Forest Protocol
Protocol Update Effort
Goals and Objectives

- CAR adopted the Forest Protocols in 2005
- CAR Board directed staff in 2007 to:
  - Initiate a stakeholder process to develop additional approaches and reduce barriers for participation
    - for public lands
    - for private commercial forests not associated with a land trust
    - for private non-timber forests (oak woodlands)
  - Improve protocol clarity, accuracy, conservatism, environmental integrity, and cost effectiveness
Protocol Update Effort
Goals and Objectives

- Update process also an opportunity to:
  - Reflect advances in science and methodology
  - Improve guidance for calculations
  - Improve the efficiency and cost-effectiveness of methods
  - Develop applications for entire United States
Forest Protocol Workgroup

• Group size chosen to foster dialogue and be effective

• Comprised of:
  • Private landowners, large and small
  • Public landowners
  • Environmental organizations
  • Scientists/Academics
  • Regulators
  • Verifiers
Public Process

• Work Group Meetings
  • Every 3 weeks in day-long sessions
  • Meetings open to public observers

• Public Review and Comment
  • Three separate drafts (12/08, 4/09, and 6/09)
  • Two specific issue documents (HWP – 2/09 and PIA – 6/09)

• Four public workshops (7/08, 12/08, 2/09, 4/09, 8/09)
Results

New Climate Action Reserve standard brings US forests into the carbon market

Forest Project Protocol
Version 3.0
September 1, 2009
What is a Carbon Offset Project?

- A carbon project is a focused activity that has a climate benefit.

- A forest project either *increases sequestration* or *decreases emissions*.

- A project must be:
  - Additional
  - Measurable
  - Verifiable
  - Above Business as Usual
  - Permanent
Key Components of Offset Projects

• Additional
  • project is yield a real climate benefit, above and beyond ‘business as usual’

• Measurable
  • A project must be able to correctly calculate the benefit it is providing to ensure that it is real.

• Verifiable
  • Project stocks can be verified as accurate

• Business as Usual
  • What would have happened in the absence of the project

• Permanent
  • The project reductions must be equivalent (to the atmosphere) to the emissions the project is offsetting
The CAR Forest Protocol

• Accounting Guidance for the Key Components

• Also Addresses:
  • Eligibility Requirements
  • GHG Assessment Boundaries
  • Quantification
  • Co-benefits
CAR Forest Project Types

- Improved Forest Management
  - Activities that increase forest-based sequestration and/or decrease emissions

- 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
  - Removing a significant conversion threat to non-forest use and dedicating the forest to continued forest cover.
Crediting and Additionality

- 100-year crediting period
- All projects must exceed all legal requirements, including any requirements to:
  - Reforest
  - Buffer watercourses
  - Protect for endangered species
  - Manage under a binding deed restriction or conservation easement
- Voluntary agreements that can be rescinded are not considered legal requirements
Improved Forest Management
Baseline

• Project-level modeling conducted to determine a baseline that:
  • Exceeds legal requirements
  • Is financially viable
  • Does not follow a period of rapid depletion
  • Does not decline below regional measures of ‘Common Practice’

• Protocols provide standardized guidance for modeling

• Project stocks above baseline are credited
Improved Forest Management Baseline

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

Initial Project Inventory

Project Activity

Reductions
Improved Forest Management Baseline

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

Baseline

Initial Project Inventory

Reductions
Public Lands Forest Management Baseline

• Quantification of baseline using an historic (10-year) review of:
  • Retention standards
  • Rotations
  • Other practices determined by statute, regulation, policy, and budgets

• The review provides the basis for forward modeling. Project stocks above forward-projected baseline are additional
Baseline for Avoided Conversion

- Baseline is based on likely effects of conversion as substantiated by an appraisal and similar regional practices.

- Other required criteria include:
  - Suitability of project area for conversion
  - Legal permissibility of conversion
  - Assessment of risk of conversion as determined by disparity in value from appraisal
Reforestation Baseline

- Baseline is simulated future characterization of carbon stocks if cover >10%, or narrative description if <10%

- Project allowed if project land base has undergone significant natural disturbance and the landowner is not required by law to reforest

- Economic evaluation required to determine that reforestation activity would not have otherwise happened
Risk-management: Leakage

• Each project type has its own worksheet that assesses the risk of leakage and provides a corresponding leakage risk factor

• This risk factor or leakage percent must be assessed annually and deducted from the calculations of net carbon sequestration or avoided emissions
Environmental Integrity

- Projects required to:
  - Live trees be maintained or increased over project life
  - Manage for diverse native trees with multiple age classes
    - Even age harvesting limited to 40-acre units
    - No more than 40% of project area can be in age classes less than 20 years
  - Demonstration of long-term sustainability
  - Manage for structural elements
    - Requirements for lying and standing dead wood
Managing for Permanence

• Permanence defined in protocol as ‘out of atmosphere for at least 100 years’

• Long Term Monitoring and Verification
  • Identifies impermanence or reversals

• Reversals (2 types) must be compensated
  • Unavoidable: fire, pests, disease, wind, etc.
  • Avoidable: over-harvesting, financial failure, project termination
Managing for Permanence

• Unavoidable Reversals compensated from Buffer Pool administered by Reserve
  • All projects contribute to pool based on risk
  • Risk (financial) reduced with qualified conservation easement or deed restriction or public ownership

• Avoidable Reversals compensated by Forest Owner
  • Surrenders CRTs (project or purchased) equal to CRTs reversed

• All compensation of reversals must be from forest CRTs
Managing for Permanence

- Project Implementation Agreement
  - Adherence to the protocol enforced by requiring forest owners to enter into a long-term contract with the Reserve
- Specifies remedies in the case of an “avoidable” (intentional) reversal
- Specifies that projects must retire CRTs equivalent (with penalties in some cases) to the total amount issued in the event of project termination
Managing for Permanence

- PIA Enforcement and Longevity Secured Through Requirement that:
  - counterparty seek assignment of PIA to subsequent forest owner
  - recording of notice of PIA on title to inform potential purchasers
Monitoring and Verification

- Initial 3rd party verification includes site visit
  - Subsequent annual monitoring reports can be verified.
  - Periodic (6-years) site verification

- Verified stocks above baseline are awarded CRTs
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