

Forest Carbon Markets: Experience + Perspectives from New England



**2014 Regional
Conservation
Partnership Network
Gathering**

Nashua, NH

November 13, 2014

CA Forest Carbon – a \$2 Billion Opportunity

Landowners in 48 states can access California compliance carbon market which may pay out as much as \$2 billion by 2020.

Program	FY11	FY12	FY13	FY14	FY15
	Enacted	Enacted	Enacted	Enacted	Budget
	(\$000,000)				
Land & Water Conservation Fund (LWCF)*	301	323	306	306	350
N.A. Wetlands Conservation Act (NAWCA)	37	36	34	34	34
State Wildlife Grants (SWG)	62	61	58	59	53
California Air Resources Board Forest Offset Sales (@\$9/CCO)	0	0	10	54	89
<i>*Includes LWCF Fed Acquisition, State Grants, Forest Legacy, and Sec. 6 Land Acquisition</i>					

\$51 million allocated to the Forest Legacy Program in 2014

CA Forest Carbon – a \$2 Billion Opportunity

Forest carbon projects have large initial-year values and are significant on a per-acre basis.

Issuance Year \$/Acre by Region

California	800-1200
Oregon/Washington	200-1000
Southeast Hardwood	200-800
Southeast Softwood	150-200
Northeast	100-250
Lake States	75-400

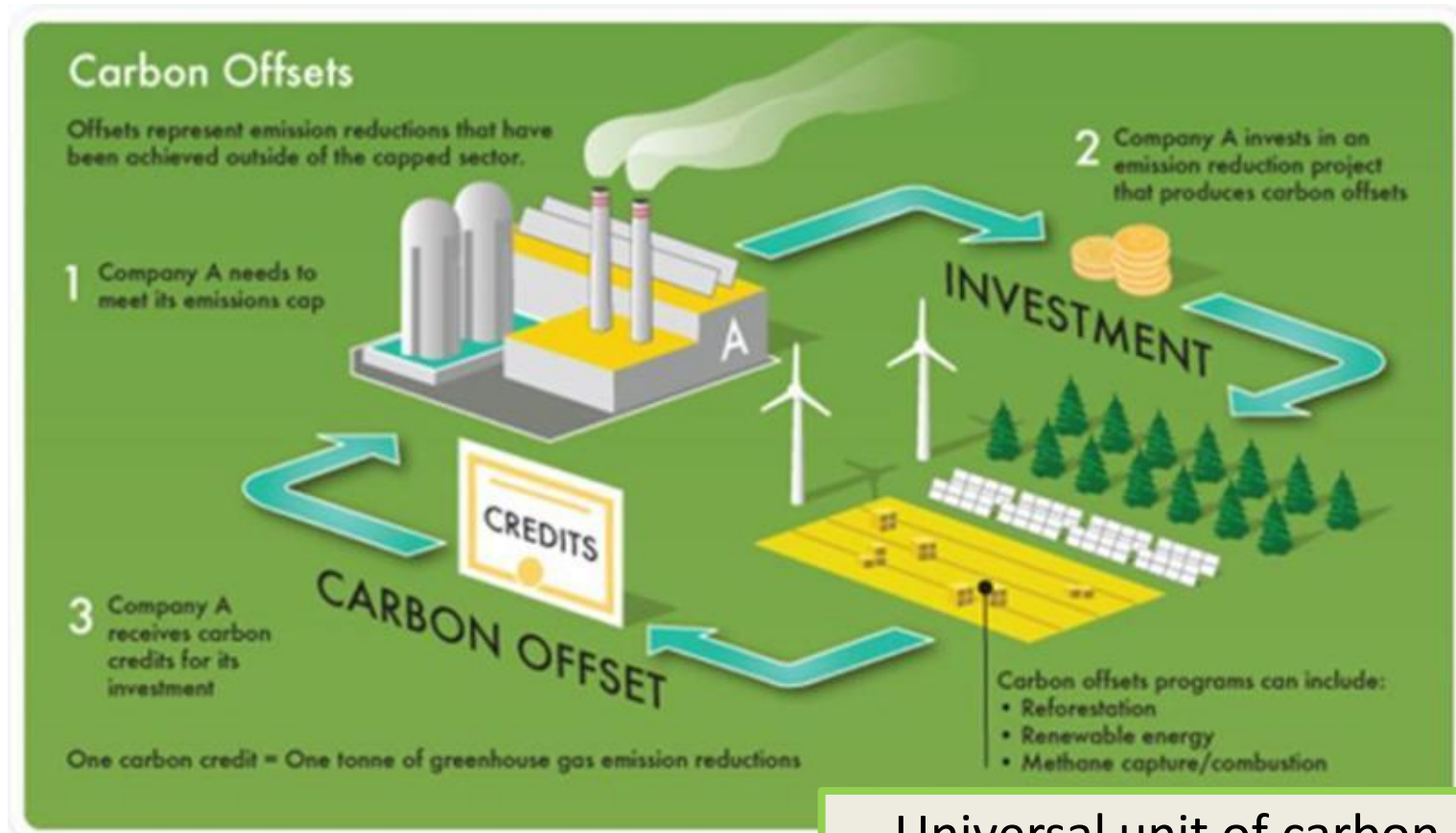
CA Forest Carbon – a \$2 Billion Opportunity

TIMOs and REITs are already generating significant revenue:

Company	Project	Acres	Market Value (\$000,000)
Forestland Group	Bishop	230,000	15.7
Forestland Group	CT Lakes	146,000	10.4
Forestland Group	Champion	103,000	1.3
Forestland Group	Highlands	9,000	not public
Potlatch	Moro Big Pine	16,000	2.0
Campbell Group	McCloud River	9,000	1.6
FIA	Goodman	29,000	not public
Weyerhaeuser	MS/AL Bottoms	50,000	not public
Lyme Timber	Grand Lakes Stream	22,000	not public
Molpus Woodlands	Brimstone Forest	6,000	not public

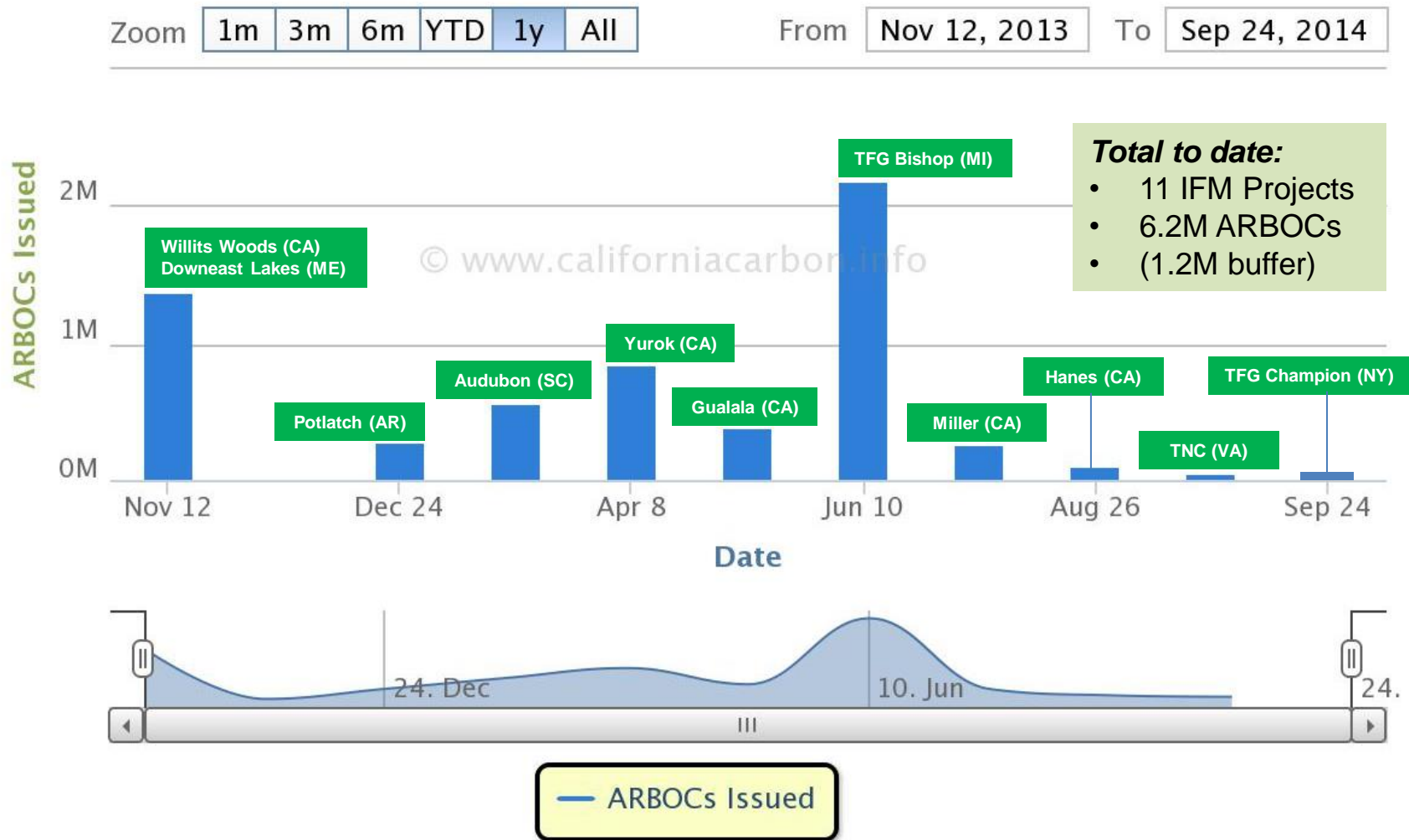
More than one million acres of US forestland submitted to ARB as carbon projects for California's program.

What are Carbon Offsets?



Universal unit of carbon trade is the “carbon offset” (aka “credit”) = 1 tCO₂e

Issued ARB Forest Carbon Offsets



Finite Carbon IFM Project Owners

700,000 acres of IFM offset projects for California ARB:

Project Owner	State	Acres	Type
Downeast Lakes Land Trust	Maine	19,800	Land Trust
New England Forestry Foundation	New Hampshire	2,100	Land Trust
Tennessee River Gorge Trust	Tennessee	5,300	Land Trust
Berry Summit	California	2,500	Private
Passamaquoddy Nation	Maine	99,000	Tribe
United Church of Christ	Missouri	3,900	Religious
The Forestland Group	New York	102,000	TIMO
The Forestland Group	New Hampshire	146,000	TIMO
The Forestland Group	<i>confidential</i>	100,000+	TIMO
The Forestland Group	<i>confidential</i>	75,000+	TIMO
The Lyme Timber Company	Maine	20,000	TIMO
Molpus Woodlands Group	Tennessee	5,100	TIMO
Potlatch Corporation	Arkansas	16,000	REIT
Weyerhaeuser	Mississippi	55,000	REIT
Norfolk Southern Corporation	South Carolina	12,500	Corporate



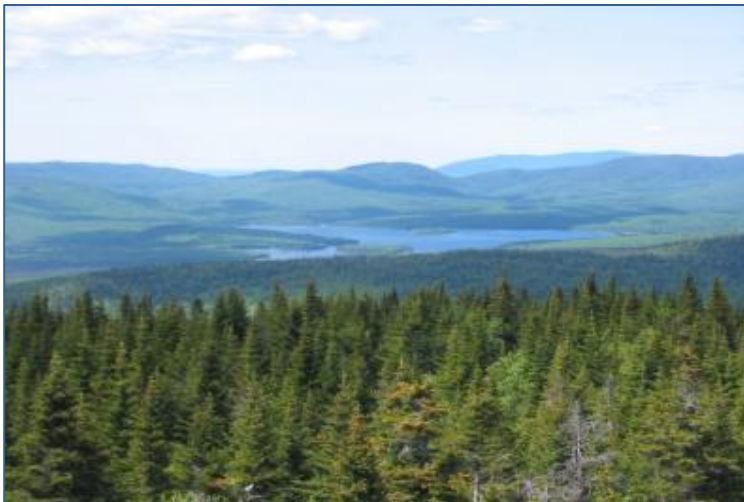
Land Trust and TIMO Perspective

***Carbon Offsets and Community Forest Conservation:
Leveraging an Ecosystem Services Market***

Why Landowners Consider Carbon

Conservation Capital

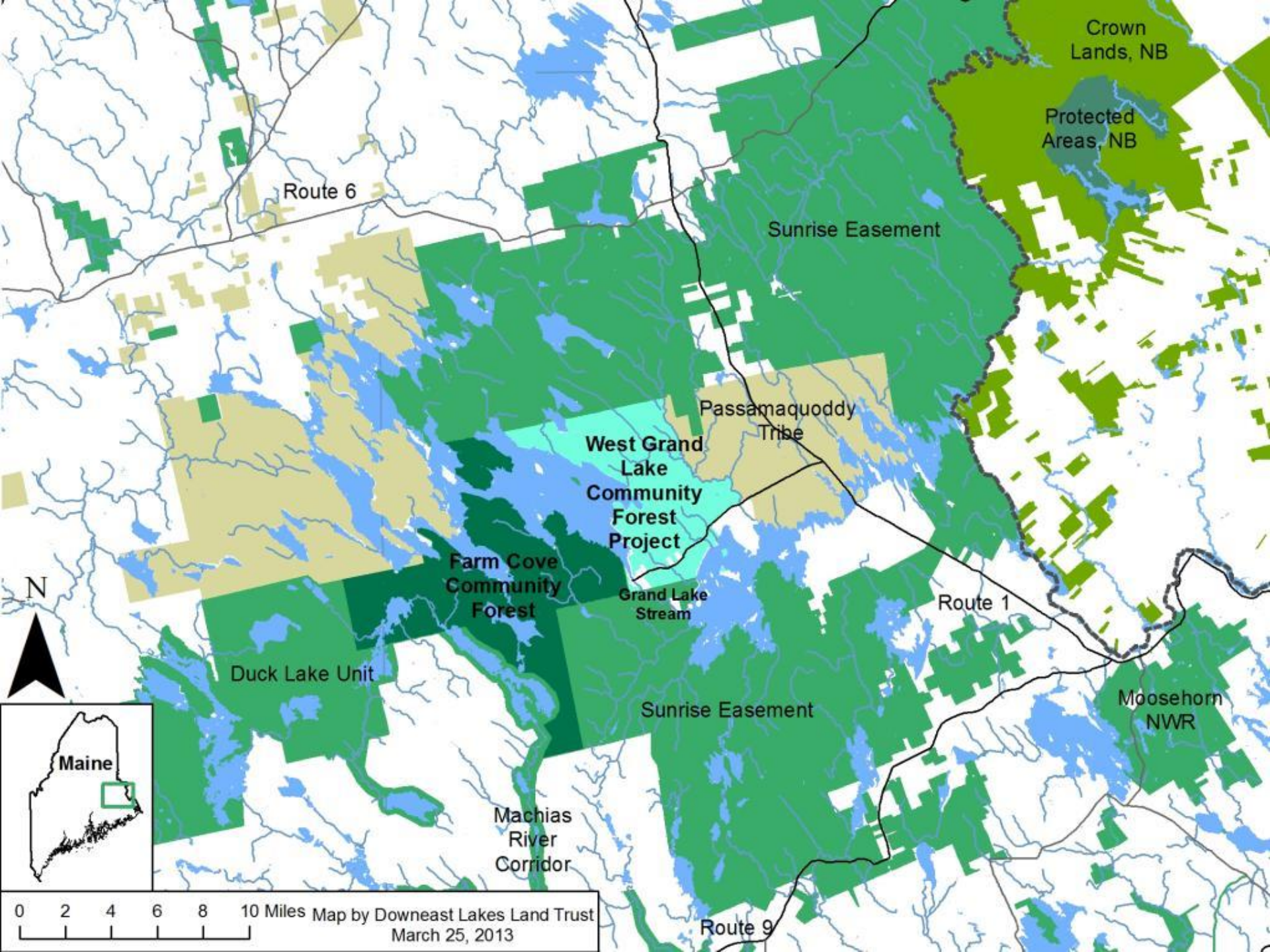
- Acquisition of land and conservation easements
- Leverage traditional funding to advance conservation + financial goals



ROI + Stewardship

- New cash flow on conservatively managed working forests
 - *ROI aligned w/ conv. products*
 - *Revenue sharing with grantee*
- Income for stewardship costs





Route 6

Crown Lands, NB

Protected Areas, NB

Sunrise Easement

Passamaquoddy Tribe

West Grand Lake Community Forest Project

Farm Cove Community Forest

Grand Lake Stream

Route 1

Duck Lake Unit

Sunrise Easement

Moosehorn NWR

Machias River Corridor

Route 9



0 2 4 6 8 10 Miles Map by Downeast Lakes Land Trust March 25, 2013



Why Enter the Carbon Market?

The Farm Cove Carbon Project:

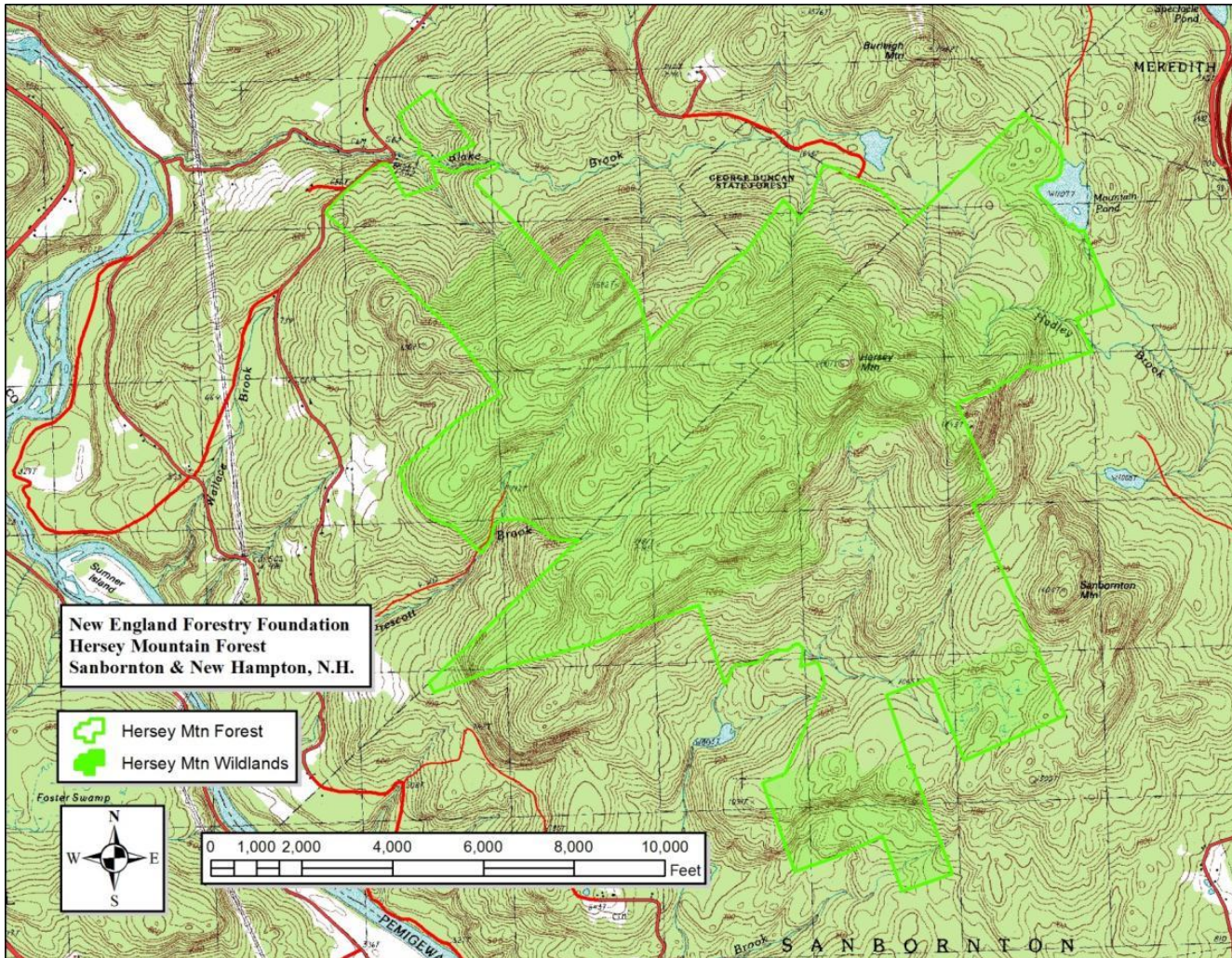
Conserved forest leveraged for new conservation.

West Grand Lake Forest Carbon Project:

Carbon offsets directly reducing purchase cost.

- Compatible with current goals
- Retained flexibility to manage forest
- Ability to manage risk & upfront costs – partnership with Finite Carbon
- Opportunity due to stocking level
- \$\$ for Conservation Opportunity

Hersey Mountain Forest



Hersey Mountain Timeline

1996	Mike Burke Memorial Forest	500 acres
1997	Knox Mountain Tree Farm	730 acres
97-01	Acquired additional parcels w/\$ from Sweet Water Trust	<u>2,058 acres</u> 3,288 acres

Through NEFF's agreement with the Sweet Water Trust, agreed to evaluate entire property and set aside a portion as wilderness to demonstrate the compatibility of adjacent wilderness and managed lands.

2,141 acres wilderness and 1,147 acres managed timberland



NEFF's Decision

- April 2010, regulatory window where landowners could register already conserved wilderness areas
- NEFF evaluated selling carbon on all its land; determined too risky and complicated to commit
- Selling carbon fit into NEFF's educational mission
- Opportunity to generate revenue from land where otherwise little financial return
- Vetted numerous project developers, chose to work with Finite Carbon

Risks and Challenges

- Feasibility: acreage, initial volume, growth rate, regional risks
- Following changing regulatory system, both state + federal
- Uncertain future demand and price for product
- Long-term commitment to offset program (100 years from last issuance of offsets)
- Future costs of inventory and verification

Each landowner has a unique risk profile

Landowner Commitments



Natural forest management

Harvest \leq Growth

Clearcuts $<$ 40 acres



FSC, SFI, ATFS or state/fed approved plan



Audits

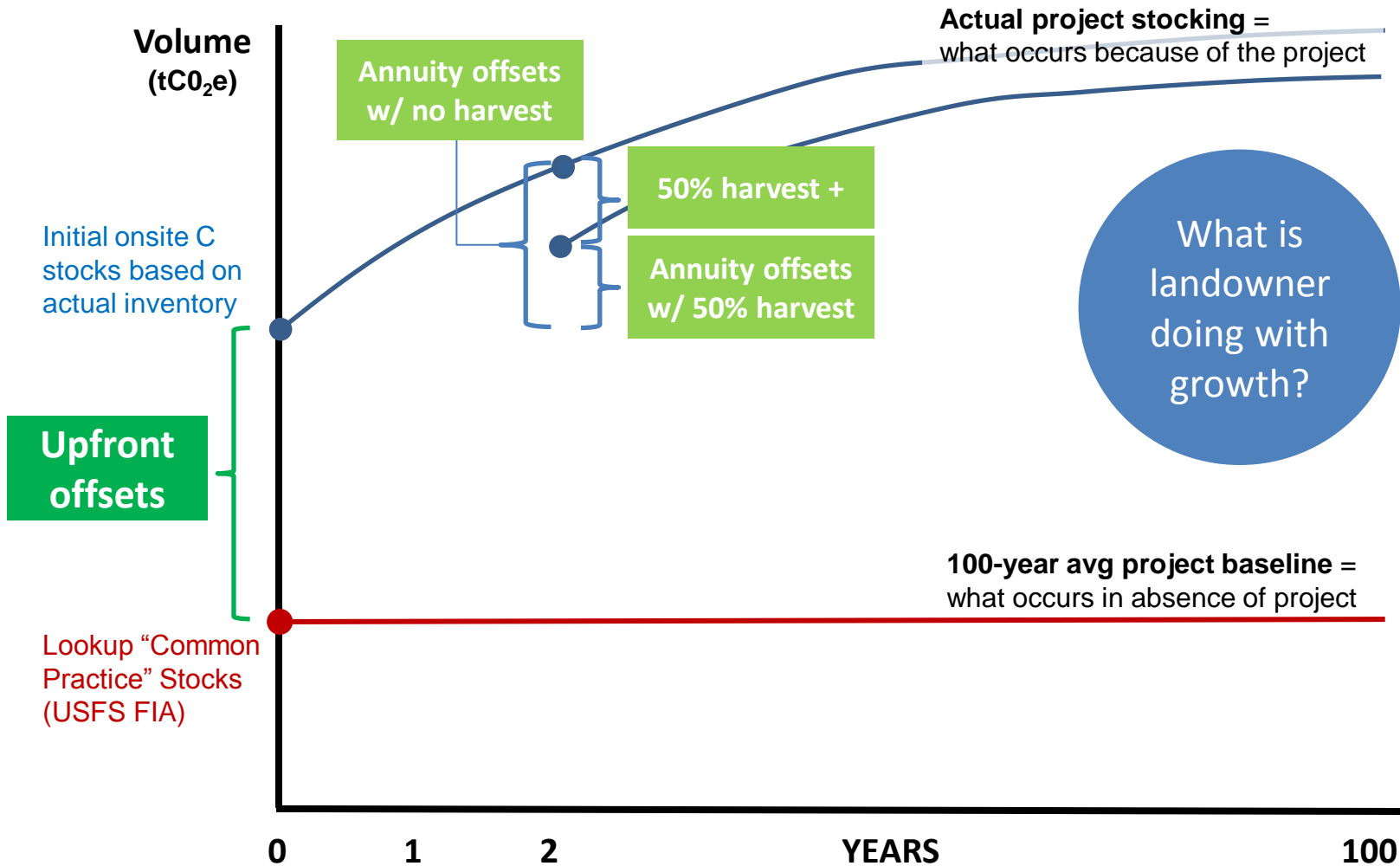
- Harvest updates + desk review (~annual)
- Field verify (every 6 years)



Re-inventory (every 12 years)

Verify and inventory for 100+ years

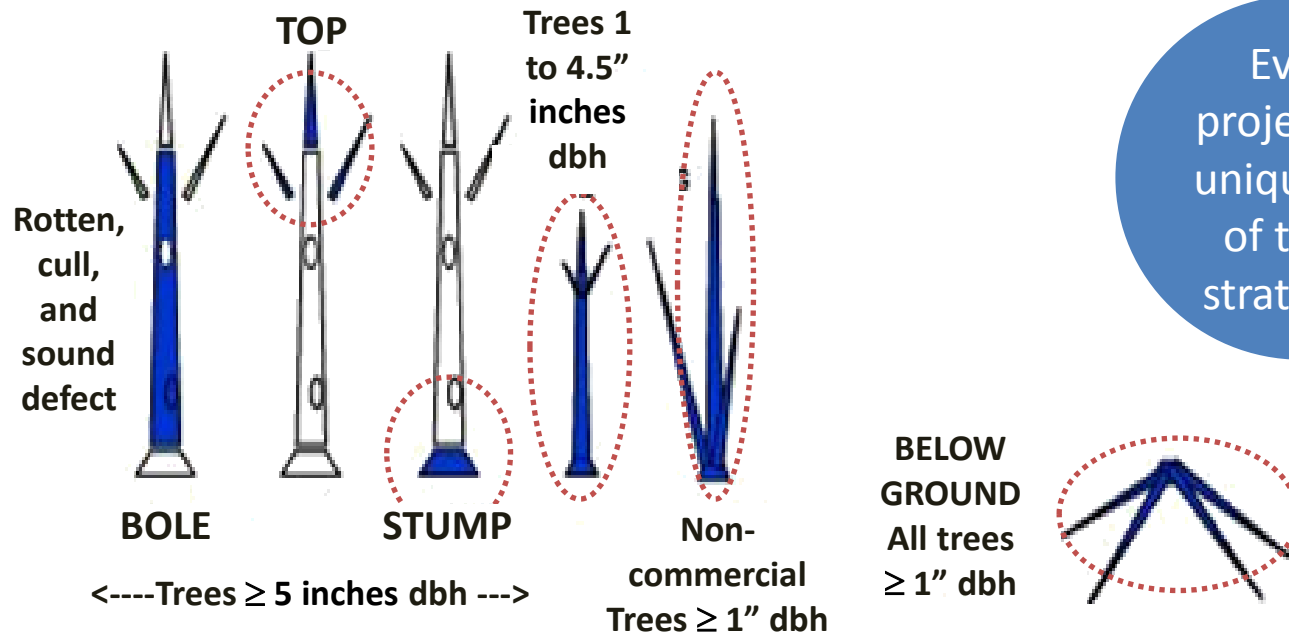
Quantifying an ARB IFM Offset



Carbon Asset Integration Strategies

UNTAPPED ASSET CLASS

Gains on non-merch portions of trees, stands, and forest.



SPECIAL LANDS

Gains on lightly and unmanaged stands and tracts.

MARKET OPTIMIZATION

Revenues from growth optimized by leverage of market conditions from carbon and traditional wood products.

Carbon Project Development Cycle

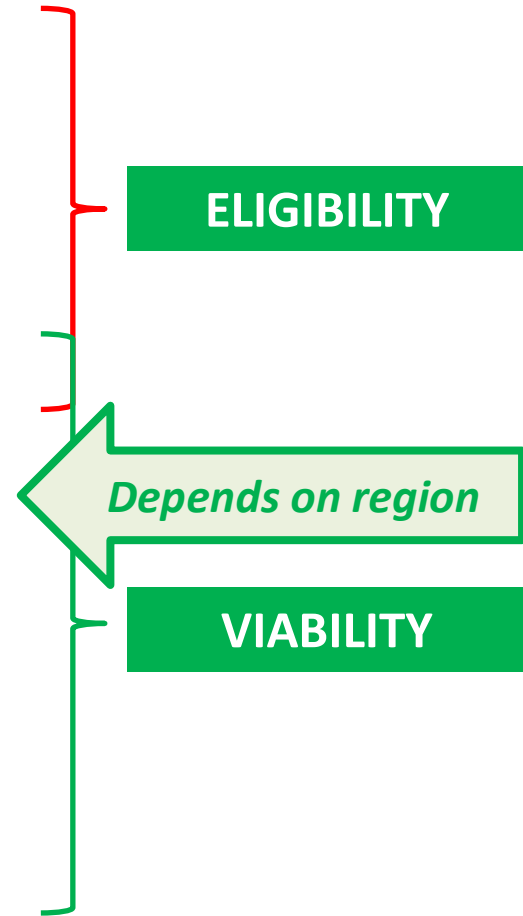
Finite Carbon has evaluated over *5 million acres* of US forestlands...



= \$125k+
+ long term M&O costs
+ risk; 12 month process

Project Feasibility = Eligibility + Viability

- Lower 48 states
- Natural + sustainable FM requirements
- Harvest <= Growth
- Certified (FSC, SFI or Tree Farm) or Plan
- Private ownership (mostly)
- 2-4000+ “qualified” acres (Strategy 1-3)
 - Untapped Asset Class, +/-
 - Special Lands, +/-
 - Market Conditions
- Current stocks >= region average



Easements on Finite IFM Projects

- 8 of 15 projects have conservation easements
- 3 are Forest Legacy
- All recorded prior to carbon project and therefore included in project baseline
- Little to no +/- impact on carbon project:
 - IFM, CE not required
 - Limited silvicultural restrictions
 - CE not ARB “qualified”

Easements and Forest Carbon Best Practices



Easement before carbon project, or vice versa?

IFM

Harvest restrictions? Then 28 months to submit OPDR
Qualified CE will reduce risk buffer pool contribution

AC

ARB “Qualified” CE required:

- Qualified CE holder
- Perpetual
- ARB is 3rd party beneficiary with right to enforce



Purpose and Grantor retained right
USFS Forest Legacy?
Amending existing easements?

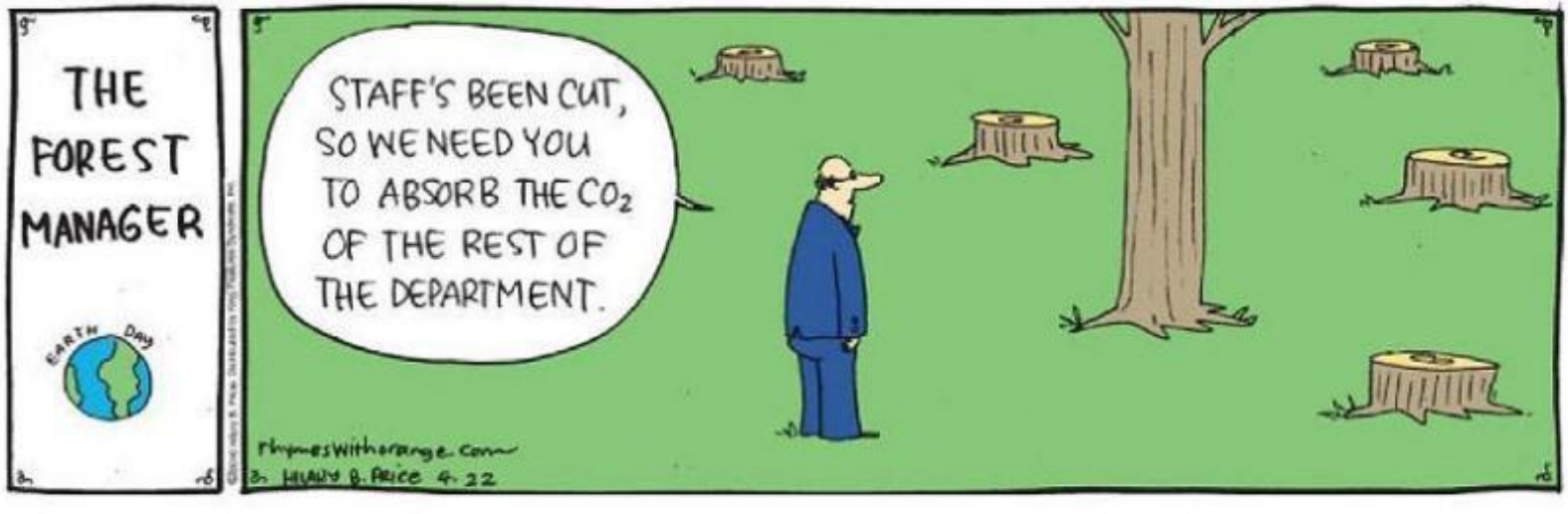
Carbon Project Alignment with Land Protection

Layered w/ easement and forest certification...

- Significant source of acquisition + stewardship funding
- Additional accountability mechanism for management
Regular, rigorous monitoring, reporting requirements
- CFI for management, research, and education

What is the best role for land trusts in facilitating forest carbon projects?

Thank you!



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