The Forest Health - Human Health Initiative

Linking landowners, carbon markets, and health care to conserve and sustainably manage family forests.

Presented by:
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According to landandfarm.com: Non-industrial private forestland for sale in the US in April 2011:

<table>
<thead>
<tr>
<th>State</th>
<th>Acres for Sale (rounded)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>26,000 ac</td>
</tr>
<tr>
<td>Florida</td>
<td>19,000 ac</td>
</tr>
<tr>
<td>Georgia</td>
<td>95,000 ac</td>
</tr>
<tr>
<td>Kentucky</td>
<td>17,000 ac</td>
</tr>
<tr>
<td>Maine</td>
<td>13,000 ac</td>
</tr>
<tr>
<td>Missouri</td>
<td>11,000 ac</td>
</tr>
<tr>
<td>Mississippi</td>
<td>14,000 ac</td>
</tr>
<tr>
<td>Montana</td>
<td>48,000 ac</td>
</tr>
<tr>
<td>N. Carolina</td>
<td>30,000 ac</td>
</tr>
<tr>
<td>New York</td>
<td>395,000 ac</td>
</tr>
<tr>
<td>Oregon</td>
<td>30,000 ac</td>
</tr>
<tr>
<td>S. Carolina</td>
<td>29,000 ac</td>
</tr>
<tr>
<td>Tennessee</td>
<td>45,000 ac</td>
</tr>
<tr>
<td>Texas</td>
<td>32,000 ac</td>
</tr>
<tr>
<td>Utah</td>
<td>53,000 ac</td>
</tr>
<tr>
<td>Virginia</td>
<td>11,000 ac</td>
</tr>
</tbody>
</table>

% of listings:
- <10 acres: 20%
- 10-19 acres: 10%
- 20-49 acres: 19%
- 50-100 acres: 17%
- 101-499 acres: 26%
- 500-999 acres: 4%
- 1,000+ acres: 4%
- Totals: 100%
% of NIPF acreage in the state owned by landowners who are 75 years of age or older

% of NIPF acreage owned by landowners 75 years and older

- 5% – 10%
- 10% - 20%
- 20% - 30%
- 30% - 50%
Loss of stored carbon if 50% of acres owned by 75+ year old landowners sold to non-forest use
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2005 Offspring Survey (n=300)
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2005 Offspring Interview Results:
Top 3 conditions that would force the sale of family forests
(n = 300)
Starting in 2007, the Pinchot Institute:

- Began research work looking at family forestland owners and their offspring.
- By 2010 – we had conducted over **1,000 in-depth interviews** with landowners and their offspring across the US.
- **What we discovered surprised us** …
2007-2010 Offspring Interview Results:
What would force you to sell forestland?
(n = 620 offspring interviews)

- Medical
- Finan. Pressure (unspec.)
- Education
- Taxes
- High Main. Costs
- Devel. Press.
- Family Dynamics

Responses

WI
PA
OR
WA
2007-2010 Offspring Interview Results:

*Important or very important to help keep forestland*

(n = 620 offspring interviews)

Responses

<table>
<thead>
<tr>
<th>Property tax relief</th>
<th>Ecosystem services</th>
<th>Market for biomass</th>
<th>Steady timber prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>WI</td>
<td>PA</td>
<td>OR</td>
<td>WA</td>
</tr>
</tbody>
</table>

Graph showing the percentage of responses for each category.
Is it possible to link *carbon banking* to *health care payments*?
American Carbon Registry (ACR): Woodlands Carbon listed on registry.

- For first time, protocols established specifically for family forest landowners
- 20 year contract
- Carbon credits generated from certified forest management not preservation
- Carbon baseline established on net present value of 5% for NIPF landowners. Carbon credits earned by managing land above 5% NPV (usually through longer rotations)
In 2010... The Pinchot Institute introduced the **Forest Health-Human Health Initiative**...

Based on *‘value-added’* health care business proposition at three levels:

- Carbon buyer
- Forestland owner
- Rural forest community

*Selling carbon alone may not be enough*
All 20 years of payments from carbon buyers go *direct to health care accounts*.

90% of payments go to landowner *ATreeM Card (value-add to landowner)*.

10% of payments goes direct to health care in rural community. *(value-add to community)*.

Quantification of payments to social value (health care) for carbon buyer *(value-add to carbon buyer)*.
Value-Added Carbon Proposition

Carbon buyer:
- No payments to landowner.
- All payments to health care accounts.
- Annual quantification of payments to health care accounts for global investor recognition.

Forestland Owner:
- Long-term income stream for family health care.
- No insurance policy required.
- Non-taxable income status.

Rural Forest Community:
- Long-term income stream for community health care (physician training; virtual technology; home medical services).
• Rural forestry community in crisis; rebuilding itself on sustainability platform; national attention.

• Over 700 family forest owners collectively owning over 50,000 acres

• Very limited access to health care in community; 40 miles away from medical centers. Just losing their health care clinic.

Back to landowners and offspring, but laser in on health care costs and carbon contract interest:

Columbia County, Oregon
Wisconsin
North Carolina

n = 450 landowners and offspring
FH-HH 2010-2011 Survey Results: Landowner
How likely to accelerate the sale of timber to pay for...
(% who rated likely or very likely)

Likely to increase harvest to pay for . . .

Likely to sell forestland to pay for . . .
We also learned a few other important things:

• For a high percentage, only high-deductible insurance policies available to them ($5,000 or more per year). As a result . . .

• Underinsured: 40% landowners; 60% offspring

• $5,000 in out-of-pocket expenses for health care: 47% landowners; 54% offspring

• No long term care insurance: 70% landowners; 80% offspring
Devil-in-the-detail issues.
Show-stoppers for landowners and/or offspring?

- Contract length (20 years)
- All lands
- If taxable, what then?
- Contract stays with land
- 10% redirect to community health care
FH-HH 2011 Survey Results: **Landowners**
Potential carbon contract requirements: Show Stoppers? (% of who said no)

**FH-HH 2011 Survey Results: Offspring**
Potential carbon contract requirements: Show Stoppers? (% of who said no)

Show-stoppers for landowners?
Show-stoppers for offspring?
Interested in participating in a carbon payment to health care contract?

FH-HH 2011 Survey Results:  
Landowners & Offspring
Interested or very interested in a carbon payment to health care program?
(% who said yes) (n = 450)

... but minimum of $1,000/yr. to ATreeM card required
With a minimum of $1,000 per year to the ATreeM card . . .

<table>
<thead>
<tr>
<th>Location</th>
<th>$/MtCO₂e</th>
<th>Acreage served</th>
<th># of landowners</th>
<th># of acres</th>
<th>Avg annual $ deposit to ATreeM™</th>
<th>Added MtCO₂e For 20-yr &amp; avg yearly</th>
<th>Avg annual carbon payment</th>
<th>Avg annual $ deposit to rural health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia County Oregon</td>
<td>$15</td>
<td>51-100</td>
<td>101</td>
<td>6875</td>
<td>51-100: $2,438</td>
<td>1,672,866</td>
<td>$950,000</td>
<td>$36,500</td>
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<tr>
<td></td>
<td></td>
<td>101-500</td>
<td>44</td>
<td>8033</td>
<td>101-500: $6,507</td>
<td>63,643</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>501+</td>
<td>4</td>
<td>3181</td>
<td>501+: $36,992</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$8.50</td>
<td>101-500</td>
<td>44</td>
<td>8033</td>
<td>101-500: $2,749</td>
<td>789,089</td>
<td>$340,000</td>
<td>$10,500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>501+</td>
<td>4</td>
<td>3181</td>
<td>501+: $18,287</td>
<td>39,454</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Partnerships currently formed to take next steps . . .
The Forest Health - Human Health Initiative

- Foundation houses the American Tree Farm (ATF) forest landowner certification program.
- ATF serves over 90,000 family forestland owners; 32 states; over 24 million acres of forestland.
The Forest Health - Human Health Initiative

- Woodlands Carbon in Oregon
- National carbon project developers with NW subsidiary L&C Carbon.
• Internationally recognized carbon registry
• Nation’s first carbon protocols specifically adapted to family forestlands.
• MOU with Pinchot Institute as FHHH carbon verifier
The Forest Health - Human Health Initiative

Forest Health Human Health Model: Direct link between health care & forests

Human Health

Rural Health (Community)

Forest Aggregator

Project Developer

Carbon Registry

Landowners (A, B, & C)

Forest Health

ATreeM Administrator

10% $ + 90% $

Annual $ distribution report back to . . .

Card administrator?

Carbon Buyers

Trademark for ATreeM card secured by Pinchot Institute.

www.pinchot.org

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Oregon Department of Forestry first in the nation to look at carbon contract on state forestlands.

Legislative action in process to secure non-tax status for ATreeM card
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- COMP-NW
- Committed to training NW students to service NW communities.
- Established FHHH priority admittance placement position.

**Forest Health Human Health Model: Direct link between health care & forests**

- **Human Health**
  - Rural Health (Community)
  - Landowners (A, B, & C)
  - Forest Health
  - Carbon Registry
  - Carbon Buyers

- **Committed to training NW students to service NW communities.**

**American Carbon Registry**

**OREGON**

**Western University**
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Targeting health care sector companies that participate in the Carbon Disclosure Project Global 500 report for Wall Street investors

Pfizer?
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Forest Health Human Health Model: Direct link between health care & forests

FHHH Institute
new 501 (c) (3)

Innovation

Expansion
Next Steps:

- **Finalize business plan** for launch in Columbia County by end of 2013
- **Complete ground work** with Columbia County landowners for carbon contract development
- **Secure lead health care sector carbon buyer**
- Secure Oregon Legislative *non-tax status for ATreeM card* (in process).
- **Expand forestland owner participation** opportunity in other regions.
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