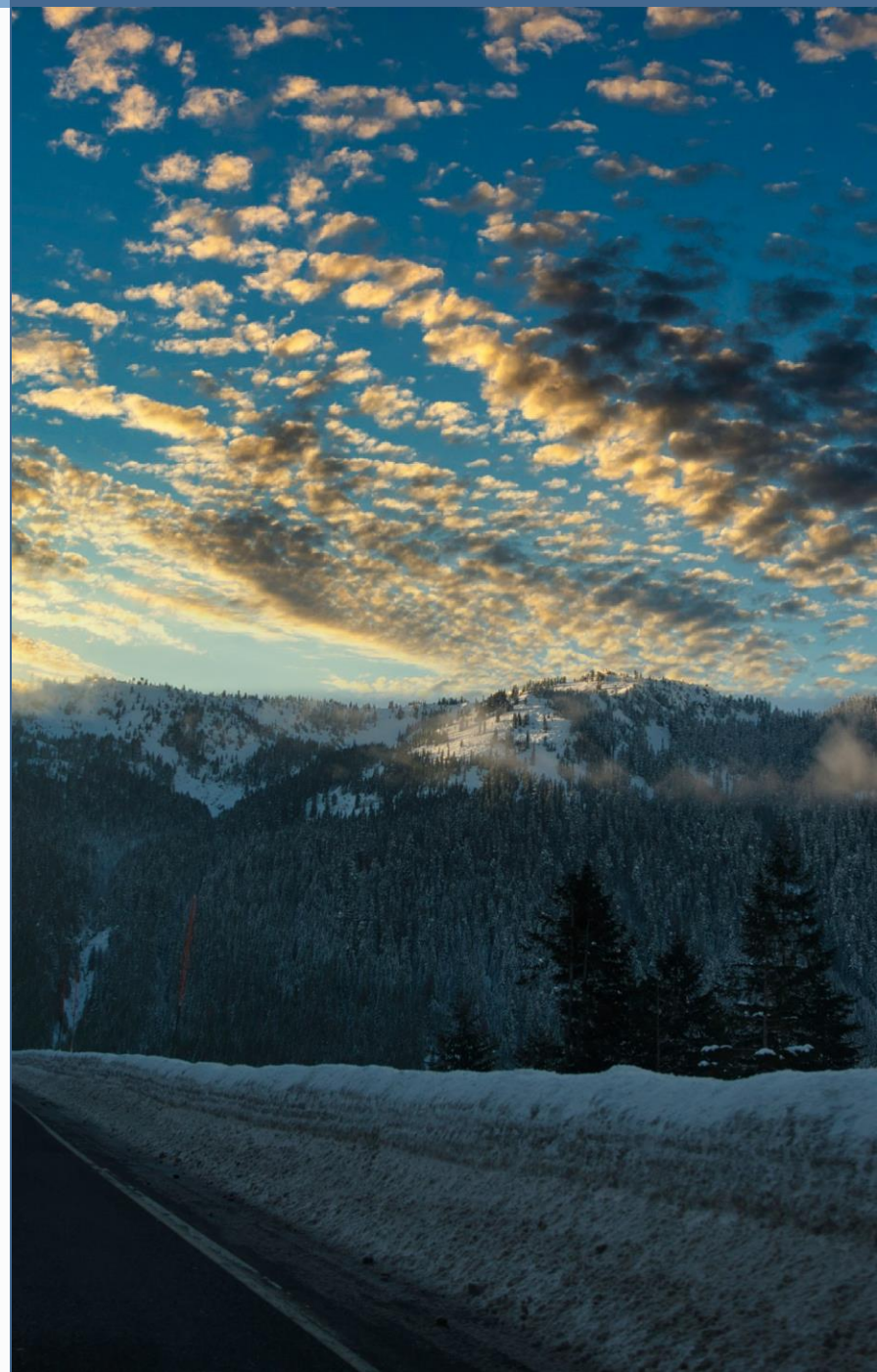
Forest Offset Protocol Technical Working Group

Meeting #6

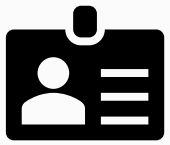
DEPARTMENT OF ECOLOGY
State of Washington

Agenda

- Topic #1 Leakage Deduction
- Topic #2 Forest Management Requirements
- Public comment opportunity



Zoom tips and tricks



Please rename yourself with your affiliation: Click on ‘Participants,’ hover over your name Click ‘More’ then ‘Rename.’

Attendees use the Raise Hand feature during public comment period.

Panelists please keep your video on as bandwidth allows.

Reminder: Role of this working group

- This working group is not tasked with making consensus recommendations changes to Ecology rule or adopted protocols
- Ecology will consider multiple sources and perspectives, including the input collected through this working group, when deciding how to proceed with changes to this protocol
- Input provided by working group members, even if unanimous, should not be considered an indicator of the changes Ecology may or may not make

Disclosure of relevant financial interest or professional engagements

- At the start of each meeting Ecology will ask working group participants to disclose any financial interests or professional engagements related to the considered protocol revisions being discussed
- Disclosure of a relevant financial interest **does not preclude** participation in the discussion

Examples of financial interests relevant to today's discussion

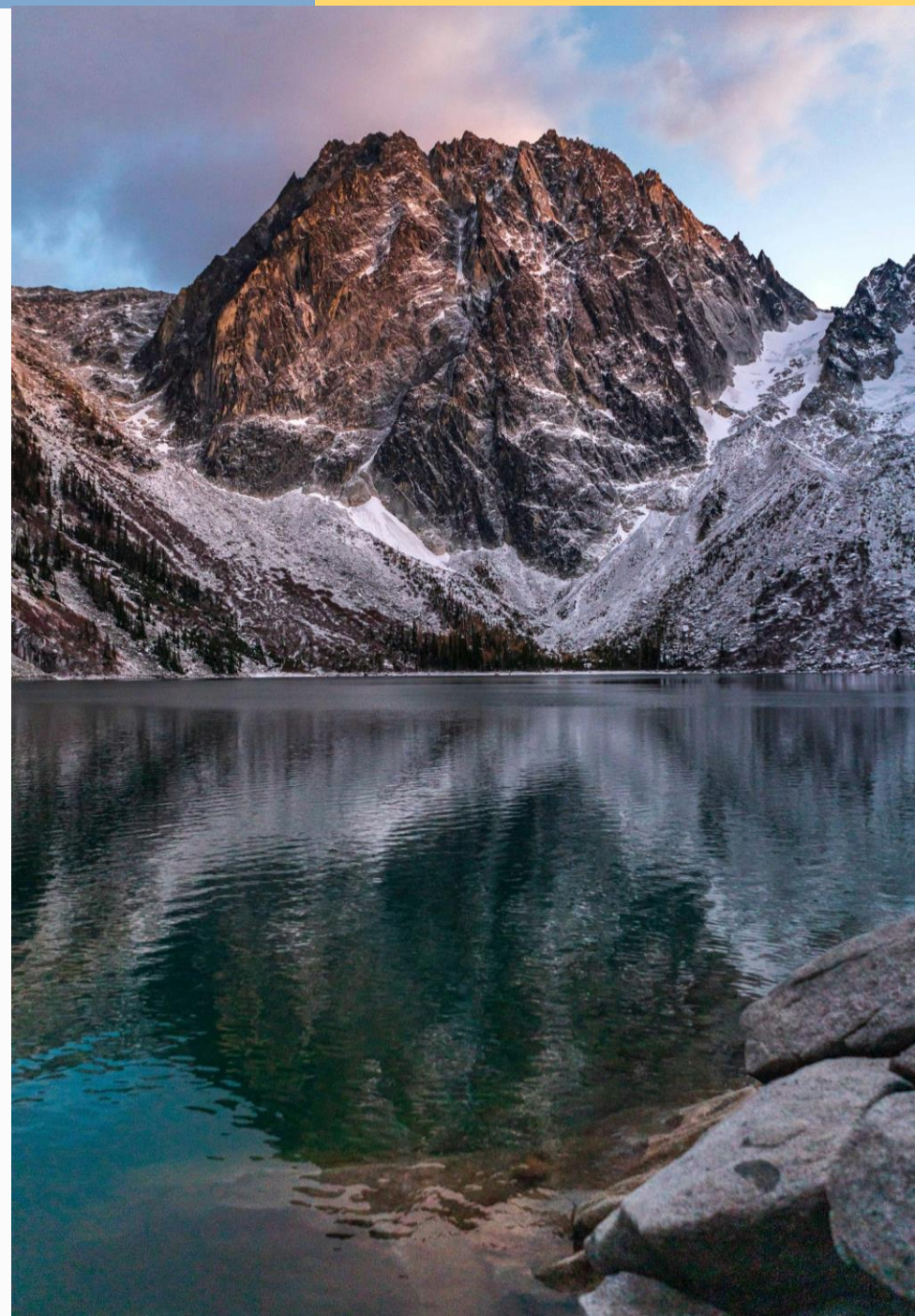
- Intention or consideration of development of a forest offset project in Washington's market which would involve even-aged harvests
- Any other financial interests that may be perceived as pertinent to this discussion

Disclosures shared in prior meeting

Prospective project development	Other experiences related to project development	Experiences related to registration, verification, or protocol development
Mike Warjone – Port Blakely	Sheldon Zakreski – Living Sky Carbon Solutions	Jon Remucal – Climate Action Reserve
Steve Hinton – Tulalip Tribes	Felipe Casarim – BP	Tani Colbert Sangree – GHG Institute
Jonathan Pomp – Green Assets		John Nickerson – Dogwood Springs Forestry
Jeremy Koslowski – The Climate Trust		
Edward Mann – Global Forest Carbon		
Ed Murphy – Sierra Pacific Industries		
David Ford – L & C Carbon		
Kathleen Farley Wolfe – King County DNR		
Ben Parkhurst - Anew		

Disclosure opportunity

Please use the raise hand feature to share a relevant disclosure



Topic #1: Leakage deduction

- Overview of leakage in protocol, treatment in other protocols, and relevant recent research
- Discussion
- Poll

Leakage definitions

- Activity shifting leakage
- Market shifting leakage

Leakage quantification in the protocol

Equation 5.1. Net GHG Reductions and GHG Removal Enhancements

$$QR_y = [(\Delta AC_{onsite} - \Delta BC_{onsite}) + (AC_{wp,y} - BC_{wp,y}) * 0.80 + SE_y] (1 - ACD) + N_{y-1}$$

Where,

QR_y	=	Quantified GHG emission reductions and GHG removal enhancements for reporting period y (MT CO_2e)
y	=	Reporting period
ΔAC_{onsite}	=	The change in actual onsite carbon since the last reporting period (MTCO_2e)
ΔBC_{onsite}	=	The change in baseline onsite carbon since the last reporting period (MT CO_2e) For improved forest management projects, where baseline onsite carbon stocks are averaged across all reporting periods, the value for ΔBC_{onsite} will be zero in all reporting periods except the first reporting period of the project.
$AC_{wp,y}$	=	Actual carbon in wood products produced in reporting period y that is projected to remain stored for at least 100 years (i.e., $WP_{total,\ y}$ derived for actual harvest volumes following the requirements and methods in appendix C) (MT CO_2e)
$BC_{wp,y}$	=	Averaged annual baseline carbon in wood products that would have remained stored for at least 100 years (i.e., $WP_{total,\ y}$ derived for baseline harvest volumes following the requirements and methods in appendix C) (MT CO_2e)
0.80	=	Market responses to changes in wood product production. The general assumption in this protocol is that for every ton of reduced harvesting caused by a forest project, the market will compensate with an increase in harvesting of 0.2 tons on other lands.

Secondary effect emissions

- For reforestation projects there is an additional deduction when projects involve the conversion of viable cropland or grazing land
  - The additional leakage rate deduction for reforestation of viable cropland is 24%
  - For viable grazing land the leakage rate depends on the expect canopy cover, rate is up to 50%

Secondary effect emissions

- Avoided conversion projects receive a deduction due to conversion displacement risk, applied to the difference in actual vs baseline onsite carbon in a reporting period

Equation 5.12. Secondary Effects Emissions

$SE_y = MIN[(-0.036 \times (\Delta AC_{onsite} - \Delta BC_{onsite}), 0]$

Where,

SE_y	=	Secondary Effect GHG emissions caused by the project activity in reporting period y (MT CO_2e)
y	=	Reporting period
MIN	=	The lowest value in the set of values being evaluated
-0.036	=	Conversion displacement risk value
ΔAC_{onsite}	=	Annual difference in actual onsite carbon as defined in equation 5.1 (MT CO_2e)
ΔBC_{onsite}	=	Annual difference in baseline onsite carbon as defined in equation 5.1 (MT CO_2e)

Secondary effect emissions

- For IFM projects there is an additional deduction when the amount of harvested trees in a reporting period is less than the baseline assumption for harvesting in that reporting period

$$If \sum_{n=1}^{y} (AC_{se,n} - BC_{se,n}) < 0, then\ SE_y = (AC_{se,y} - BC_{se,y}) \times 0.20$$

Where,

SE_y	=	Estimated annual secondary effects (MT CO_2e)
y	=	The reporting period
$AC_{se,n}$	=	Actual amount of carbon in standing live and standing dead trees (whole tree including belowground biomass and bark) harvested by reporting period y
$BC_{se,n}$	=	Estimated average baseline amount of carbon in standing live and standing dead trees (whole tree including belowground biomass and bark) that would have been harvested by reporting period y

Leakage treatment in other protocols

- CAR US Forest 5.1
  - Leakage deductions (for IFM, AC, and reforestation) are largely in line with ARB protocol with some revisions
    - Carryforward of positive secondary effects for IFM projects (but no crediting for positive secondary effects)

Leakage treatment in other protocols

- ACR IFM 2.1
  - Proponents must demonstrate no **activity shifting leakage** by:
    1. Meeting one of the following requirements;
       a. Entity wide adherence to certification standard (FSC, SFI, ATFS)
       b. Enrollment in state sanctioned forestry program with monitoring and enforcement mechanisms
       c. For private landowners with <5,000 acres or tribal landowners, adherence a to sustainable forest management plan with demonstrated compatibility with Montreal Process Criteria
    2. Management plans prepared >24 months prior to start of project must show no planned increase in harvest outside the project area compared with project documents; OR
    3. Historical records must show no deviation from historical trends over most recent 10 year average for lands owned by proponent outside project area; OR
    4. Verifiable evidence of no harvesting in a given reporting period for all lands owned or manage by participating entities not enrolled in the GHG project;

Leakage treatment in other protocols

- ACR IFM 2.1
  - Market shifting leakage is estimated based on the magnitude of harvest declines and the type of landowner
    - Where project activities decrease total wood products produced by <5% over a crediting period, leakage deduction = 0
    - …Decrease total wood products produced by 5% - 25% over a crediting period, leakage deduction = 10%
    - …Decrease total wood products produced by >25% over a crediting period, leakage deduction = 20%
    - …Decrease total wood products produced by >25% over a crediting period, and landowner is a private entity with >5,000 acres, leakage deduction = 30%

Leakage treatment in other protocols

- Verra (VM0045)
  - Leakage deduction is based on the ratio of merchantable timber stock to total stock in the project area, compared with the national average
    - If ratio is comparable with national average, leakage rate = 40%
    - If ratio is greater than national average, leakage rate = 70%
    - If ratio is less than national average, leakage rate = 20%
    - If project activity involves no permanent reduction in timber supply, leakage rate = 10%

Critiques of leakage deductions in the protocol

- In the scientific literature leakage estimates from reduced timber harvest vary greatly, but in many instances have found rates that are greater than 20% for deferred harvest projects
  - 84% leakage rate from deferral of public timber harvest in the pacific northwest (Murray et al, 2004) at a large scale
  - Modeled 71% - 85% leakage for national payment for carbon storage program to forest owners (Nepal et al, 2013)
  - Meta-analysis suggests average leakage rate of 39.6% (Pan et al, 2020)
  - Scale of uptake has a significant impact on leakage rates. Smaller scale project uptake is modeled to have a lower leakage rate (Daigneault et al, 2023)

Leakage deduction timing

- Leak rate for IFM projects is based on the difference between actual onsite carbon stock and *average* baseline carbon stocks, rather than the modeled baseline onsite carbon.
- For reporting periods where the average baseline is above the modeled baseline this has been argued to result in an insufficient leakage deduction, thus over crediting (Haya et al, 2023)

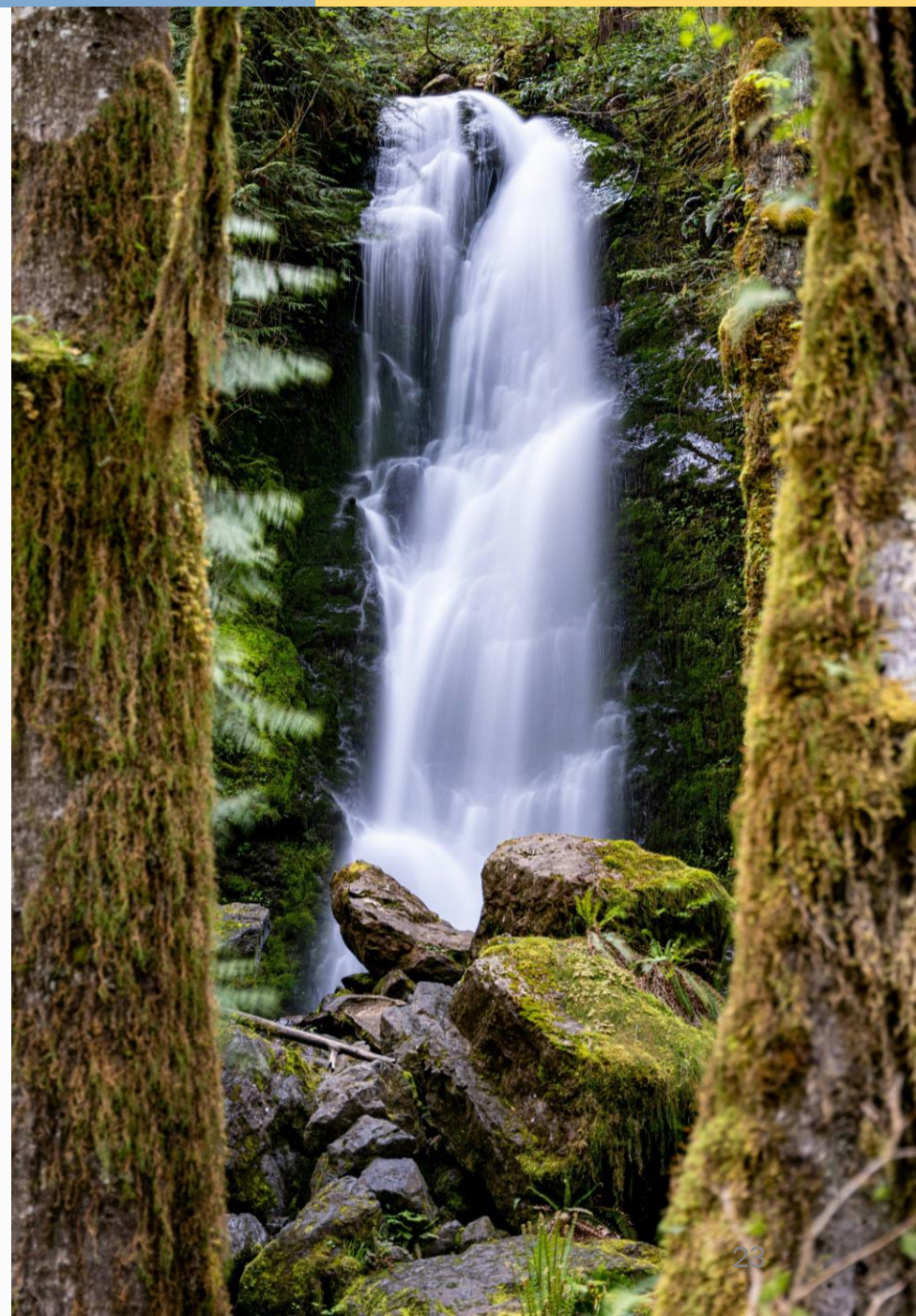
Discussion

- Corrections, context, and clarifications related leakage
- Does the 20% default rate assumption (for IFM) projects adequately account for project leakage?
- Should Ecology consider approaches to disincentivize activity-shifting leakage for IFM projects?
- Should Ecology consider an approach to leakage deductions that is project specific (based on project size, landowner type, or other factors)?

Poll #1

Topic #2: Forest Practice Requirements

- Overview of forest practice requirements
- Discussion
- Poll



Forest Practice Requirements in the Protocol

- Projects must adhere to all applicable state or local forest practice requirements *and* additional requirements in the protocol
- The requirements in the protocol are more restrictive that WA forest practice rules in some ways, particularly regarding even-aged harvests

Forest Practice Requirements in the Protocol

- Maintain certification with FSC, SFI, for Tree Farm system, OR;
  - Operate under renewable long term management place demonstrating harvest levels that can be permanently sustained over time
  - Employ uneven-age management and retain at least 40% of canopy across the forest
- If even-aged management is practiced on a watershed scale up to 10,000 acres, projects must maintain no more than 40% of their acres in ages less than 20 years'
- Even-aged harvest units must not exceed 40 acres in total area, AND;
  - Be separated by an area as large as the area being harvested or 20 acres
  - Even-age harvest must not occur until at least 5 years after prior even-aged harvest in project boundary (or until prior harvest unit has been replanted with trees at least 5 ft tall)

WA Forest Practice Rules

- Even-aged harvest units must be less than 120 acres (240 acres with explicit approval)
- At least 30% of the area *perimeter* must be in stands >30 years of age
  - At least 60% of the perimeter must be in stands >15 years of
  - At least 90% of the perimeter must be in stands >5 years or 5 ft tall

Treatment in other protocols

- CAR US Forest 5.1
  - Harvest block size scales by harvest retention level
    - 0 Sq ft basal area/acre retained = 40 acre maximum size
    - 15-20 Sq ft basal area/acre retained = 60 acre maximum size
    - […]
    - >50 Sq ft basal area/acre retained = no maximum harvest size

Treatment in other protocols

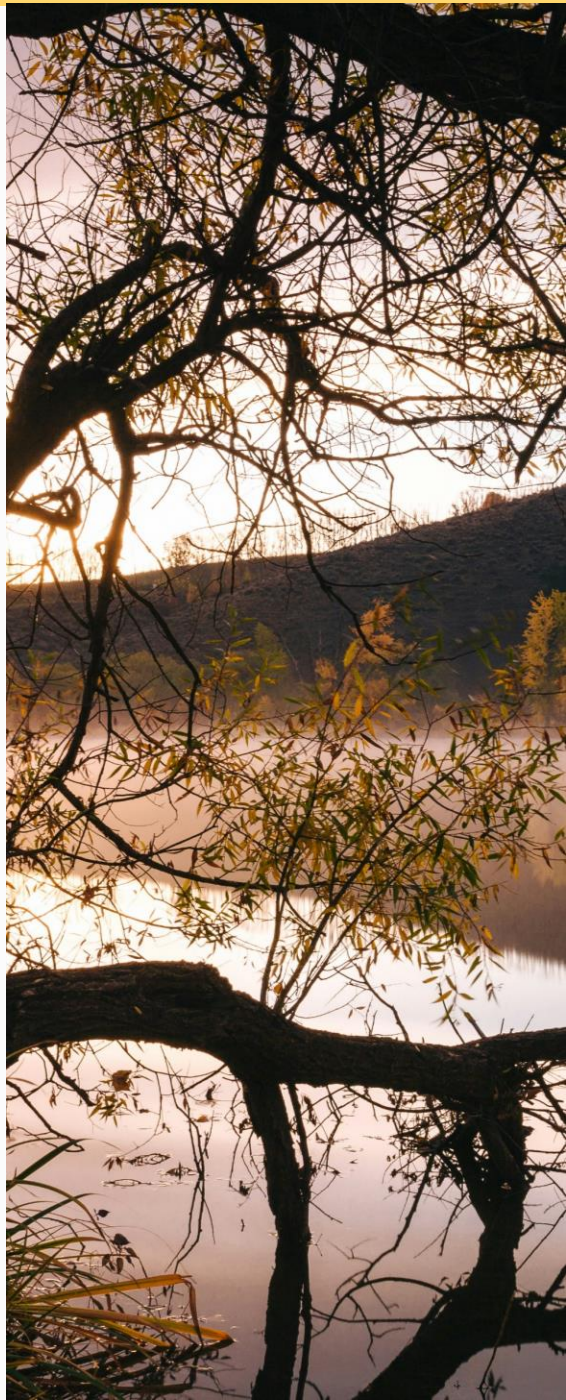
- ACR IFM 2.1
  - No requirements beyond adherence to all applicable state and local requirements; AND
  - One of the following:
    - Entity wide adherence to certification standard (FSC, SFI, ATFS)
    - Enrollment in state sanction forestry program with monitoring and enforcement mechanisms
    - For private landowners with <5,000 acres or tribal landowners, adherence to sustainable forest management plan with demonstrated compatibility with Montreal Process Criteria

FSC Certification Requirements

- FSC certification sets clearcut sizes by region
- The Pacific Coast region (OR, CA, WA) have the largest maximum clearcut size at a 40 acre average with no block larger than 60 acres

Discussion

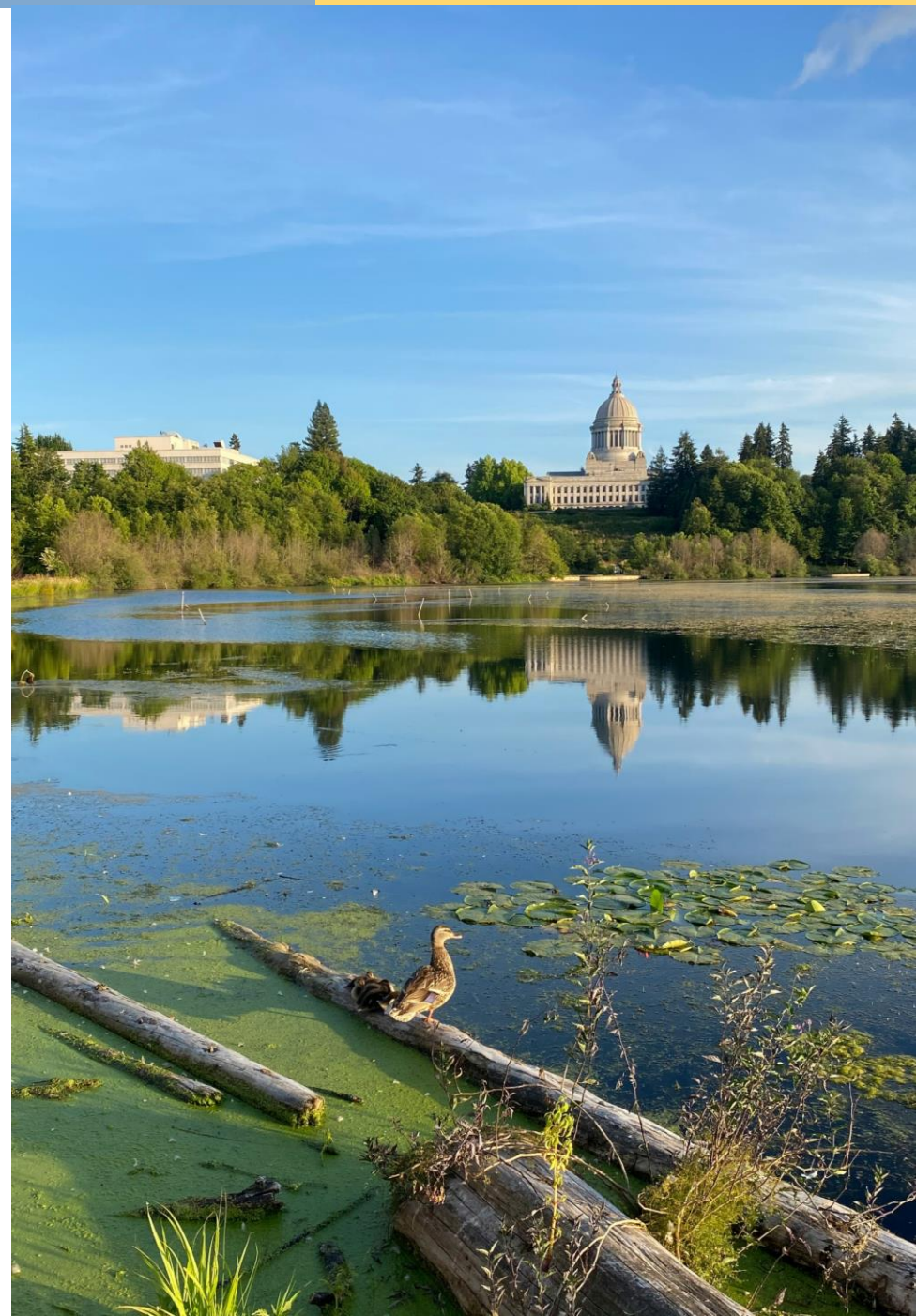
- Corrections, context, and clarifications related to forest practice requirements in the protocol
- Are the even-age management restrictions in the forest practice requirements in the protocol a significant barrier to project development?
- In addition to the even-age management restrictions, are there elements of the forest practice requirements in the protocol that pose a barrier for project development in Washington?



Poll #2

Next steps

- Meeting #7 is **1/7/2025** at 9 am P.T
- Final scheduled meeting is February 4th

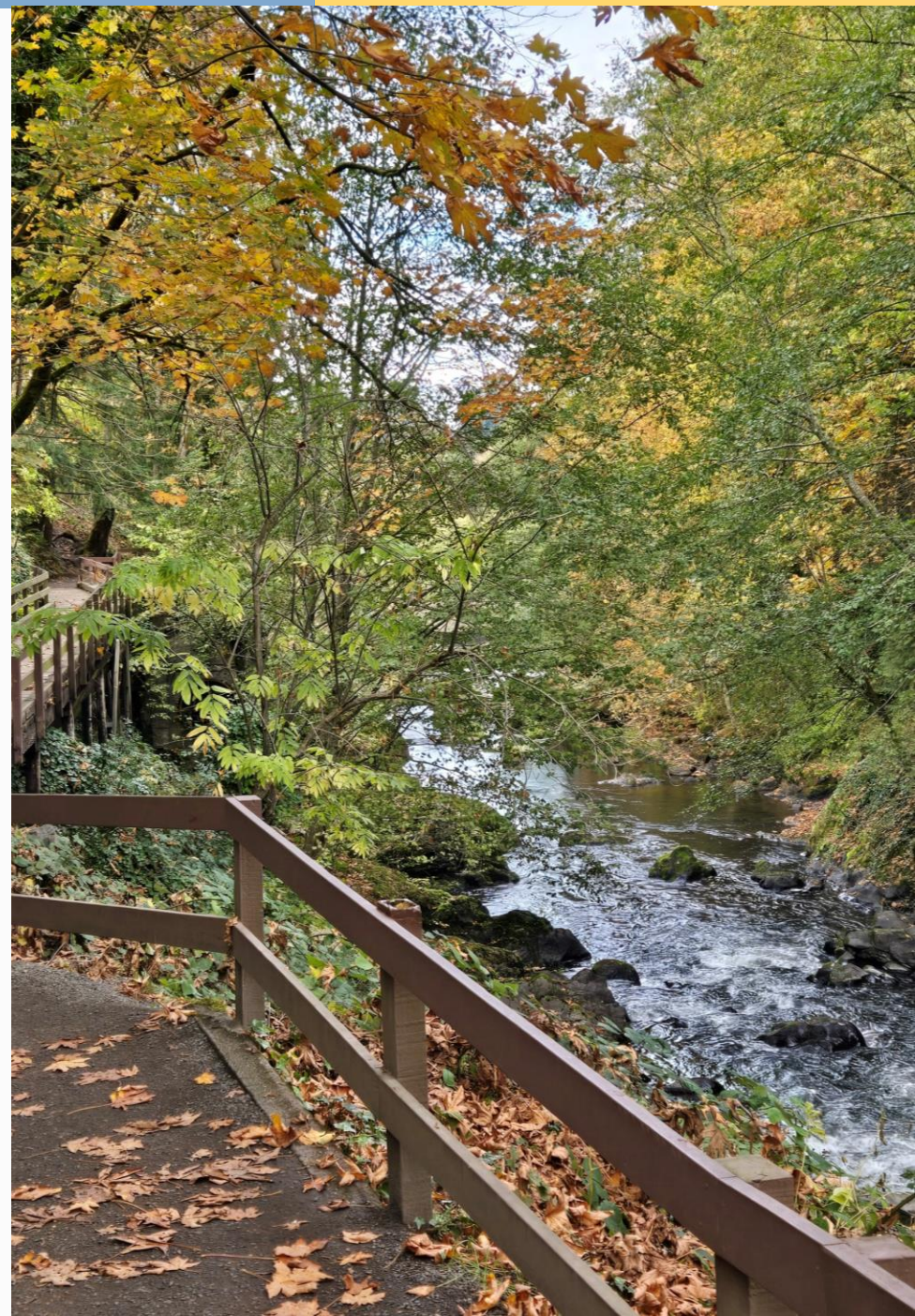



Thank you!
Contact: CCAOffsets@ecy.wa.gov

Public Comment Opportunity

Guidelines for providing public comment

- Up to two minutes per person
- Host will unmute you and begin timer
- Please keep the comments related to forestry or offset projects
- Ecology will not respond to comments in this meeting
- Please use “raise hand” button to indicate that you wish to provide a comment

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