Opportunities for Forest Owners in the CA Offsets Program

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CA Forests and GHG Reduction Webinar Series

ARB forest project count

- 57 IFM projects listed
- 1 AC projects listed
- 8 Reforestation projects listed
- 16 have issued ARBOCs (as of April 8)

Compliance	5,563,609
Early Action	3,795,176
total	9,358,785

What is the forest protocol?

- Provides eligibility requirements for forest offset projects
- Lists additional requirements for projects
- Provides guidelines for measuring and monitoring (inventory)
- Provides guidance on how to establish baselines
- Provides quantification methodologies

Project types under protocol

- Improved Forest Management
  - Includes increasing retention, managing for growth, or managing in a way that maintains or increases stocks above a baseline.
- Reforestation
  - Includes reforestation of land either post disturbance, or after 10 years of no canopy. Economics are challenging.
- Avoided Conversion
  - Includes placing an easement on forest that has an appraised non-forest value of >40% forest value.

General protocol requirements

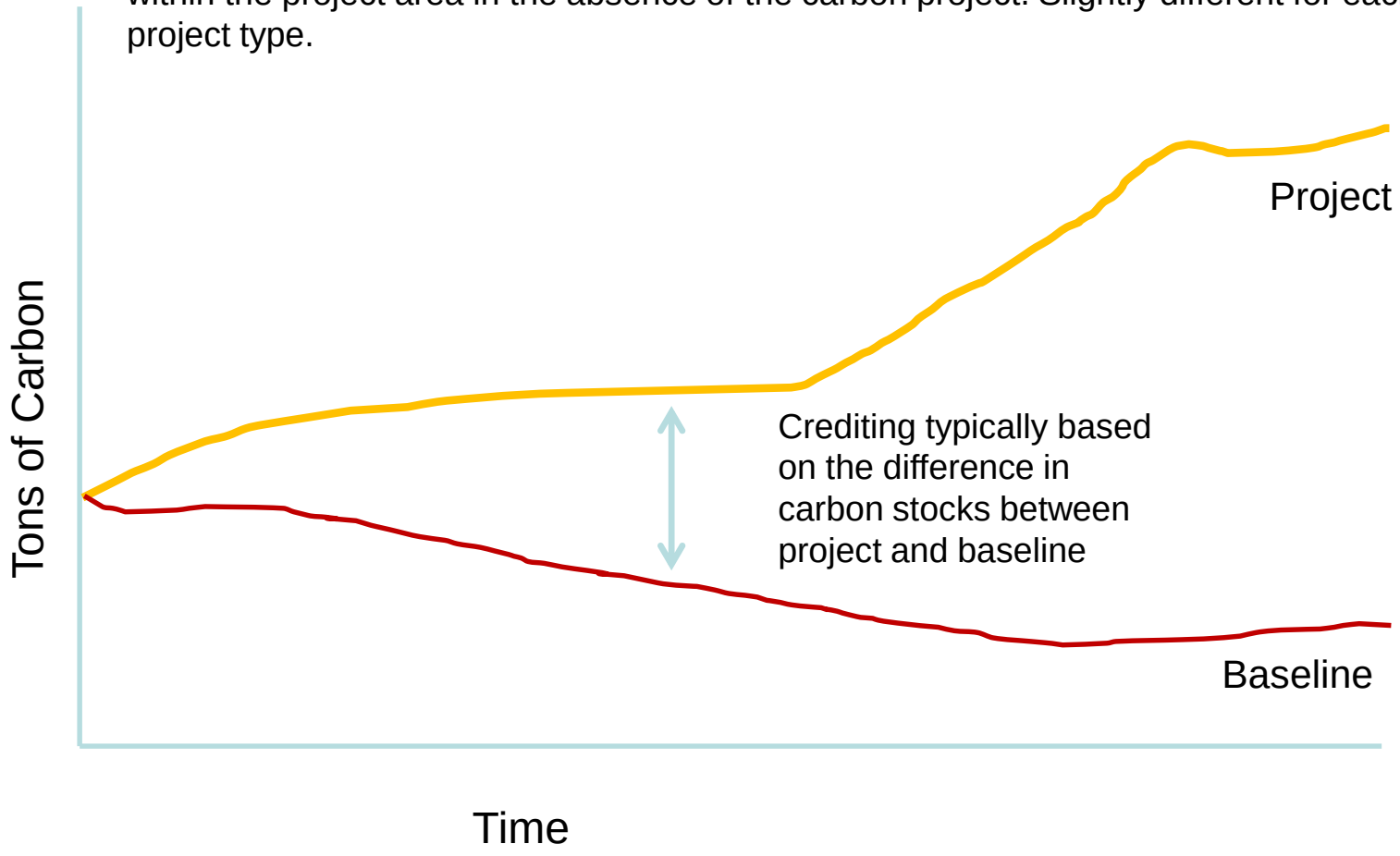
- Private and public (not federal)
- Projects anywhere in continental US (southern AK in late 2015/HI in future)
- 25 year crediting period + 100 year M&R&V
- Forest projects must contribute to buffer account
- No broadcast fertilization

General protocol requirements

- **Sustainable Forest Management**
  - Third party cert (FSC, ATF, SFI), gov't agency program, ***or*** uneven-aged (no less than 40% cc)
  - **Natural Forest Management**
  - Age class (no more than 40% in ages <20yrs)
  - Native species (at least 95%)
  - Species composition (no single spp prevalence can exceed published % in project's assessment area)
  - Maintain lying dead wood

Setting a Baseline-a requirement for all carbon projects

Baseline: the counterfactual or business as usual scenario that would have occurred within the project area in the absence of the carbon project. Slightly different for each project type.



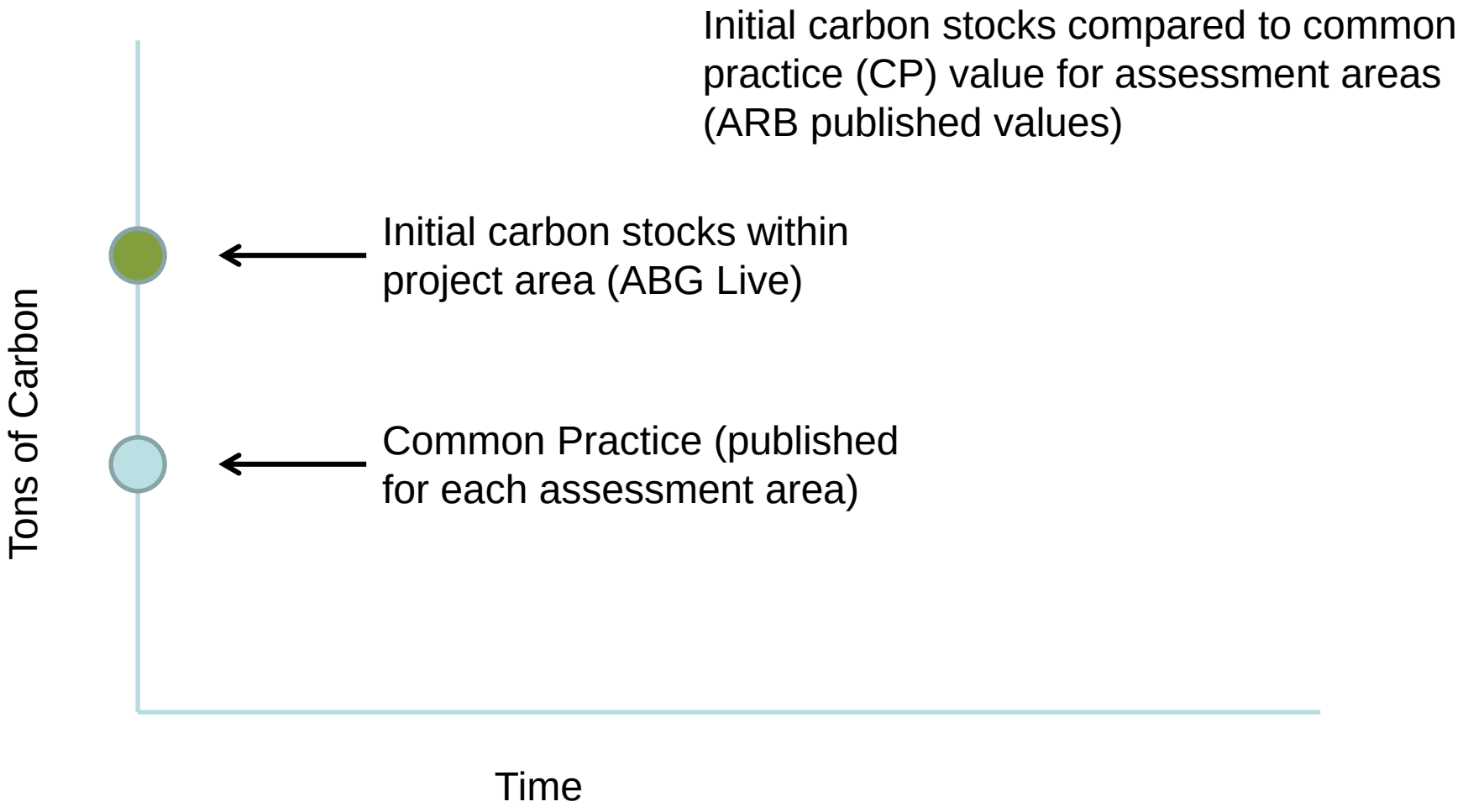
Improved Forest Management-Private Land

- Can be a portion of total landholding
- High stocked areas tend to pencil out better
- Can include increasing rotation length, removing competing vegetation, thinning to promote long term growth and stocking or changes in regeneration prescriptions.
- Forest owners may already be implementing strategies that would be considered eligible.

Improved Forest Management

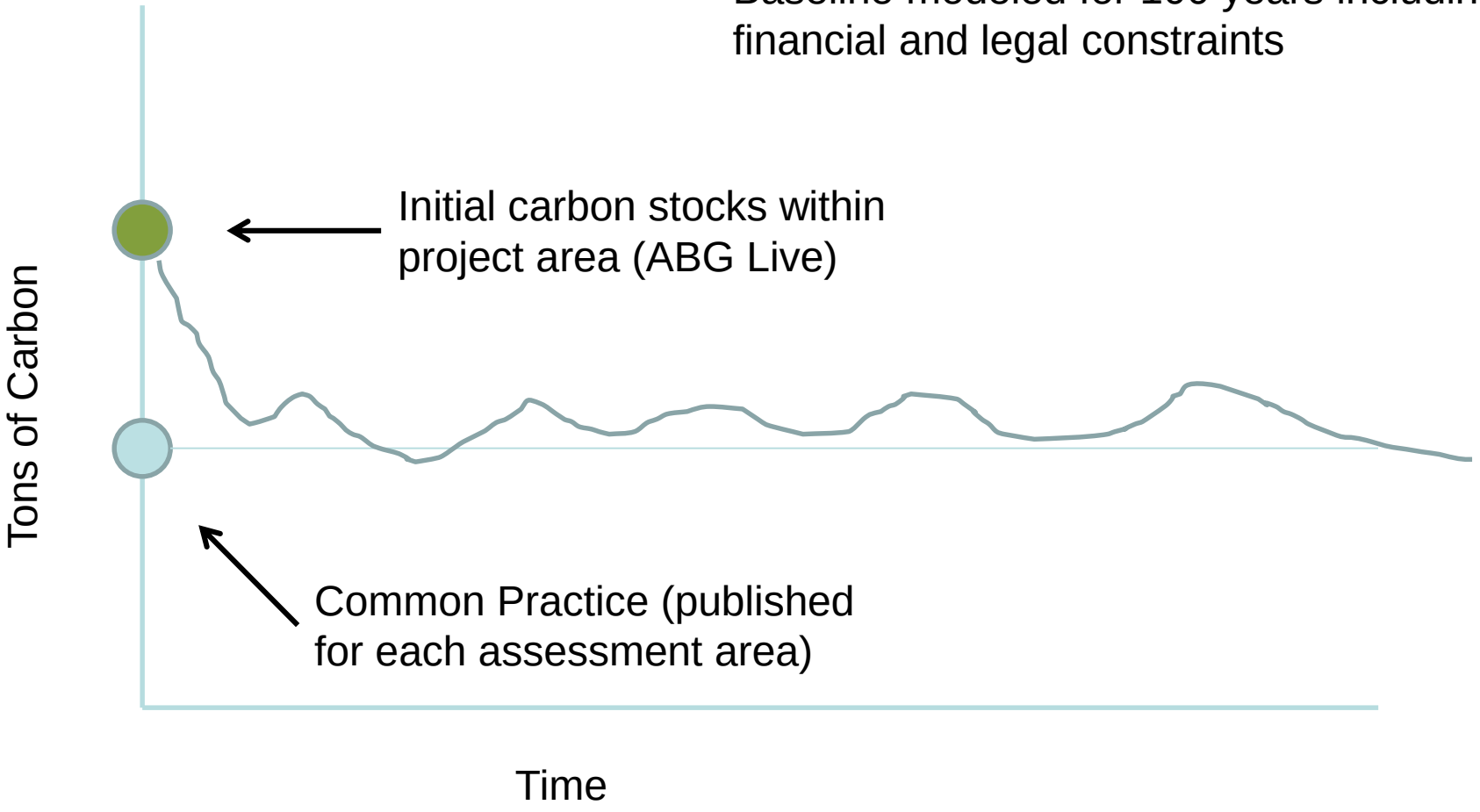
- Initial carbon stocks compared to common practice (CP) value for assessment areas (ARB published values)
- If above CP then baseline is governed by CP (can't go below)
- If below CP baseline is either same as initial stocks or higher (compared to past stocking, LMU stocking, etc)
- Baseline is the counterfactual 100 year scenario for harvesting in the project area, taking into account all financial (e.g., access, markets) and legal constraints (e.g., FPRs, easements, SHAs)

Improved Forest Management Baseline

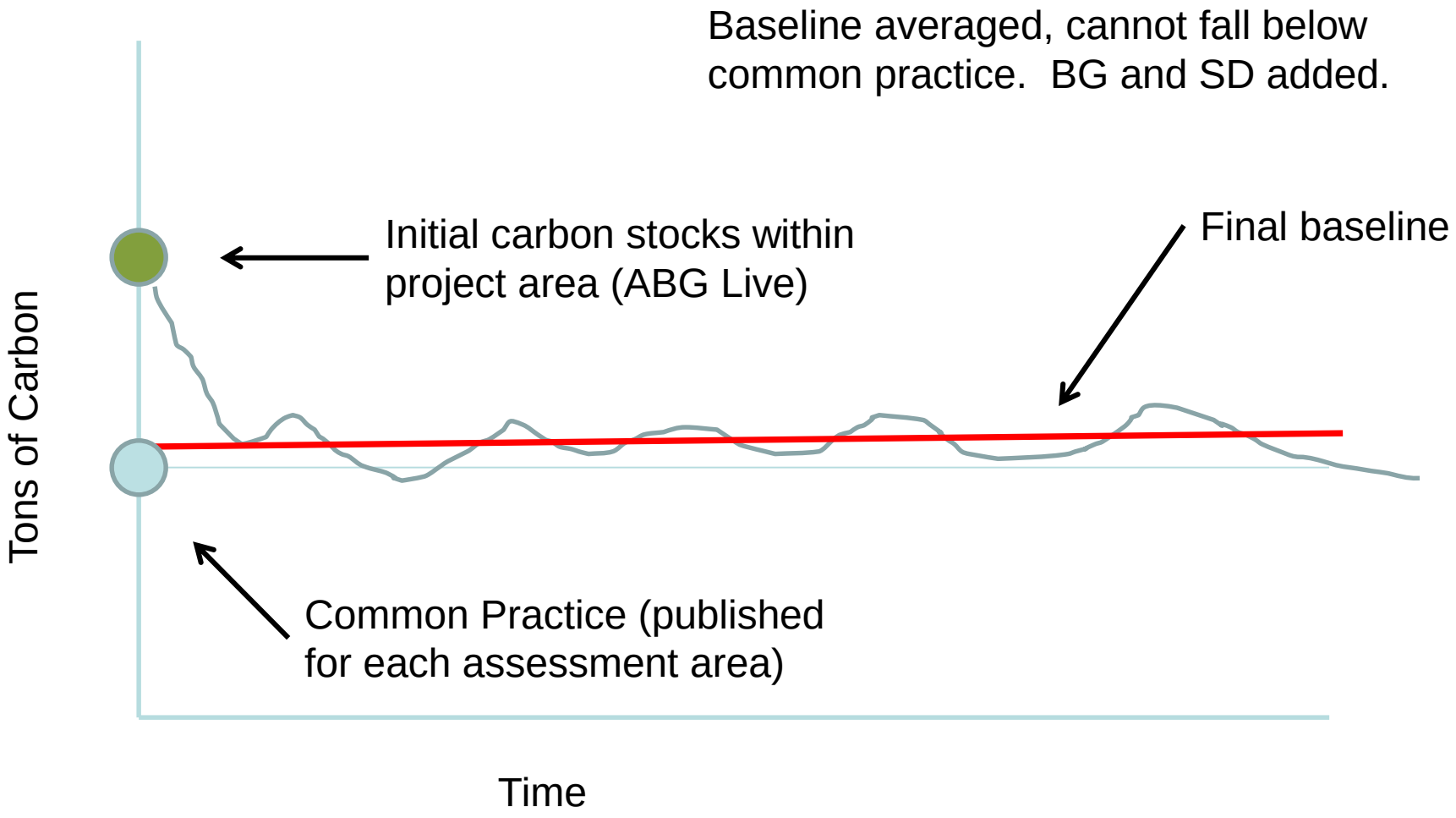


Improved Forest Management Baseline

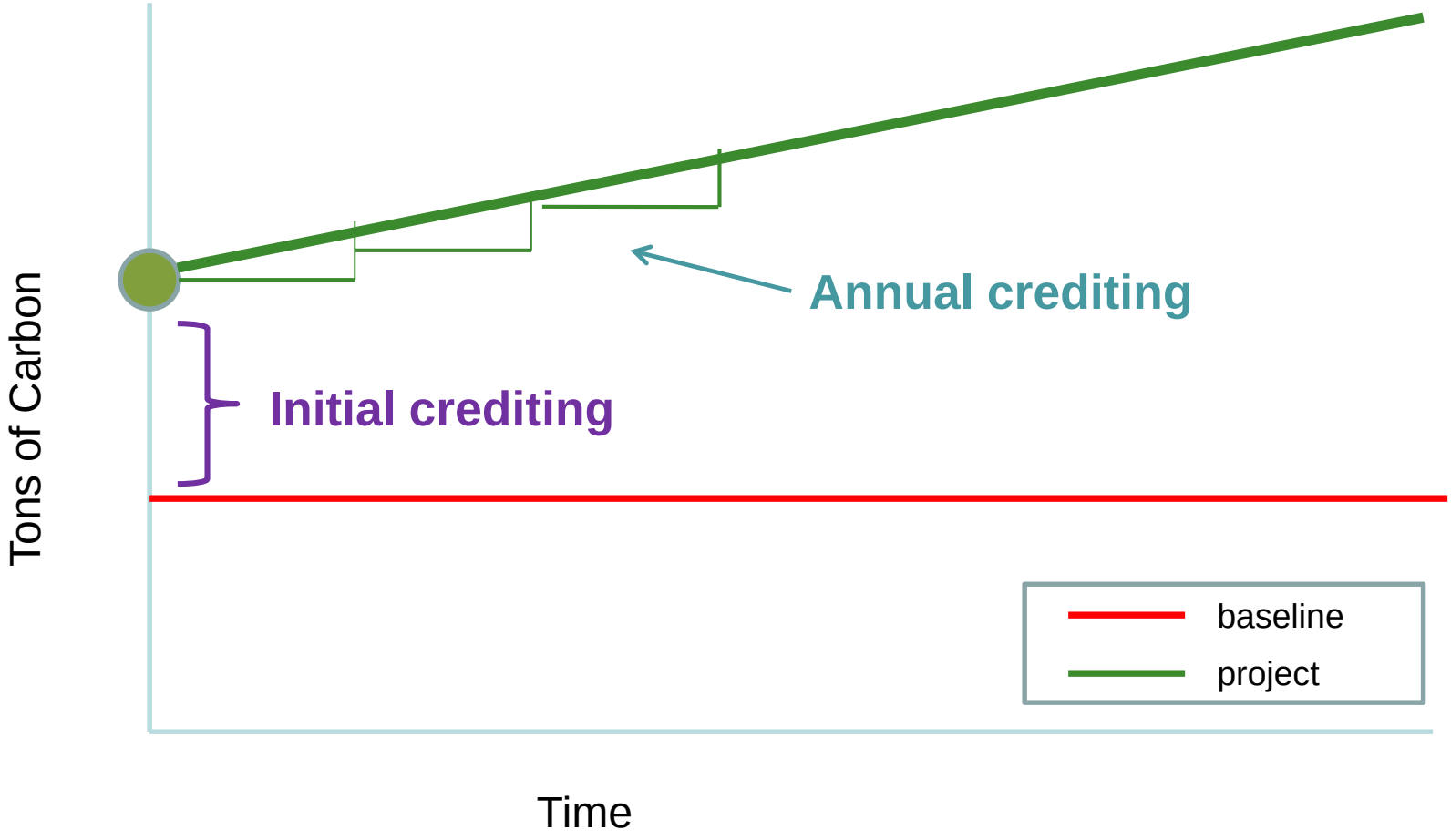
Baseline modeled for 100 years including financial and legal constraints



Improved Forest Management Baseline



Improved Forest Management Crediting



Permanence

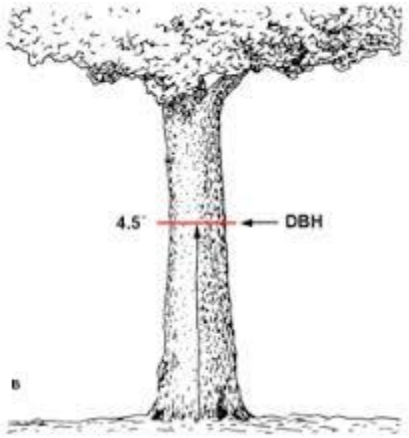
- Reversals can occur, releasing carbon that has been sold back into atmosphere
- Intentional reversal: the land owner is liable to compensate
- Unintentional reversal: the buffer account covers reversal

Buffer Account

- All forest projects must contribute to the buffer at each credit issuance
- Risk tool used to determine % contribution
- Ranges from 10.5 – 19.2%
- Risk categories include; financial failure, conversion, over-harvesting, social, wildfire, disease/insect, other catastrophes

Inventory

- Required to quantify carbon stocks in standing trees (live and dead)
- No plot can be older than 12 years
- Sampling error ≤5% or confidence deduction is applied
- DBH of all trees ≥5” (can be less)
- Heights (all are recommended)



Reporting and Verification

- Project reports must be submitted to Registry and ARB at each reporting period
- Full verification required at least every 6 years.
- Verifications can be less intensive in the interim years
- Verifier must rotate every 6 years (or every time a full verification is conducted)

Miller Forest IFM

- Located in Humboldt County
- Project Area 1,585 acres
- Comprised of Doug fir, PO Cedar, P Madrone, oaks, manzanita.
- Stocking was well above common practice
- Low level of harvesting planned

Hanes Ranch IFM

- Located in Mendocino County
- Project area 8,860 acres
- Comprised of Redwood, Doug Fir, hardwoods
- Initial stocks well above common practice
- Goal to bring all stands into selection management over time

Challenges

- Legal obligation to 100 year MRV
- Inventory costs
- Verification costs
- Invalidation risk
- Unclear post-2020 market

Opportunities

- Alternate revenue stream for high stocked forests, until 2020, and potentially beyond.

Thank you!

For further information please contact:

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