The California Climate Action Registry's Forest Protocols

Overview and Use of Models

Forestry/Agriculture
GHG Modeling Forum
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CALIFORNIA
Climate
ACTION
Registry

Forest Protocols

- Forest Sector Protocol (Appendix to GRP)
  - Reporting guidance for entity level reporting
- Forest Project Protocol
  - Reporting guidance for project developers
  - 3 project types: Reforestation, Conservation-based forest management & Conservation
- Forest Certification Protocol
  - Certification guidance for approved certifiers
  - State commits best efforts to ensure certified results received recognition in future GHG frameworks
- Developed by multi-stakeholder workgroup

Forest Sector Protocol

- Forest entity:
  - Legal entity or individual who owns > 100 acres of commercial/non-commercial trees
- Purpose:
  - Track changes in entity carbon stocks and any related CO_2 emissions (i.e., biological)
  - General Reporting Protocol provides guidance for entity non-biological (e.g., fossil fuel) emissions
- Geographic boundaries:
  - CA (Certified)
  - US (Not certified)

Forest Sector Protocol (cont'd)

- Entity Baseline (Optional)
  - 2 components: characterization & quantification
  - Use simulation models for baseline projections
- Quantification requires complete inventory of carbon pools
  - Required and optional carbon pools
  - Minimum confidence standards
  - Sampling methodology, inventory plots (plots must be $\leq$ 10 years), stratification system, analytical methods to translate field data
  - Provide model equations for biomass calculations
- Stock change accounting
  - Declines in carbon stocks quantified as GHG emissions

Forest Project Protocol

- Forest Project:
  - A planned set of activities that removes, reduces, or prevents CO_2 emissions in the atmosphere by conserving and/or increasing on-site forest carbon stocks
  - Eligible for certification by Registry as GHG reductions
  - CA only
- Three project types:
  1. Conservation-based forest management
  2. Reforestation
  3. Conservation
- Threshold requirements (per legislation)
  - Permanent easement
  - Native species
  - Natural forest management
  - Regulatory additionality

Forest Project Baselines

- Project baseline
  - What would have happened in absence of project
  - Required
- Baseline approach
  - Approaches prescribed by Project Protocol
  - Vary by project type
  - Projection over time (use simulation models)
- Baseline elements
  - Characterization (qualitative)
  - Quantification: same process as entity level but has higher confidence requirements and sliding – scale deduction based on confidence
  - Model equations provided by Registry for biomass calculations

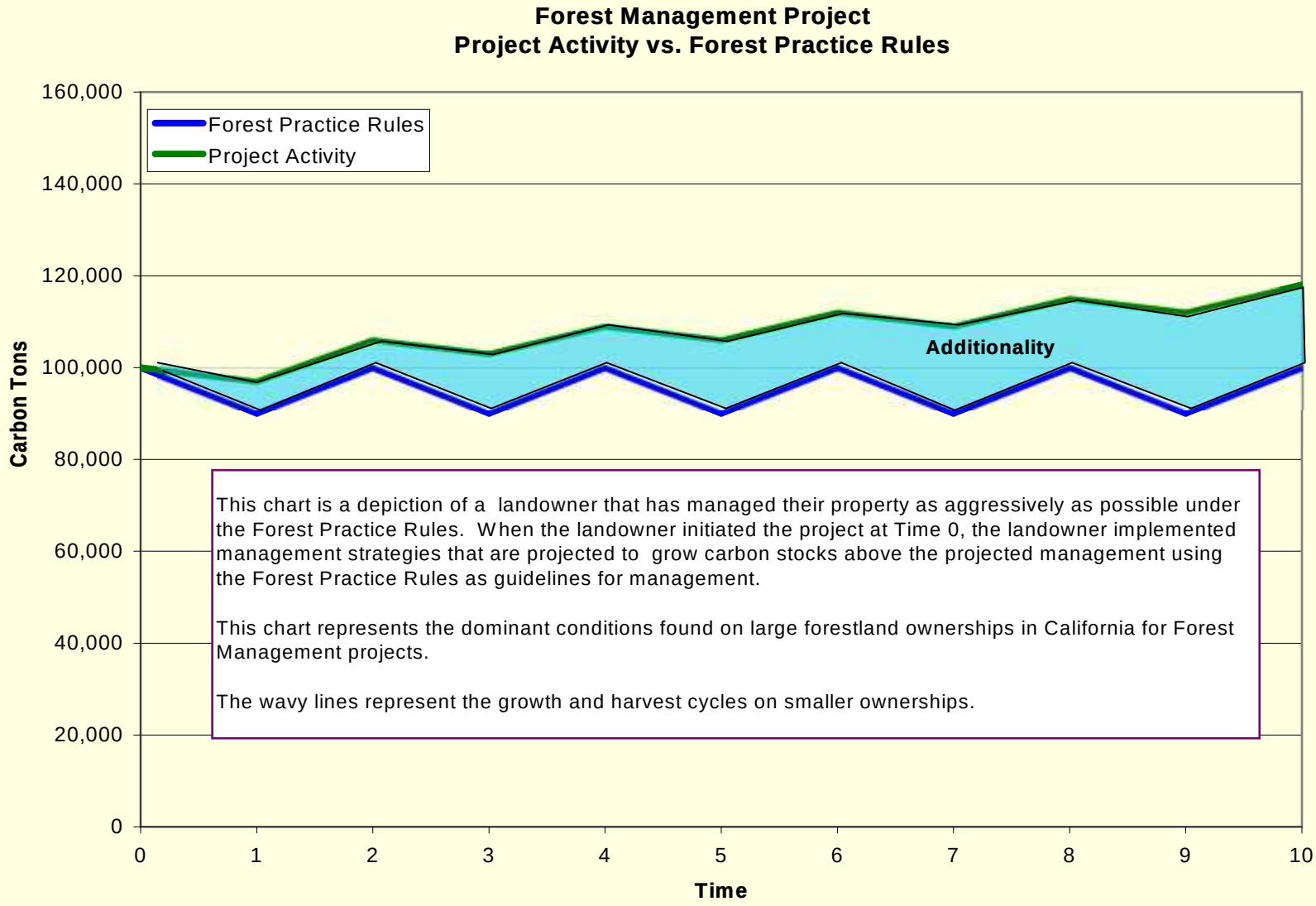
Project Baseline Characterization

- Reforestation:
  - Out of forest cover (i.e. <10% tree canopy cover) for past ten years
  - Expected future practices on land based on practices (or lack thereof) of previous ten years
- Conservation-based forest management:
  - CA Forest Practice Rules
- Conservation:
  - Immediate site specific threat or
  - Land use conversion trends (state data)

Additionality

- Project activity must exceed baseline (i.e., what would have happened otherwise), including mandatory legal requirements
- Must characterize & quantify project activity

Baseline/Additionality Example



Permanence

- Permanence (i.e., duration):
  - Perpetual easement dedicates land to permanent forest use (i.e. secures land base) and secures "additional" activities
  - Annual reporting to Registry verifies duration of GHG reductions (i.e., storage of additional carbon)

Leakage

- Leakage:
  - Activity-shifting (on-site): assessment/quantification required
  - Activity-shifting (off-site):assessment required
    - Registry to continue effort re: quantitative approach
    - Models can support approach
  - Market leakage assessment/quantification strongly encouraged
    - Registry to continue effort re: quantitative approach
    - Models can support approach

Forest Certification Protocol

- Ensures completeness, consistency, and accuracy of data/methodologies
- Approved certifiers must include a Registered Professional Forester
- Certification components:
  - Conduct direct sampling (at beginning and end of 5 year intervals)
  - Review annual monitoring reports
  - Assess methodologies, estimations, models and calculations
  - Reported data must be free of material misstatements

Summary of Model Use to Support Protocols

- Carbon inventories (entity and project)
- Baseline/project activity projections
- Leakage assessments:
  - Off-site activity-shifting leakage
  - Market leakage

Contact Information

For More Information

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