

Forest Projects with the Climate Action Reserve



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Which Protocol?

- The Reserve is expecting to be accredited by CARB in the coming weeks
 - At that time we will begin registering projects under the CARB forest protocol
- For now, all forest projects are registered under the Reserve forest protocol
- What's the difference between them?
 - 98% the same. I will note key differences.
 - Projects registered under the Reserve protocol must undergo a “desk verification” by a CARB verifier.
 - At this point, most new projects are waiting for the new protocol to avoid additional costs.

North Carolina Forest Projects



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Project Name	Location	Project Type	Acreage
Noles South	Washington County	Avoided Conv.	325
Pungo River	Washington County	Avoided Conv.	704
Privateer Farm	Cumberland County	Avoided Conv.	2112
Privateer Farm	Cumberland County	Reforestation	430
Privateer Farm	Cumberland County	Reforestation	1118
Pocosin Lakes	Tyrrell County	Avoided Conv.	1876
Noles North	Washington County	Avoided Conversion	282
B&B Farms	Washington County	Avoided Conversion	150
Alligator River	Hyde County	Avoided Conversion	2000

South Carolina Forest Projects



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Project Name	Location	Project Type	Acreage
Willow Bend 1	Horry County	Avoided Conv.	670
Willow Bend 2	Horry County	Avoided Conv.	604
Middleton Place	Dorchester Cnty.	Avoided Conv.	3732
Francis Beider	Orangeburg Cnty.	Improved Mgmt.	6127
Ravenwood 1	Colleton County	Improved Mgmt.	251
Ravenwood 2	Colleton County	Improved Mgmt.	347
Hinson Haulover	Georgetown Cnty.	Improved Mgmt.	1362
Groton	Near GA border	Improved Mgmt.	5003
Brosnan Forest	Near Charleston	Improved Mgmt.	12,488



Protocol Major Elements

- Applies Throughout the United States
 - Private and Public Lands (excludes federal)
- Three Project Types:
 - Reforestation
 - Improved Forest Management
 - Avoided Conversion
- Standardized Baseline and Accounting Methods
- Requirement for Permanence (100 years)
 - Not for everybody, projects require a long-term vision for the land
- Requirements for Sustainability
- Reserve Rules Allow Aggregation for Small Landowners



Start Date

- Start date is defined by change in management practice that can be demonstrated to a verifier.
- Examples:
 - Change in ownership
 - Hire a consultant
 - File a harvest plan with a government agency
 - Record a conservation easement
- Reserve Protocol: Project must be submitted within 6 months of start date
- CARB Protocol: Start date can be any time after January 1, 2007



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Crediting Period

- CARB Protocol: 25 years, renewable
- Reserve Protocol: Up to 100 years



Additionality

- Because of the carbon finance, the project developer is changing behavior, going beyond standard practice
 - Regulatory additionality
 - Performance standard
- Standardized approach
 - Additionality is based on how similar forests are being managed, rather than guessing how a particular landowner would act



Forest Project Types

- **Reforestation**
 - Less than 10% canopy cover for at least 10 years, or following a significant natural disturbance that has removed at least 20% of the trees
- **Avoided Conversion**
 - Remove threat of conversion to non-forest use and ensure continued forest cover by conservation easement or dedication to a government agency
- **Improved Forest Management**
 - Activities that increase forest-based sequestration and/or decrease emissions



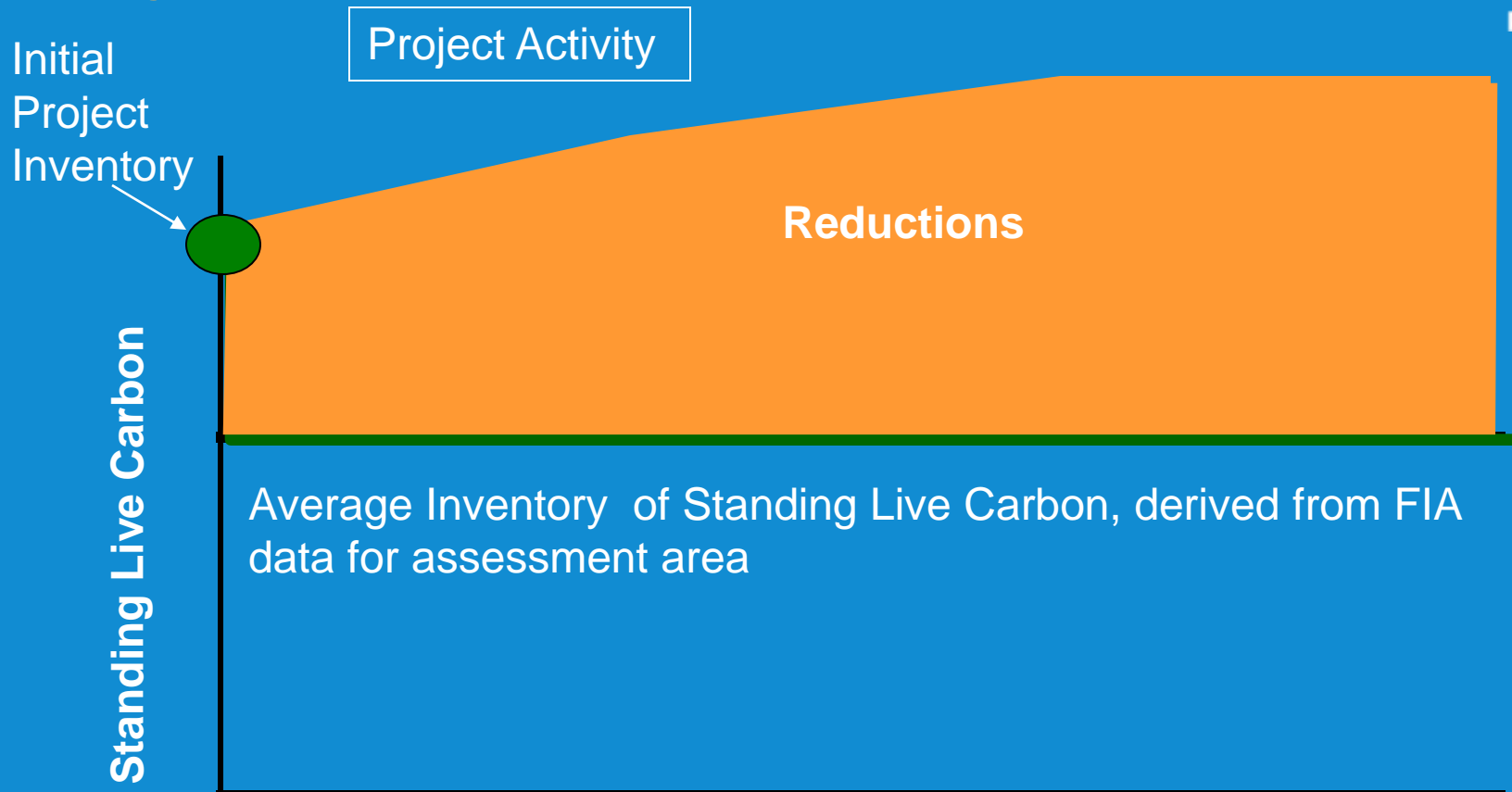
Forest Project Baselines

- Credits Are Issued for Exceeding Baseline Carbon Storage
- Baselines Are Established for 100 Years (100-Year Crediting Period)
- Baselines must incorporate all legal requirements, including any requirements to:
 - Reforest
 - Buffer watercourses
 - Protect for endangered species
 - Manage under a binding deed restriction or conservation easement
- Other Requirements Depend on Project Type

Improved Forest Management Projects



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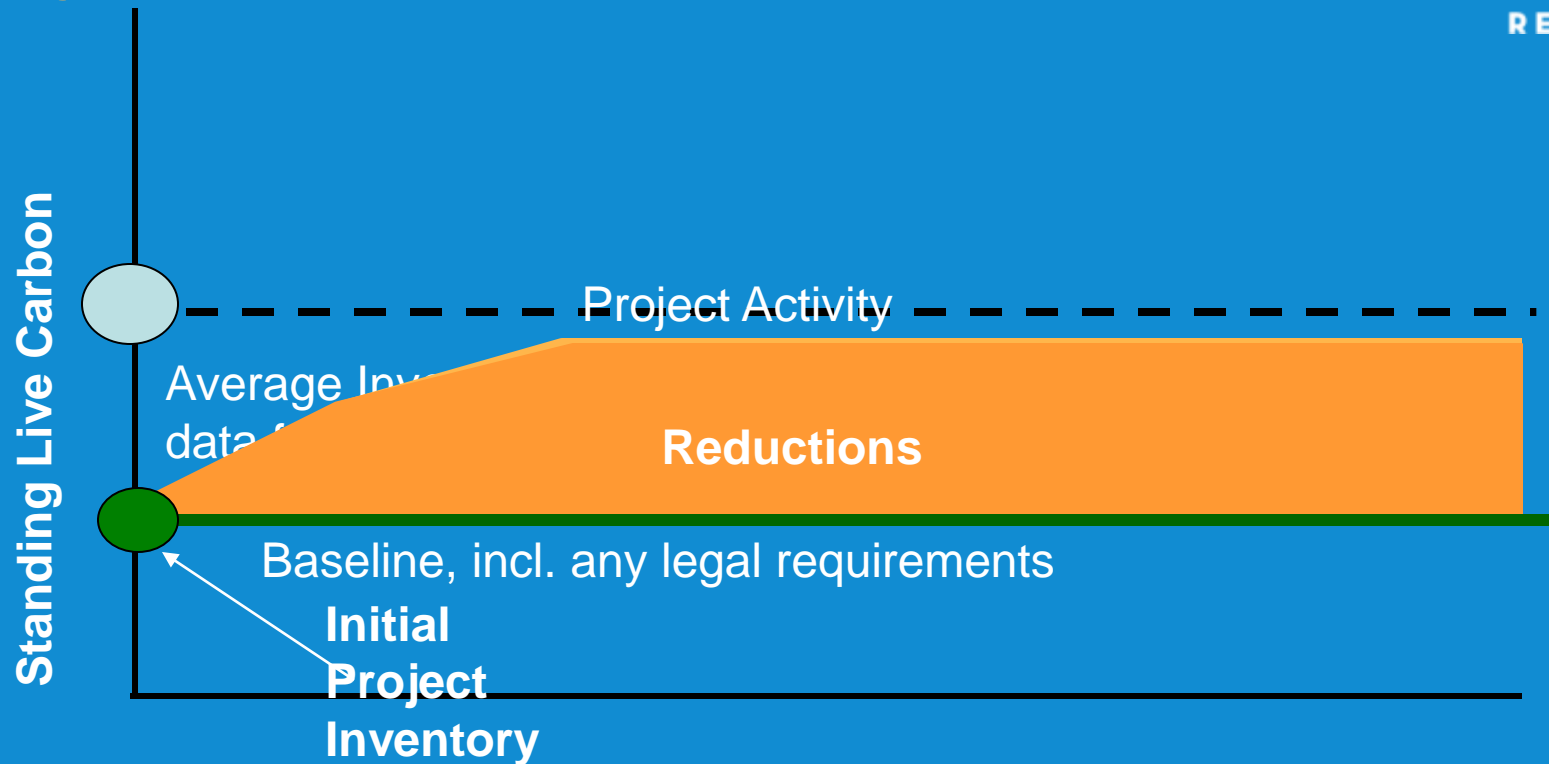


- In this scenario, the project will generate credits for both stock retention and growth

Improved Forest Management Projects



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- In this scenario, the project will generate credits for growth only



Avoided Conversion Projects

- Projects must demonstrate:
 - Suitability of project area for conversion
 - Legal permissibility of conversion
 - Significant risk of conversion, as determined by disparity in land-use value according to an appraisal
- Baseline determined by likely effects of conversion, as substantiated by an appraisal and similar regional practices



Reforestation Projects

- Projects allowed only where:
 - There has been a significant natural disturbance (and the landowner is not required by law to reforest); or
 - Land has been out of forest cover for at least 10 years
- For projects following natural disturbance, economic evaluation required to determine that baseline is not reforestation
- Baseline defined by modeling carbon stocks without reforestation activity



Inventory

- An inventory of carbon stocks is required at beginning of project
- We do not require any particular methodology
- The target sampling error for inventory samples is +/- 5 percent of the mean at the 90 percent confidence level
 - Above this sampling error, you must take a deduction
- Typically done with sample plots, but some project developers have been working on remote sensing and satellite imagery



Accounting for Leakage

- Leakage is assessed differently for each project type:
 - **Reforestation:** Standard factors used for displacement of crop or grazing land
 - **Avoided Conversion:** Standard conversion factor used
 - **Improved Forest Management:** Standard 20% market leakage factor used (reduced harvest of 1 ton → 0.2 tons leakage)
- Leakage factor is assessed annually and deducted from the calculations of net carbon sequestration and avoided emissions

Verification



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- Third-Party Verification Required
 - Site-visit required at first verification and every 6 years thereafter
 - Optional desk-review verification allowed during interim years
- Verifiers must be accredited and approved by the Reserve or CARB
- Credits issued based on difference between actual and baseline carbon stocks



Permanence

- All credited carbon must be maintained for 100 years from the time of credits are issued
- **Unavoidable Reversals** are compensated from Buffer Pool administered by Reserve or CARB (e.g., fire, wind)
- **Avoidable Reversals** must be compensated by Forest Owner
 - Must surrender credits equal to carbon reversed
- Compensation of reversals must be forest credits
- If planned harvesting will result in a reversal, plan ahead so that you have enough credits to cover it



Permanence

- Under Reserve protocol, permanence requirements are enforced via legal agreement between forest owner and the Reserve
 - Legal agreement is recorded on title to inform potential purchasers
 - Forest owner must seek assignment of the agreement to subsequent owner(s)
- Under CARB protocol, forest owner agrees to be bound by California regulation
- Agreement specifies that projects must retire credits equal (with penalties in some cases) to the total amount issued in the event of project termination

Sustainability



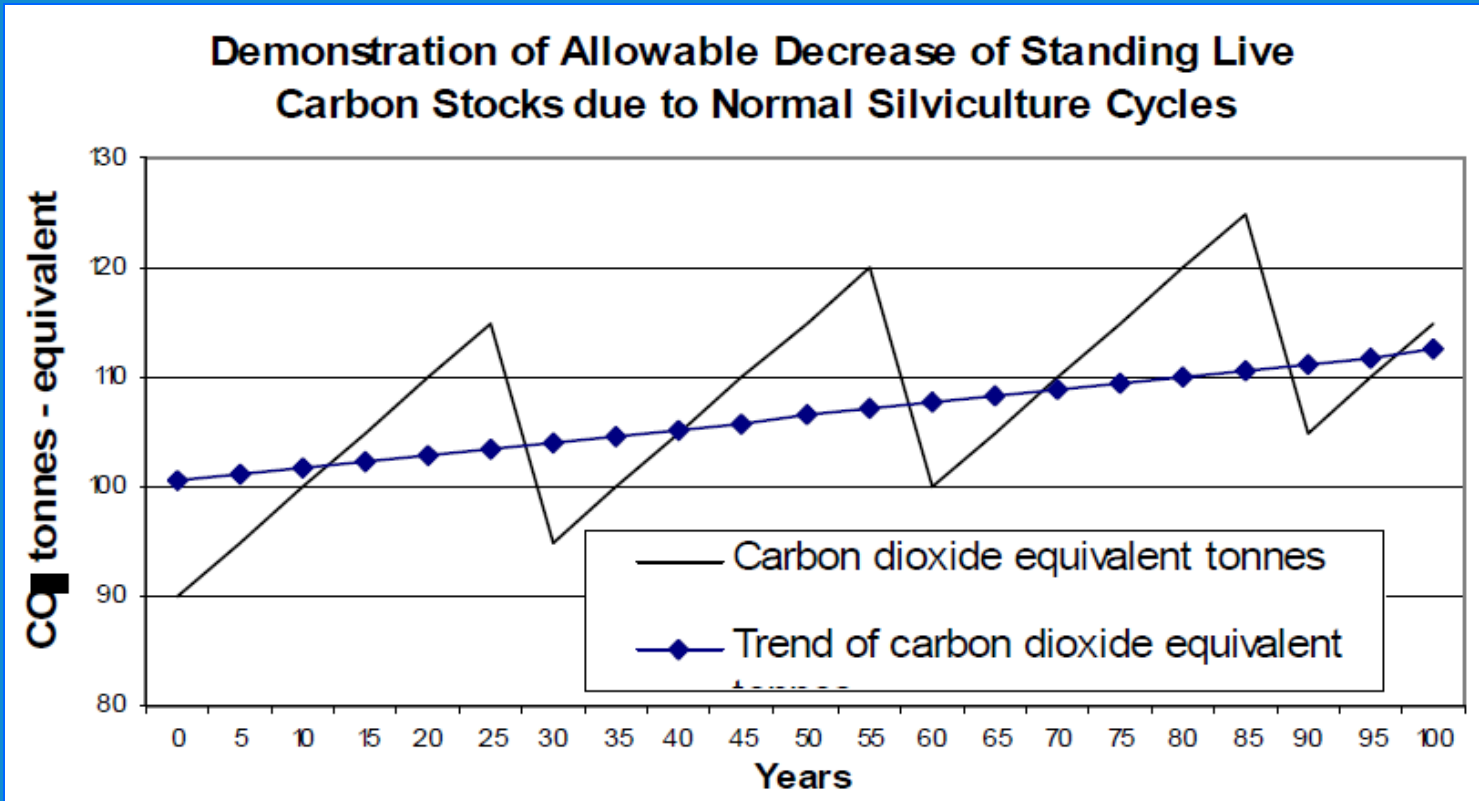
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- Projects must:
 - Demonstrate long-term sustainability
 - May be met with SFI, FSC, or Tree Farm certification (terms of certification must require verification over time)
 - May have a state-approved long-term management plan
 - Promote and maintain a diversity of native species comprised of multiple ages
 - Limit even-age management to stands of no more than 40 acres



Maintaining Carbon Stocks

- Decreases to Standing Live Carbon from Normal Silvicultural Cycles





Maintaining Carbon Stocks

- Onsite standing live carbon must be maintained or increased; no decreases over any consecutive 10-year period
 - Exceptions are when the decrease is:
 1. Necessary to mitigate wildfire, insect, or disease risks
 2. Associated with planned balancing of age classes as detailed in long-term sustainable management plan
 3. Part of normal silvicultural activities for forest projects of less than 1,000 acres



Aggregation

- Reduces inventory and verification costs for smaller landowners
 - Applies to projects < 5,000 acres
- Reduced inventory requirements
 - Higher sampling error allowed in projects, allows for fewer plots and less costly inventory
- Less frequent verification schedule
- Projects still must sign legal agreement with Reserve and follow all other requirements of the Forest Project Protocol
- CARB does not currently have aggregation rules



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For Questions or Assistance

- Full Information Available on Our Website
 - www.climateactionreserve.org
- Contact the Reserve
 - Call us at (213) 891-1444
 - Or email questions to: policy@climateactionreserve.org
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