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

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Location</th>
<th>Project Type</th>
<th>Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noles South</td>
<td>Washington County</td>
<td>Avoided Conv.</td>
<td>325</td>
</tr>
<tr>
<td>Pungo River</td>
<td>Washington County</td>
<td>Avoided Conv.</td>
<td>704</td>
</tr>
<tr>
<td>Privateer Farm</td>
<td>Cumberland County</td>
<td>Avoided Conv.</td>
<td>2112</td>
</tr>
<tr>
<td>Privateer Farm</td>
<td>Cumberland County</td>
<td>Reforestation</td>
<td>430</td>
</tr>
<tr>
<td>Privateer Farm</td>
<td>Cumberland County</td>
<td>Reforestation</td>
<td>1118</td>
</tr>
<tr>
<td>Pocosin Lakes</td>
<td>Tyrrell County</td>
<td>Avoided Conv.</td>
<td>1876</td>
</tr>
<tr>
<td>Noles North</td>
<td>Washington County</td>
<td>Avoided Conversion</td>
<td>282</td>
</tr>
<tr>
<td>B&amp;B Farms</td>
<td>Washington County</td>
<td>Avoided Conversion</td>
<td>150</td>
</tr>
<tr>
<td>Alligator River</td>
<td>Hyde County</td>
<td>Avoided Conversion</td>
<td>2000</td>
</tr>
</tbody>
</table>
## South Carolina Forest Projects

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

Initial Project Inventory

Project Activity

Standing Live Carbon

Average Inventory of Standing Live Carbon, derived from FIA data for assessment area

Reductions

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

- 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

- 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 requirement 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
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
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

• Joel Levin
  – jlevin@climateactionreserve.org
  – (213) 891-6927