Role of Forest Biomass in 2022 Draft Scoping Plan

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What is the Scoping Plan? Why does it matter?

- Scoping Plan is a major planning document prepared by CARB.
- Answers the question: How can CA achieve net-zero emissions by 2045? I.e., how much solar, EVs, land restoration, etc., over time.
- **Why it matters:** Establishes the state's *climate priorities*, shaping the allocation of billions in policy and investment decision-making.
- **Timing:** Official draft has been released. Public meeting on June 23rd. Public comment open until June 24th. Finalization in late 2022.

Natural and Working Lands

- Scoping Plan assesses carbon sequestration potential of California's NWLs sector (i.e., forests, croplands, wetlands, etc.).
- To do this: Proposes 4 alternate NWLs Scenarios, which differ based upon the type and level of conservation/restoration actions.

NWLs Scenarios as they relate to forests

Scenario	Objective ("Land management actions that…")	Forested acres treated/year
1	Prioritize maximizing short-term carbon stocks, minimizing disturbances	**0**
2	Prioritize implementation of current commitments ("business-as-usual")	**1 million**
3	Prioritize restoration and climate resilient carbon stocks	**2.3 million**
4	Prioritize forest wildfire reduction and other fuel reduction efforts	**5.2 million**

Forest biomass under Scenario #3

- CARB estimates the volume of biomass residues that would be collected under Scenario #3. The top-line results are*:
  - Total forests treated: 2.3 million acres/yr
  - Total biomass collected: 5.6 million BDTs/yr
- I.e., model estimates that, on average, just over 2 BDTs of forest biomass would be collected per acre treated.
- Remaining residues are left in the forest, managed via either pile/broadcast burn or decomposition methods.

** See: Appendix I, Table 33*

How biomass estimate is developed

- Two key steps:
  - **Step 1:** California Biomass Residue Emissions Characterization (C-BREC) Model used to obtain an estimate of “mobilizable” biomass.
    - Key inputs: (i) C-BREC data and assumptions; and (ii) selection of treatment/residue scenarios (i.e., x% thin-from-below; x% residues deemed “mobilizable”).
  - **Step 2:** CARB then estimates whether it is “preferable” to collect mobilizable biomass, by comparing: (i) cost of collecting and converting residues into a biofuel, vs. (ii) “social cost” of managing residues via burning and/or decay.
    - Where social cost is considered low, biomass is typically left in the forest.
    - Social cost estimated as PM2.5 and CO2 emissions from burning and/or decay.

Interpreting results (Table 34, Appendix I)

- Results provided on an eco-unit basis w/ land ownership type.

C-BREC output

Eco-unit and Land Ownership Type	Modeled Treatment Fate	Mobilizable Biomass (tons/acre)	Scenario	Treatment Acres Yielding Residue	Estimated Residue Mobilized (BDT)
Central Coast Evergreen Forest - Federal	Mobilize	2.2	BAU	5416	12078
Dry Sierra Mountains - Federal	Mobilize	4.5	BAU	28720	130291
Great-Basin Rangelands - Federal	Prescribed Fire	1.6	BAU	1031	0
Humid Sierra Mountains - Federal	Mobilize	6.2	BAU	30674	189023

Example of where social cost screening kicks in

Conclusion

- Scoping Plan models a world with 2.3 million acres treated/year.
- Anticipates, on average, just over 2 BDTs of residues would be collected per acre. Remainder is left in the forest, managed via either pile/broadcast burn or decomposition methods.
- 2 BDT/acre estimate depends on C-BREC (i.e., its core assumptions; treatment/residue scenario selection) and social cost method.
- Opportunity to provide feedback to CARB staff ends **June 24th**.
- CSG prepared a feedback piece with recommendations based upon our interpretation for stakeholders to consider (email if interested).