



University of Idaho

College of Natural Resources

TAKING STOCK OF THE FOREST CARBON OFFSET MARKET

Moderator: Greg Latta, University of Idaho

Panelists: Brian Sharer, Finite Carbon

David Ford, L&C Carbon

Western Forest Economists meeting
September 29, 2023 Portland, OR

BRIAN SHARER

FINITE CARBON

DIRECTOR OF FOREST ANALYTICS



Brian leads the quantification and modeling efforts across Finite Carbon's business lines for carbon projects throughout the U.S. and abroad.

He has over 25 years of experience in forest modeling, inventory, and investment analysis. Prior to joining Finite, Brian was portfolio manager for \$500 million of U.S. timberlands assets at GreenWood Resources where he also led inventory and modeling efforts for existing investments and acquisition targets both domestically and internationally. He has extensive analytical experience with REITs and TIMOs, industrial, government, and non-profit landowners leading planning efforts, asset valuations, systems analysis, and forestry software development. Brian serves on the Forest Biometrics Research Institute Board of Directors.

Brian holds an M.S. in Forest Resource Management from Oregon State University, an MBA from the University of Portland, and a B.A. in Biology from Colgate University.



DAVID FORD

L&C CARBON

CHIEF EXECUTIVE OFFICER



David is the CEO of L&C Carbon with previous leadership positions at National Forest Products Association, Oregon Small Woodlands Association and Metafore, where common-ground solutions across supply chains were crafted.

David is a Senior Fellow at the American Forest Foundation, where he focuses on forest carbon policy. David also serves as the Policy Committee chair of the Forest Climate Working Group – a 87-member coalition that develops and promotes forest-related solutions to climate change. He currently serves as 1st Vice Board Chair of the Program for the Endorsement of Forest Certification (PEFC), based in Geneva, Switzerland. And here in Oregon, David is in his third year of a four-year term serving as a voting Commissioner of the Oregon Global Warming Commission.

David holds a B.S. in forest management from the University of Illinois and is a graduate of the U.S. Forest Service's Forest Engineering Institute. He is a member of the Society of American Foresters and is a past officer of the National Capitol Chapter. David owns and manages a private family forest on the Big Island of Hawaii.

LANDOWNER PERSPECTIVE

- David - Large Owners – what are the trends/considerations you see as driving forest carbon offset participation consideration
 - To Brian - And how has that changed in the last 5 years or so
- Brian – Small Owners – its been a challenge to engage small landowners while maintaining credibility. You are stepping into this space while the NCX body is still warm, what makes Core Carbon different
 - To David – you were also involved in the FFCP, is there room for both?

INTRODUCING



C O R E
C A R B O N

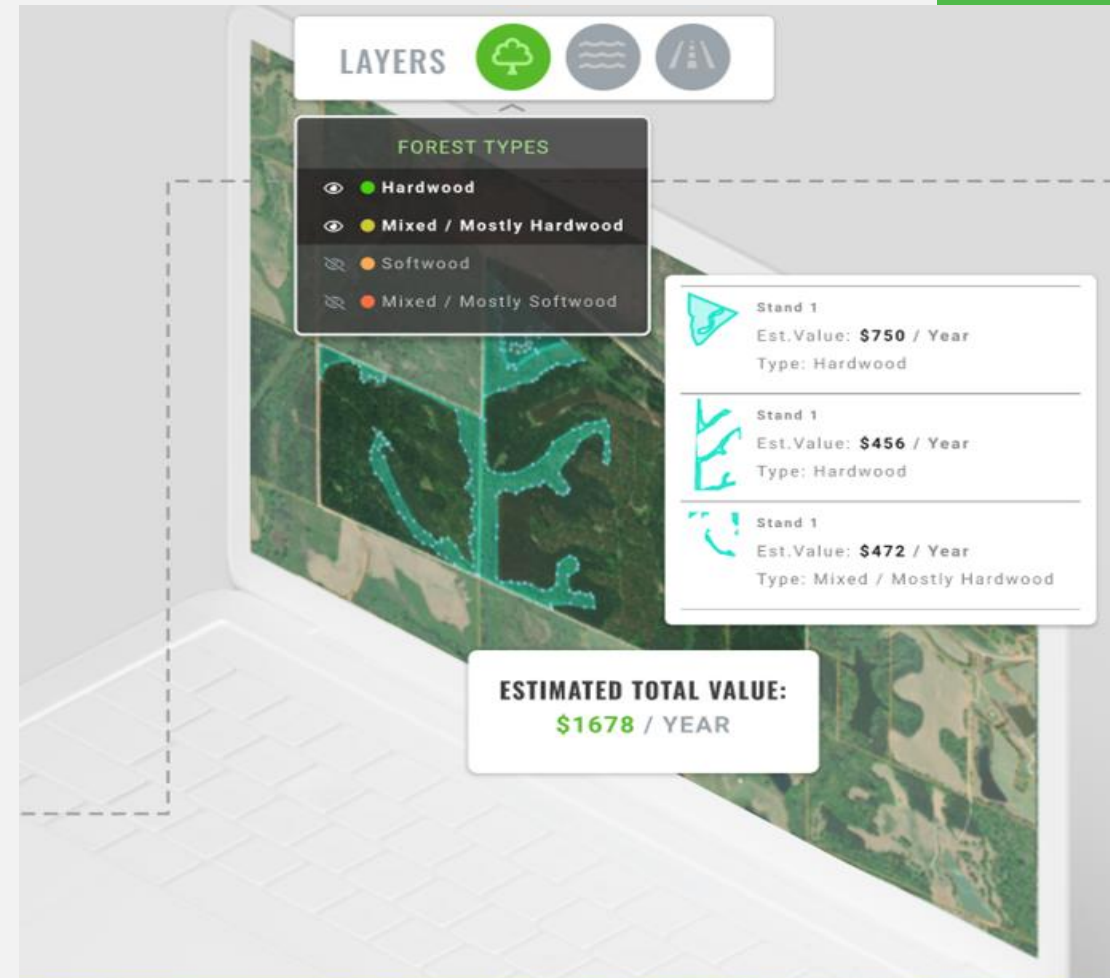
By **Finite**Carbon

BIG OPPORTUNITIES FOR SMALL LANDOWNERS.

About CORE CARBON

DEFERRED HARVEST

- CORE Carbon is a no-cost online platform for natural climate solutions
- First project type: small landowners (40 to 5,000 acres) to participate in the carbon market
- Streamlines project development, management, and payment
- Reduces costs and increases efficiencies through the use of technology
- Easy for landowners and their foresters to use
- Direct access to the market through real time quotes



First project type on CORE will use the Small Landowner Methodology published by the

American Carbon Registry on 09/29/21

Under the ACR small landowner methodology landowners would **commit to a harvest deferral of 20 or 40 years**



METHODOLOGY FOR THE QUANTIFICATION,
MONITORING, REPORTING AND VERIFICATION
OF GREENHOUSE GAS EMISSIONS
REDUCTIONS AND REMOVALS FROM

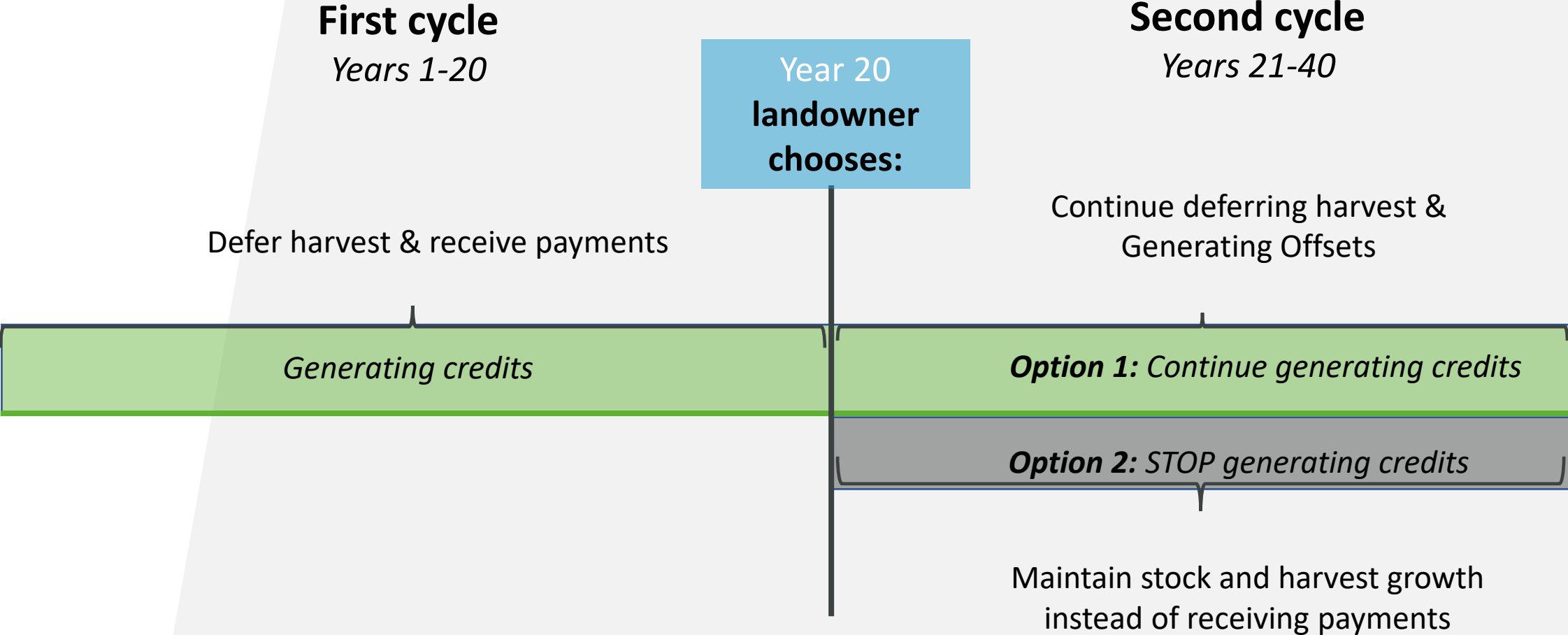
**SMALL NONINDUSTRIAL PRIVATE
FOREST LANDOWNERS**

VERSION 1.0

Required to report:

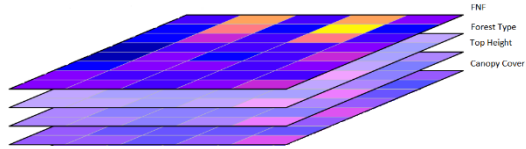
- Bi-annual report on project status
- Natural disturbance events
- Harvests on sites outside the project area

How the crediting cycles work



BIG PICTURE WORKFLOW

1. Build CORE baselayer



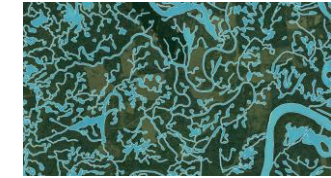
2. Get and grow relevant FIA data



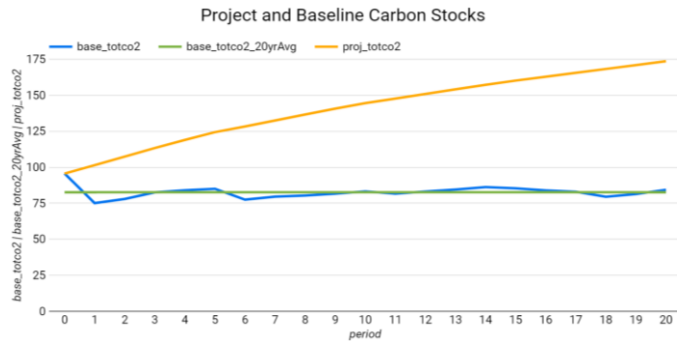
3. Calculate uncertainty

$$S_h^2 = \frac{1}{N_h - 1} \sum_{i=1}^{N_h} (Y_{hi} - \bar{Y}_h)^2$$

4. Incorporate management restrictions (SMZ, RFL, Disturbances)



6. Calculate ERT's



5. Build baseline and project scenarios





AFF is a non-profit, mission-driven organization focused on partnering with private landowners to unlock the power of America's forests to fight climate change.



American
Forest
Foundation



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History of Partnerships

Integrity of Corporate Partners

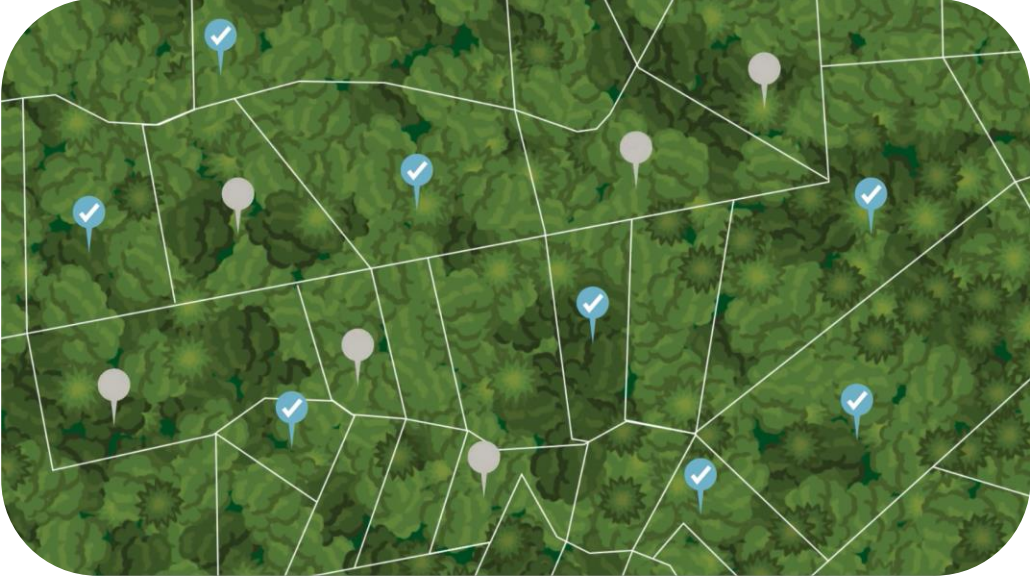
Quality of Carbon Credits

Family Forest Carbon Program

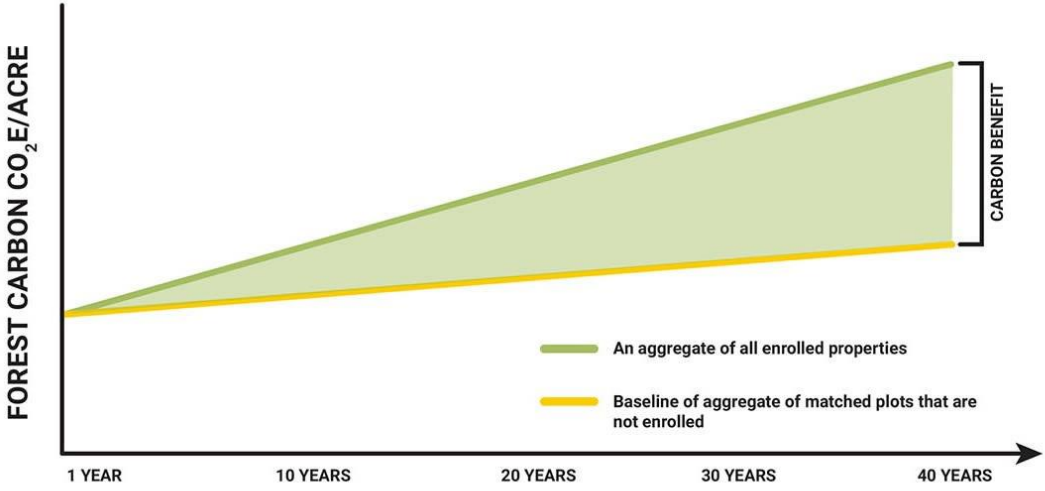
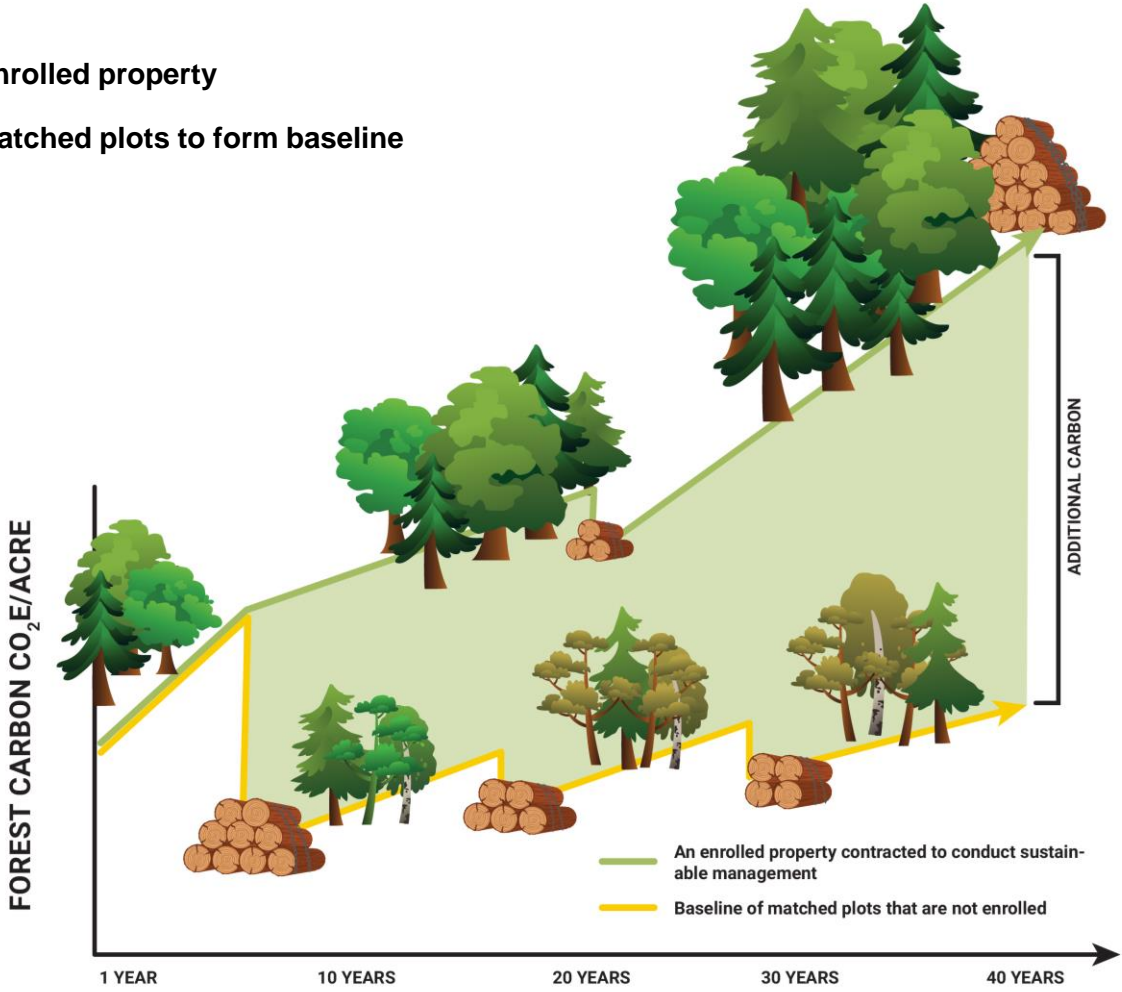


American
Forest
Foundation

A first-of-its-kind, innovative carbon accounting methodology

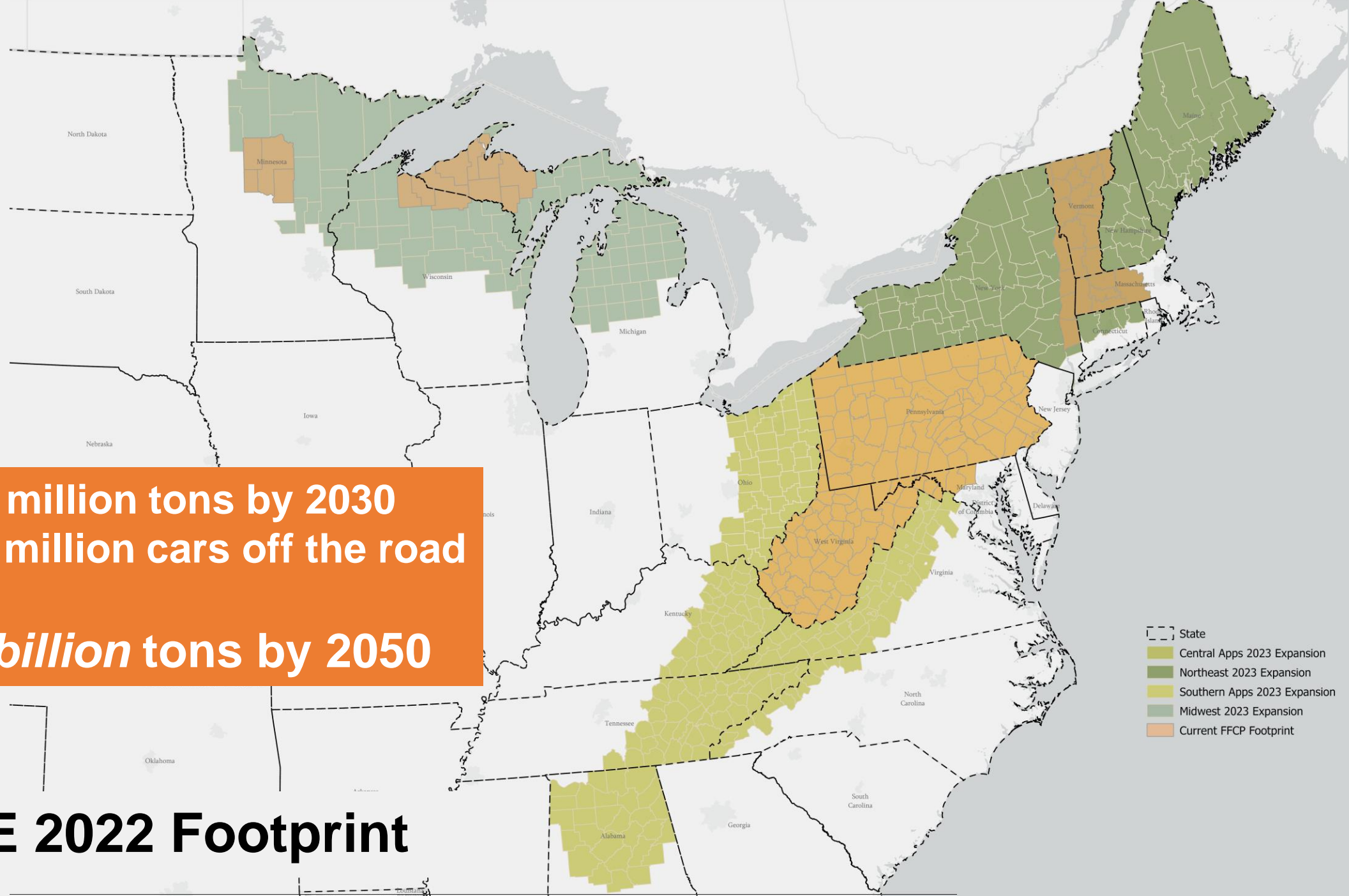


- Enrolled property
- Matched plots to form baseline



50 million tons by 2030
11 million cars off the road
1 billion tons by 2050

YE 2022 Footprint



Private Sector Demand



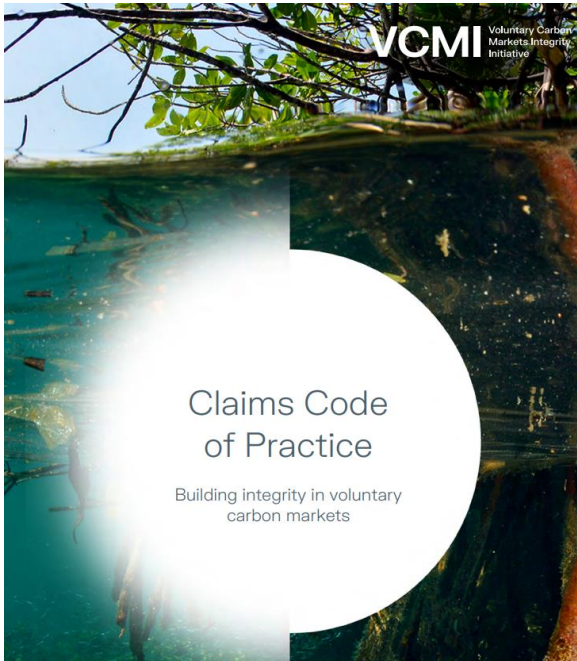
<https://sciencebasedtargets.org/>



Voluntary Carbon Markets Integrity Initiative (VCMI)

The primary purposes of the VCMI Claims Code are twofold:

- To provide clear requirements, recommendations, and supporting guidance to companies and other non-state actors on when they can credibly make voluntary use of carbon credits as part of their near-term emissions reduction objectives and long-term net-zero commitments; and
- To guide the associated claims that they can make regarding the use of those carbon credits.



Integrity Council for the Voluntary Carbon Market (ICVCM)

The goal of ICVCM is to create integrity on the supply side of the deal to ensure that the product it is offering is legitimate.



THE CORE CARBON PRINCIPLES

The CCPs are a set of interlinked principles to define a threshold standard to ensure integrity in the voluntary carbon market.

EMISSIONS IMPACT

1. Additionality
2. Permanence
3. Robust quantification of emission reductions and removals
4. No double counting

GOVERNANCE

5. Effective governance
6. Tracking
7. Transparency
8. Robust independent third-party validation and verification

SUSTAINABLE DEVELOPMENT

9. Sustainable development benefits and safeguards
10. Contribution to net zero transition

Carbon Credit Rating Agencies

Evaluating the quality and risks of carbon projects

- BeZero - <https://bezerocarbon.com/>
- Sylvera - <https://www.sylvera.com/>
- Calyx Global - <https://calyxglobal.com/>



“The answer to the global climate crisis is carbon pricing.” - Kurt Vandenberghe, the European Commission’s Directorate-General for Environment (DG ENV)

Resources

Oregon Climate Change Information:

Oregon Global Warming Commission - <https://www.keeporegoncool.org/>

Oregon Department of Energy - <https://www.oregon.gov/energy/energy-oregon/Pages/Climate-Change.aspx>

Oregon Department of Forestry - <https://www.oregon.gov/odf/forestbenefits/pages/climate-change.aspx>

Carbon Registries and Methodologies:

American Carbon Registry: <https://americancarbonregistry.org/>

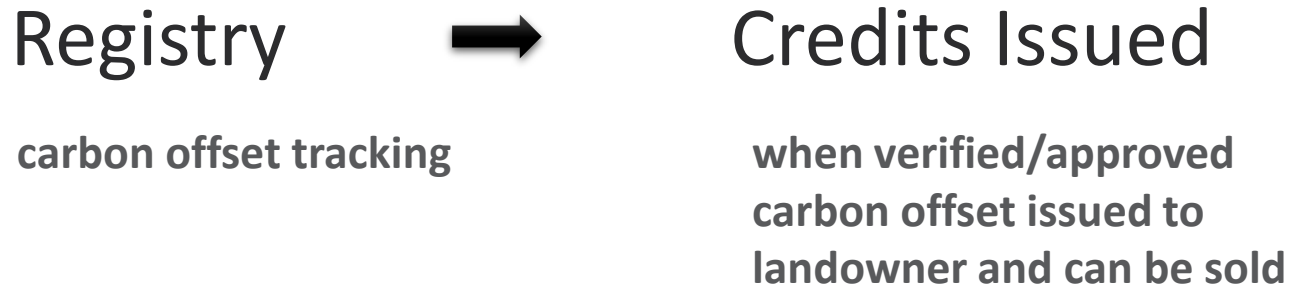
Climate Action Reserve: <https://www.climateactionreserve.org/>

VERRA (Verified Carbon Standard): <https://verra.org/programs/verified-carbon-standard/>

Family Forest Carbon Program: <https://familyforestcarbon.org/>

Voluntary Markets:

Ecosystem Marketplace - <https://www.ecosystemmarketplace.com/>





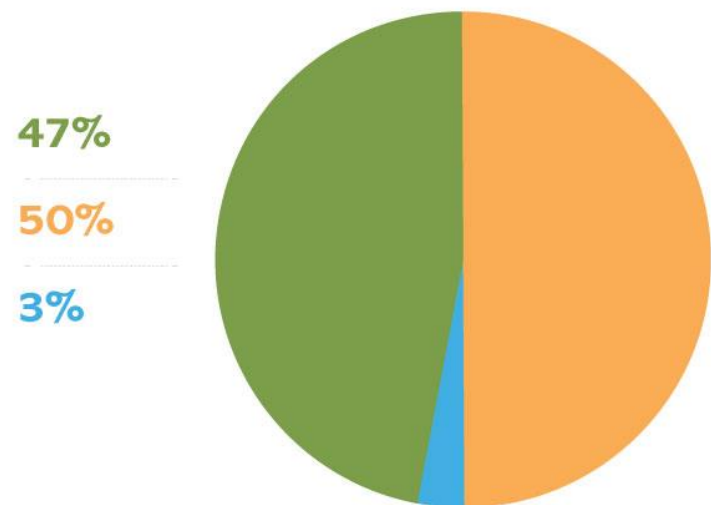
Voluntary Carbon

- American Carbon Registry (ACR)
- Climate Action Reserve (CAR)
- Gold Standard
- VERRA's Voluntary Carbon Standard (VCS)

Regulated Carbon

- California Air Resources Board (CARB) – Cap & Trade
- Washington Department of Ecology – Cap & Invest
- Regional Greenhouse Gas Initiative (RGGI) (no forestry protocol)

Oregon total land area (acres)



FORESTLAND 29,656,000

NONFOREST LAND 31,826,800
(urban, cropland, range, etc.)

WATER AREA 1,807,600

Total government	18,987,000	64%
Large private landowners (>= 5,000 acres)	6,487,000	22%
Small private landowners (<5,000 acres)	3,702,000	12%
Total private	10,189,000	34%
Native American tribal forestland	480,000	2%
TOTAL FORESTLAND, all owners	29,656,000	100%

<https://oregonforestfacts.org/sites/default/files/inline-images/Total-land-area-22.jpg>

Oregon **forests contain** on the order of **3.2 billion metric tons of carbon**.

The carbon accumulation from **growth of live trees** has been approximately **90.2 ± 2.4 MMT CO₂e/year from all forests in Oregon**. After accounting for the amount of carbon removed by harvest (-34.8 ± 4.7 MMT CO₂e/year) and mortality from all causes (-25.3 ± 1.7 MMT CO₂e/year) the **net accumulation of carbon in live trees is** approximately **30.1 ± 5.7 MMT CO₂e per year**.

Oregon Forests are a Net Sink of carbon.

MMT – million metric tons

Source: *Oregon Forest Ecosystem Carbon Inventory: 2001-2016*

DEVELOPER PERSPECTIVE

Challenges in project development and you each handle them differently

- Brian – in a full service carbon developer world
- (some of my talking points re: challenges, don't necessarily have to include on slide)
 - Project maintenance
 - Growth and yield, active harvesting
 - Administration / organizational coordination
 - Protocol / guidance updates
 - General
 - Bottlenecks: verification, ARB review
 - Scalability
 - Technology
 - Verification / validation
 - Staffing / qualifications / experience
- David – in more of a consulting framework

BUYER PERSPECTIVE



- It appears to me that there is a predominance of bad press, both in the newspapers as well as academic journals
 - Brian – How has this affected the market or what/how Finite operates
 - David – We have seen a lot of watchdog/rating groups domestically and internationally

TAKING STOCK / LOOKING FORWARD

- What have we learned?
- How has that information been applied?
- What can we do to help?
 - Academia
 - Government