

Forest Carbon

for the family forest owner

Discovering Value in Your Forest

9.22.2016

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Pinchot Institute for Conservation

Family forest owner!

WHO WE ARE





Agenda

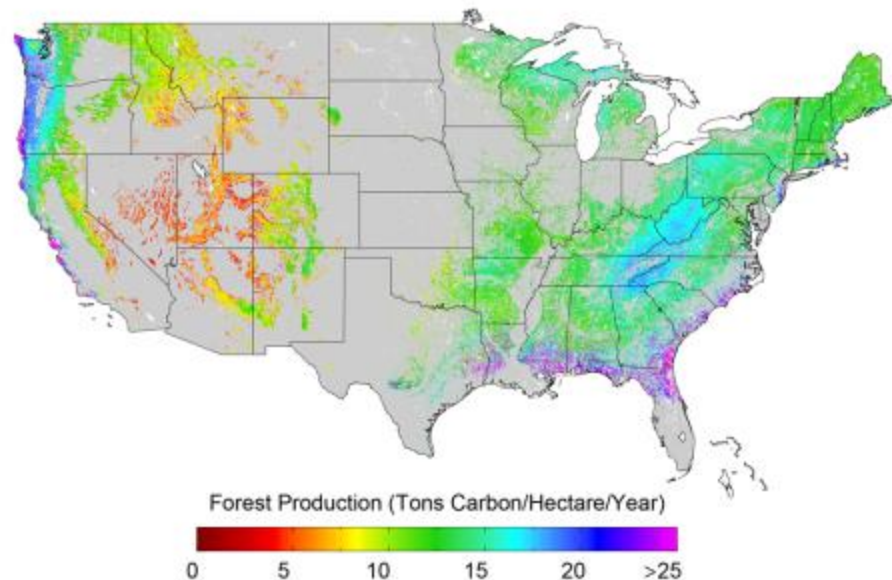
- Carbon Cycle Introduction
- Forests and Carbon
- What is additionality?
- Managing forests for additionality:
- Silvicultural Options
- Markets for Carbon
- Opportunities for Family Landowners (RCPP)
- Forest Carbon Works
- Questions and Discussion



The Big Picture

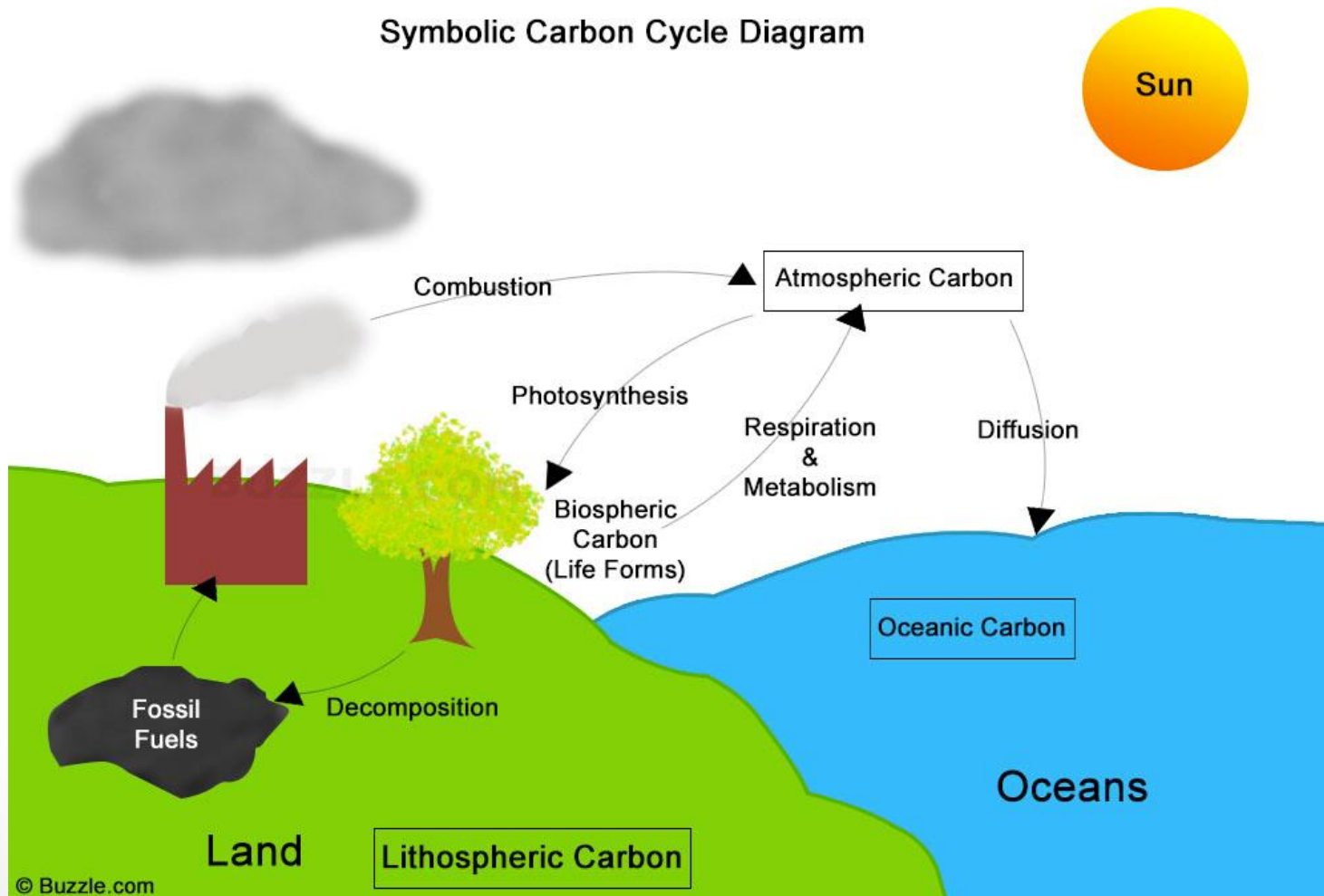
Forest Growth Provides an Important Carbon Sink

- Forests store the equivalent of 11% of US GHG emissions.
- The US forest C sink is beginning to decline.
- Significant opportunity to increase C sink.

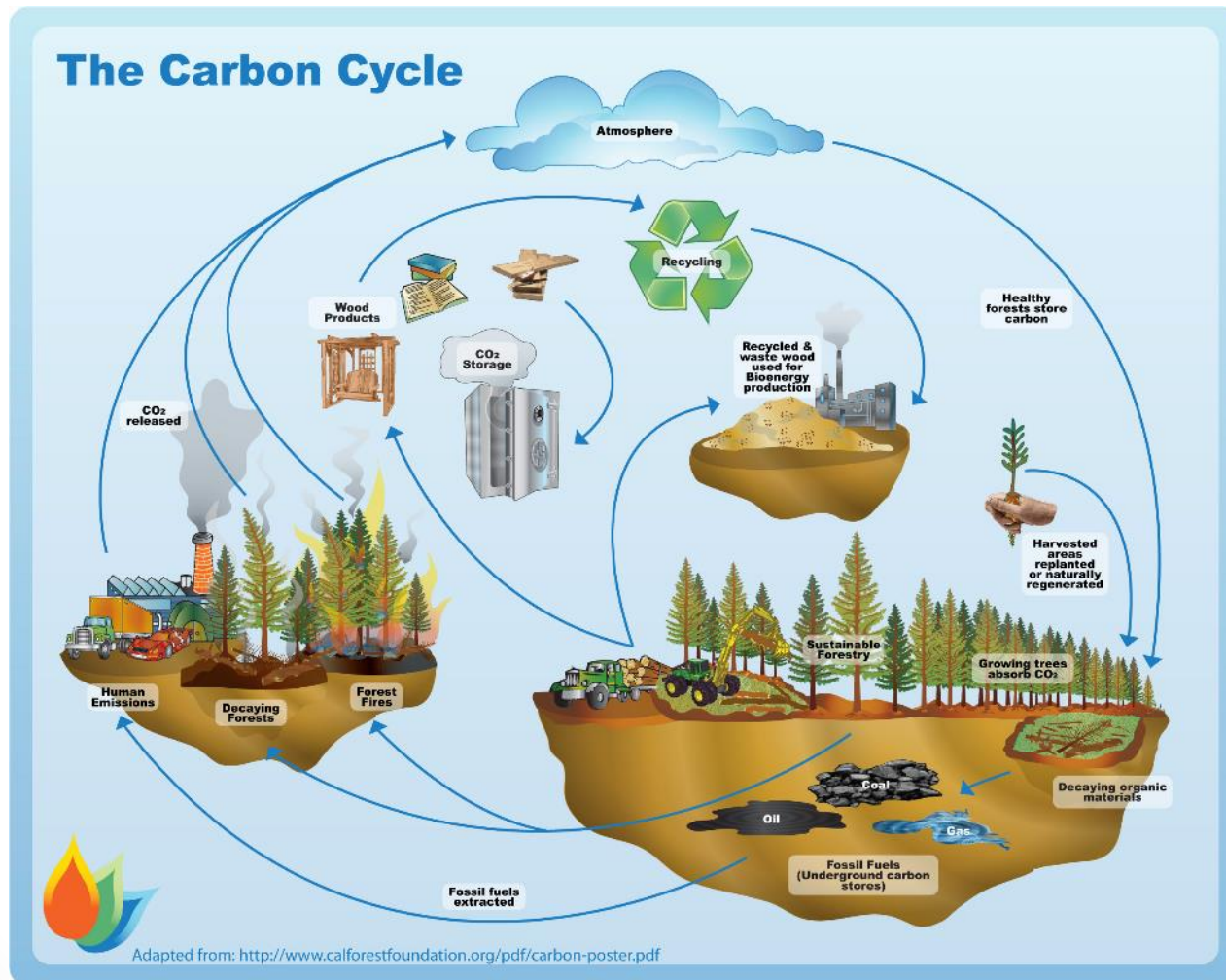


The Carbon Cycle

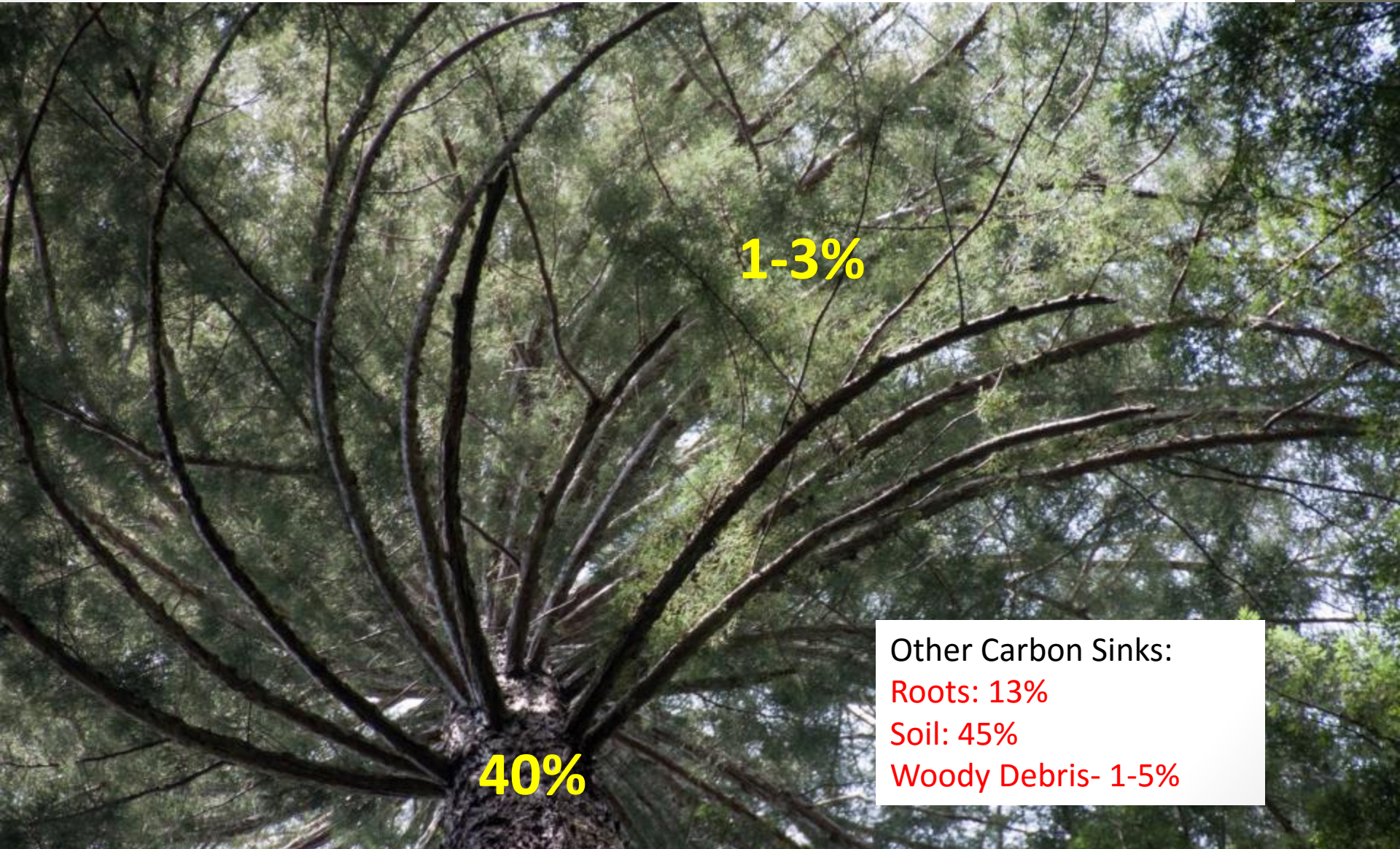
Symbolic Carbon Cycle Diagram



The Forest Carbon Cycle



Carbon in a Tree



1-3%

40%

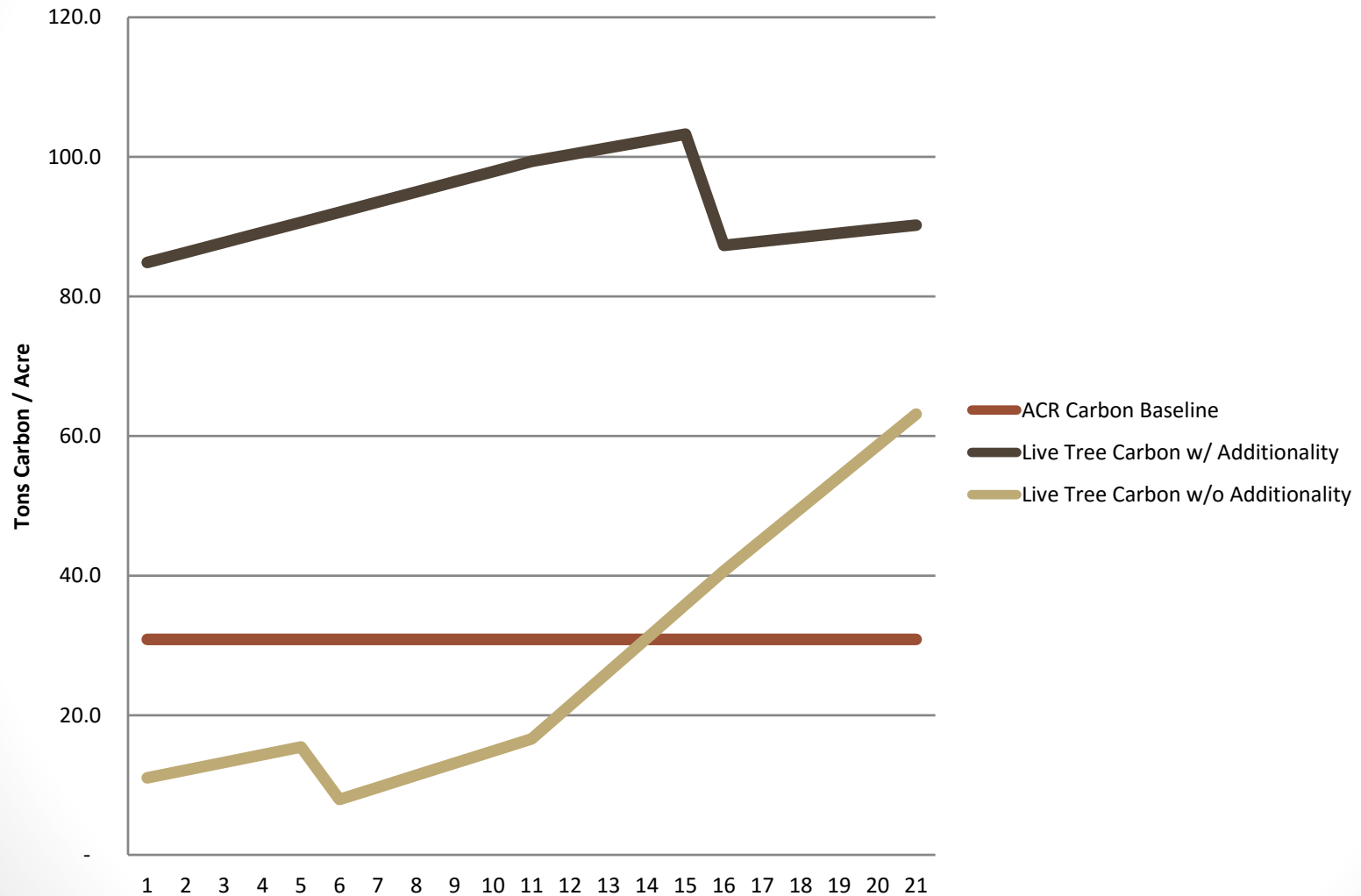
Other Carbon Sinks:

Roots: 13%

Soil: 45%

Woody Debris- 1-5%

What is Additionality

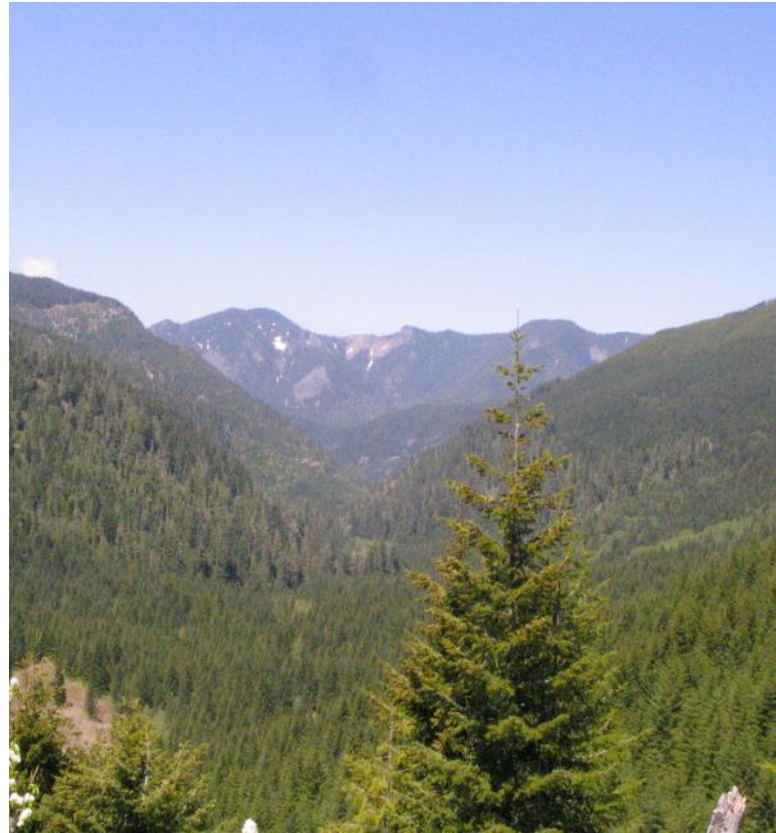


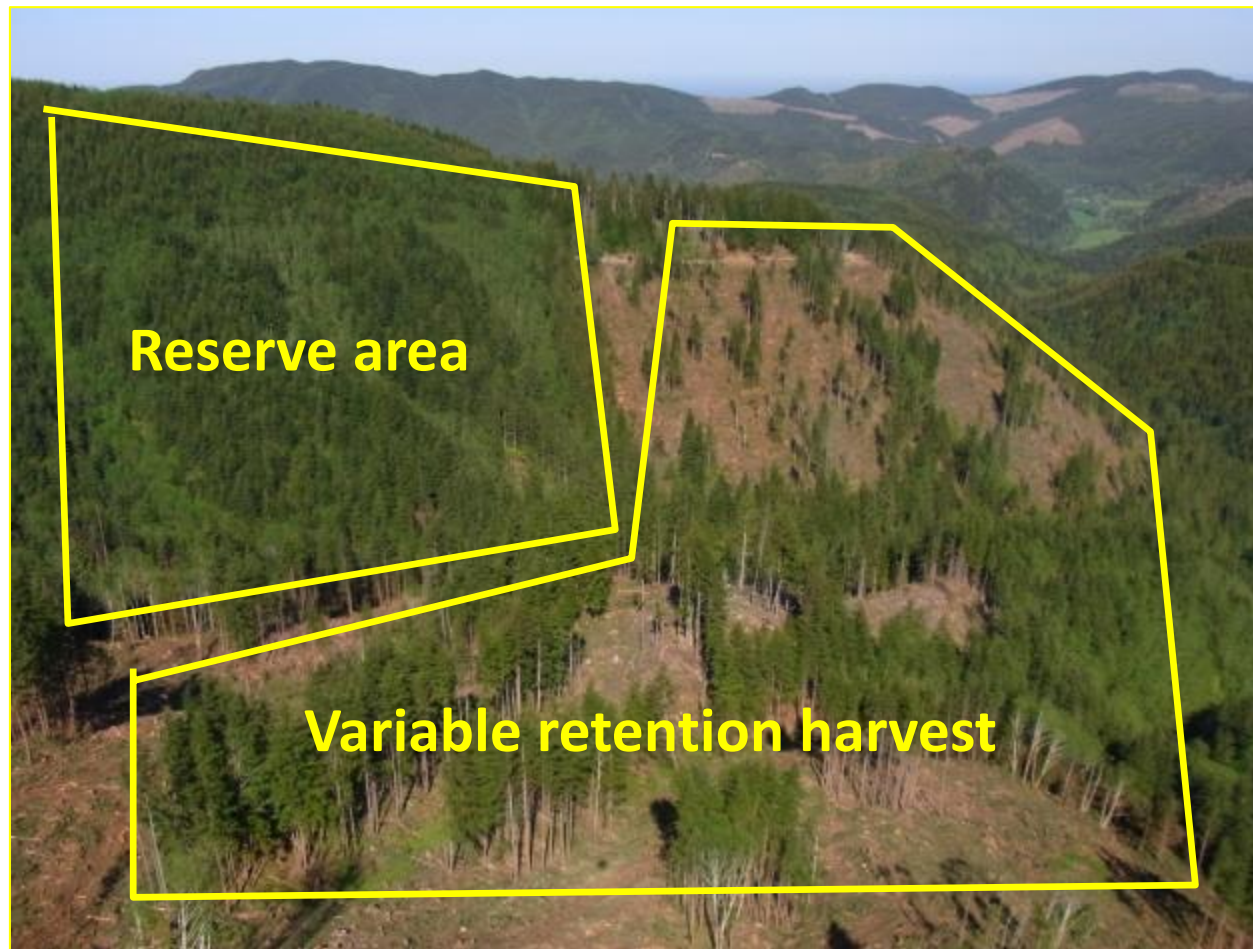
Improved Forest Management

Extended Rotation Age



Reserve Areas





Silvicultural Options

Thinning

Single Tree Selection

Shelterwood / Seed Tree

Group Selection / Patch Cuts

Silviculture Diagrams



CLEARCUTTING



SHELTERWOOD



GROUP SELECTION



SINGLE TREE SELECTION

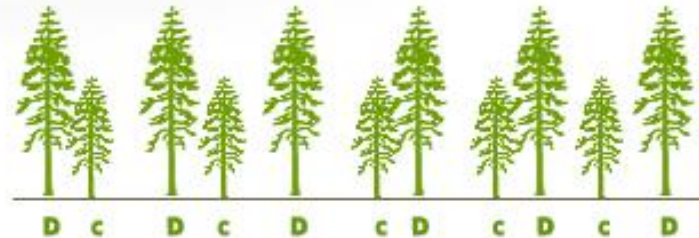
Thinning

THINNING FOR FOREST HEALTH



UNTHINNED STAND

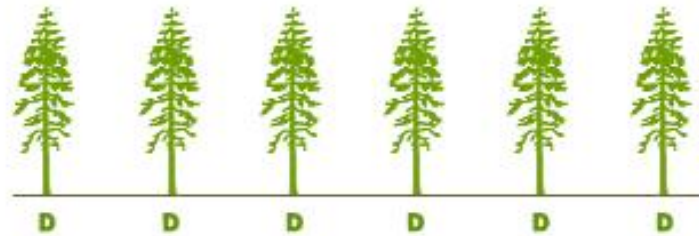
(HIGHER FIRE RISK)



MODERATE THINNING



LIGHT THINNING



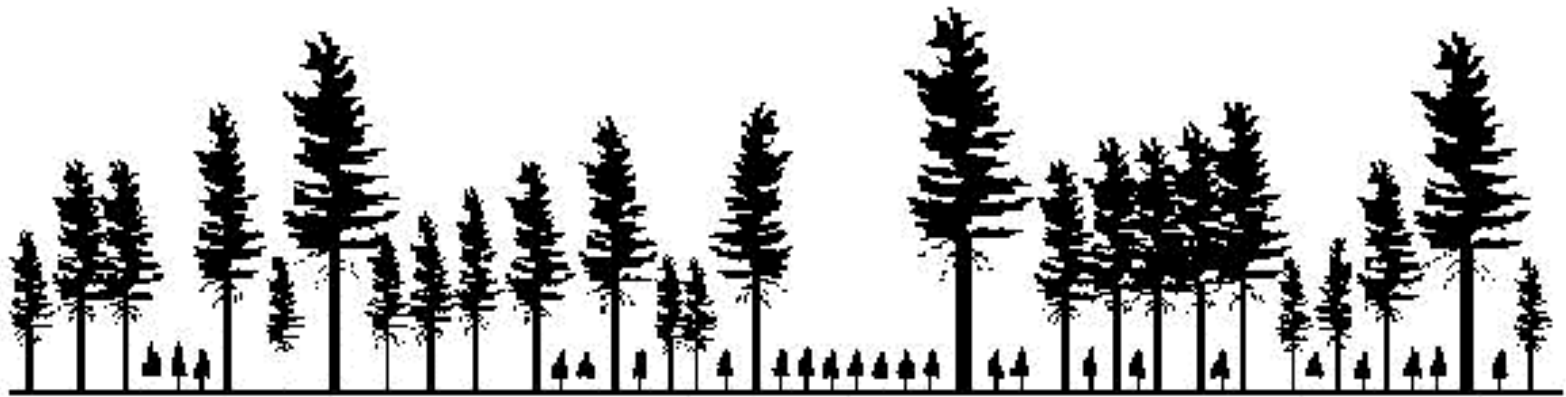
HEAVY THINNING

(LOWER FIRE RISK)

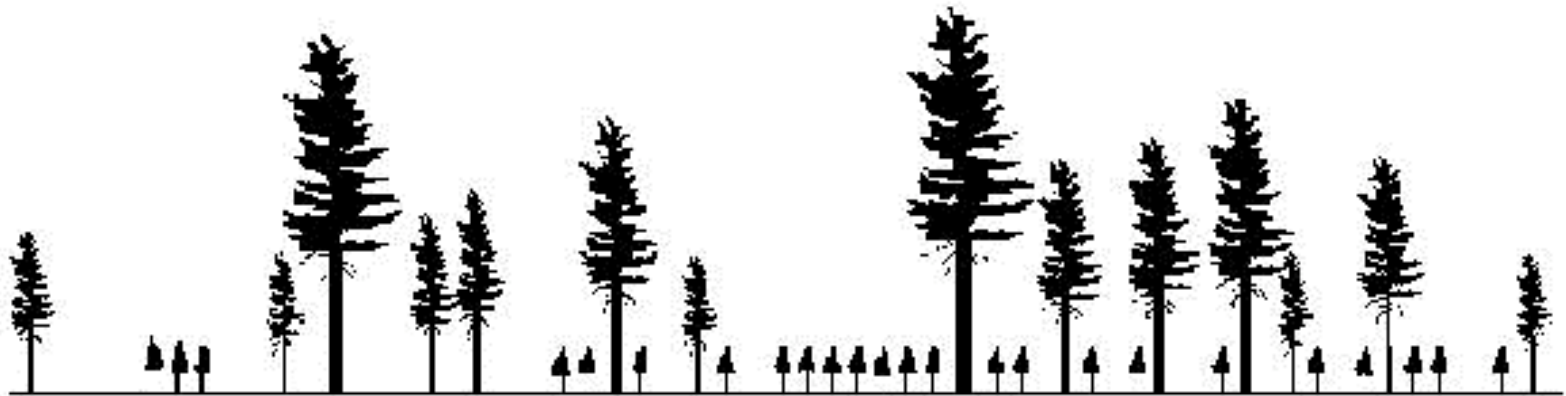
Thinning Example



Single Tree Selection



Original stand



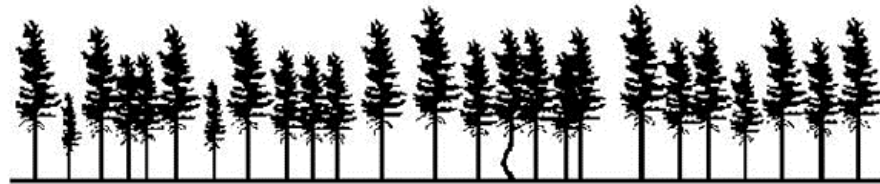
Stand after first harvest entry

Image courtesy Humboldt State University- Matthew Johnson, Ph.D.

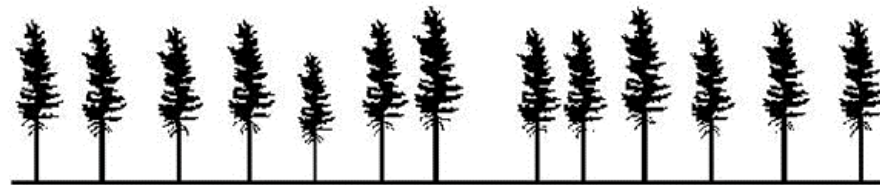
Single Tree Selection Example



Shelterwood / Seed Tree



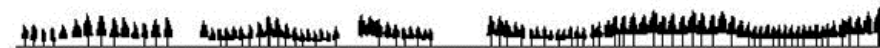
Uncut stand



Preparatory cut



Establishment cut



Removal cut

Image courtesy Humboldt State University- Matthew Johnson, Ph.D.

Shelterwood Example



Carbon on your Forest

- Raise your hand if you own forestland.
- On a piece of paper, write down which, if any of the silviculture options you've used on your land, or you might consider using in the future.
- Turn to your neighbor and share your lists
- Discuss with your neighbor whether your management create additionality over time.
- We'll come back to the full group and report back with our thumbs such that
 - Thumbs down- probably not additional
 - Thumbs sideways- maybe additional?
 - Thumbs up- Yes, my forest does or will have additionality!

Markets for Carbon Offsets

Compliance

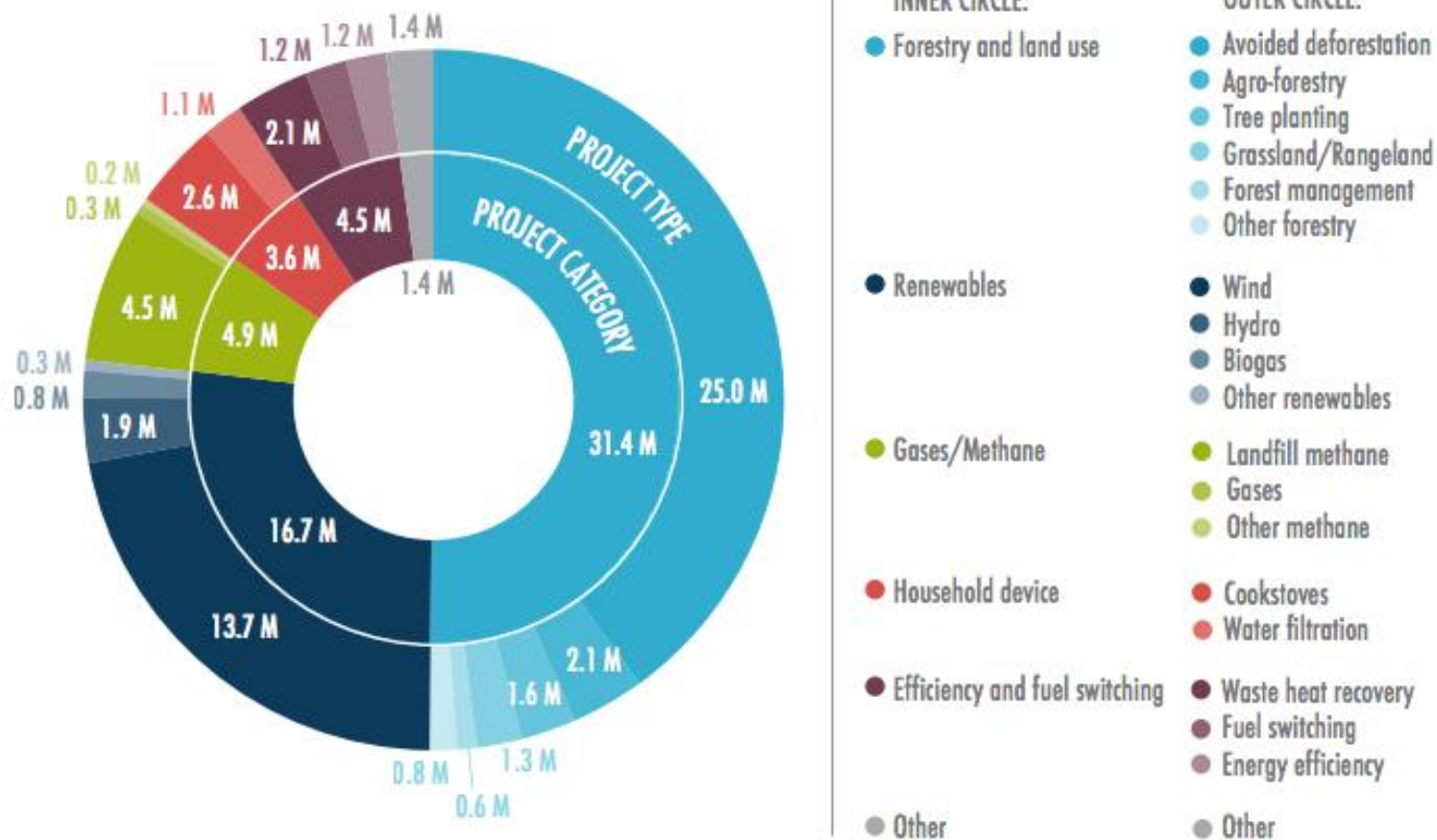
- California
- Stable
- Stringent requirements
- \$8-12 / ton
- 100 year minimum
- Regional Baselines
- One Marketplace

Voluntary

- Voluntary Buyers
- Growing
- More flexible
- \$.01-45 / ton
- 40 year minimum
- Calculated Baselines
- 3 Leading Registries

Market Scale

Figure 5: Transacted Volume by Project Category and Type, 2014

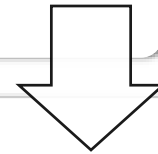


Notes: Based on 764 transactions representing 61.7 MtCO₂e.

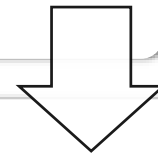
Source: Forest Trends' Ecosystem Marketplace, *State of the Voluntary Carbon Markets 2015*.

Developing a Carbon Project

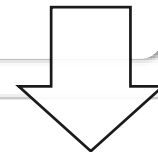
Landowner



Carbon Developer



Broker



Carbon Buyer

Overview of RCPP Opportunity

NRCS Awarded \$1 million for FMPs, carbon mgmt. demonstrations, and carbon inventories. Goals:

- Align FA and TA for C market entry
- Streamline C feasibility assessments
- Integrate assessment of additionality in FMPs
- Innovate with C inventories (tech., TA funds)
- Facilitate C modelling, aggregations, transactions, and C incentives



What you can get:

1. A carbon assessment- email bkittler@pinchot.org with your management plan and property details.
2. If you have additionality, you can get an inventory
3. NRCS management plan cost share funding (contact your district conservationist)
4. If everything works, an offer to buy your carbon through Forest Carbon Works, followed by annual payments.

Discussion

Contact:

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Your best resource- NNRG!