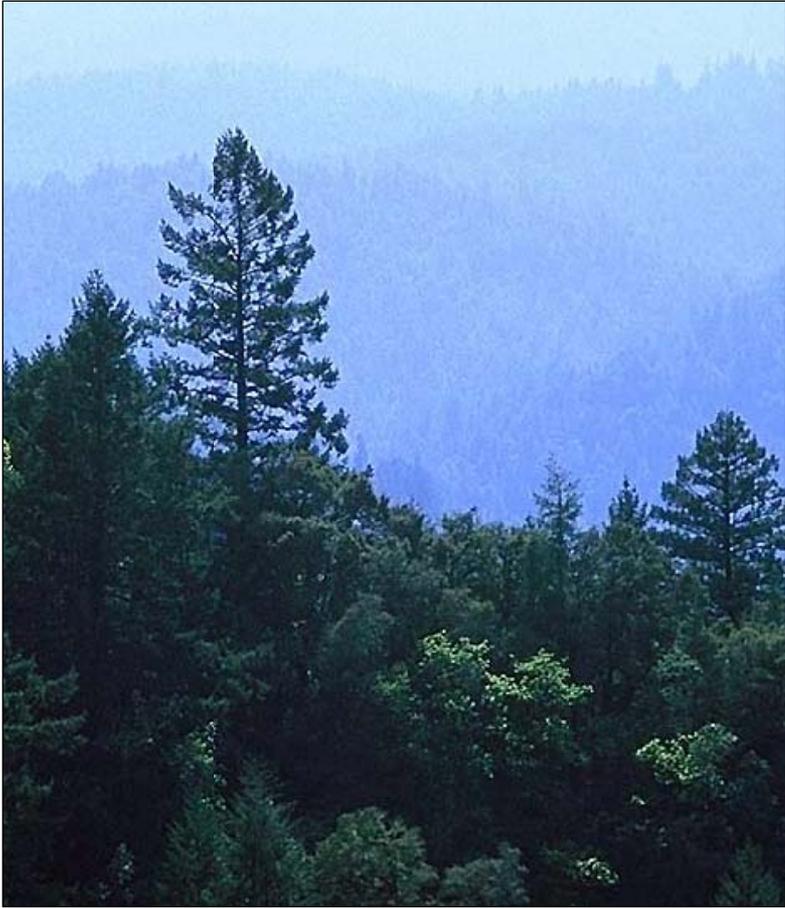




*The TCF Forest Carbon Experience*

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## *Overview of presentation*

- *TCF's GoZero<sup>®</sup> Program and North Coast Forest Conservation Initiative (CA).*
- *California Climate Action Registry– policy background, project development and verification, market experience.*
- *Suggestions for SFI Participants.*

Want to fight Global Warming without changing your carbon-spewing lifestyle?

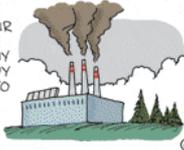
# CARBON OFFSETS 'R' US

You can't! But WE can make you feel like you can! HERE'S HOW IT WORKS-

1 YOU PAY US A FEW HUNDRED BUCKS



2 WE SPLIT YOUR MONEY WITH SOME COMPANY THAT ALREADY HAD PLANS TO REDUCE ITS CARBON EMISSIONS



OR MAYBE WE'LL JUST PLANT SOME TREES IN A DEFORESTED WOODLAND WHERE THEY WOULD HAVE GROWN ANYWAY!

3 THEN WE SHOW YOU SOME FUZZY MATH.  $CO_2 + CH_4 + \frac{1}{2} IT \leq 5 MPG < 10K ft^2 = GREEN$

4 AND YOU CAN CONTINUE YOUR HARD-CHARGIN' WAY ON THE ENVIRONMENTAL HIGH ROAD!



Our Satisfied Customers



"Now I can walk my carbon-neutral footprint all over my energy-guzzling mansion!"  
-A. Gore, Nashville, Tenn.



"I travel in my caravan of Hummers and in my private jet, but I'm still a green governor. Hasta la vista, critics. Get it?"  
-A. Schwarzenegger, Sacramento, Calif.

## AND TRY THESE OTHER SERVICES--

**@\$\$-HOLE OFFSETS 'R' US**  
GO AHEAD, BE AS BIG AN @\$\$-HOLE AS YOU WANT!  
WE'LL PAY SOME POOR JERK TO BE EXTRA-NICE!  
OUTTA MY WAY!  
YOU FIRST!



YOUR NET IMPACT WILL BE @\$\$-HOLE NEUTRAL!

**WAR OFFSETS 'R' US**  
(A division of the U.S. government)  
YOU SUPPORT THE WAR, BUT THERE'S NO WAY YOU OR YOUR KIDS ARE GOING TO IRAQ!  
JUST PAY YOUR TAXES, AND WE'LL PAY SOME WORKING-CLASS SHMEE TO GO!  
YOUR WAR-POSITIVE FOOTPRINT WILL BE ALL OVER IRAQ!



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"It's great! You just tell him how much pollution your company is responsible for and he tells you how many trees you have to plant to atone for it."



# Go Zero<sup>®</sup>



**Developed to engage leading corporations and individuals who did not see themselves primarily as emitters, but who wanted to do something positive about climate change. The Fund helps its donors calculate their estimated annual CO<sub>2</sub> emissions and then estimates how many trees would need to be planted on public land to trap or sequester those emissions over the lifetime of a forest.**

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## GoZero<sup>®</sup> Corporate Partners

- Dell
- Delta
- Gaiam
- The Home Depot
- Land Rover Portland
- Land Rover Las Vegas
- New Jersey Resources
- The North Face
- Philadelphia Eagles
- Timberland
- Travelocity
- U-Haul
- Universal Studios
- Walt Disney Company
- Yale School of Forestry

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# CONSERVATION PROSPECTS FOR THE NORTH COAST



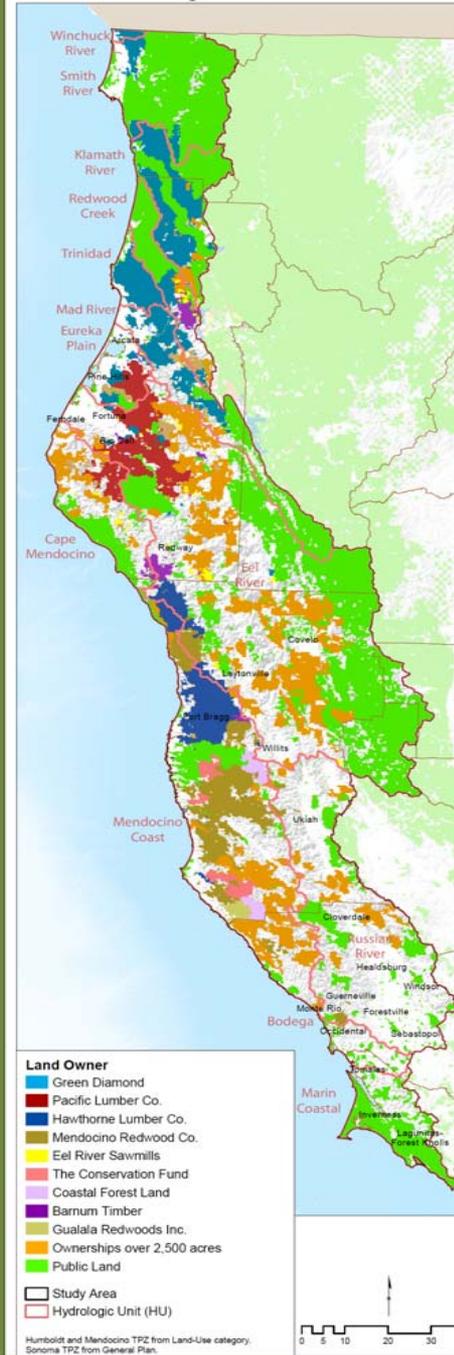
Salmon Creek Watershed, Mendocino County, California,

© 2002-2005 Kenneth & Gabrielle Adelman, California Coastal Records Project, [www.CaliforniaCoastline.org](http://www.CaliforniaCoastline.org)

## *A Review and Analysis of Existing Conservation Plans, Land Use Trends and Strategies for Conservation on the North Coast of California*

Report Prepared by The Conservation Fund  
Project Funding and Support by California State Coastal Conservancy  
August 2005

### Land Ownerships



### Conservation Priorities of Selected Plans





## Harwood lumber seeks bankruptcy protection

By [Glenda Anderson](#)  
THE PRESS DEMOCRAT

Published: Tuesday, May 27, 2008 at 4:30 a.m.

A family-owned lumber mill that has been a pillar of Mendocino County's business community for almost 60 years is fighting for its life.

Five months after the slumping housing economy forced what was supposed to be a one-month shutdown, Harwood Products has filed for bankruptcy protection in an effort to keep a major lender at bay.

Harwood owes the Wells Fargo bank \$2.7 million, said Art Harwood, the third generation of his family to run the mill.

"They're wanting to force an auction," he said.

The bankruptcy, filed Friday, halts the auction, which was scheduled for early next month, Harwood said.



CHAD SURMICK/The Press Democrat  
Harwood Products mill in Branscomb is owned by Art Harwood, shown in 1997.





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- \$70 million invested
- 40,000 acres conserved
- 55 miles of salmon spawning stream protected and \$2.3 million committed to watershed restoration
- 388 million board feet of timber under sustainable management, dual FSC & SFI certified

- 600,000 metric tons of CCAR verified GHG emission reductions (sold or contracted)
- 16 local employees or year-round contractors
- \$4 million annual operating budget
- 110 field tours or public meetings.



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[Climate Action Reserve](#) is a program of the California Registry which tracks and registers voluntary projects that reduce emissions of GHGs.

#### RESOURCES

**CARROT** is the California Registry's online GHG reporting and calculation tool. [Log into CARROT.](#)

#### PUBLIC REPORTS

[View](#) third party verified emission reports for our members.

The **General Reporting Protocol 3.0** has just been released! View [GRP 3.0](#) and a [summary of changes from GRP 2.0 to 3.0.](#)



The Climate Registry

[The Climate Registry](#), is a new GHG registry that serves all of North America. It is our sister organization and based upon the work of the California Registry.

View a [comparison](#) of the California Registry and The Climate Registry.

#### SPOTLIGHT

##### NEW EMPLOYMENT OPPORTUNITIES:

The California Climate Action Registry is hiring! To view open positions visit the [Job Opportunities](#) section.

##### PRESS RELEASES & NEWS:

August 25, 2008

[ANSI Partners with California Registry for Greenhouse Gas Accreditation Program](#)

August 12, 2008

[Urban Forest Protocol Approved by California Registry Board](#)

August 4, 2008

[Derik Broekhoff Joins California Climate Action Registry as Vice President](#)

April 14, 2008

[Climate Action Reserve Brings Order to Voluntary Carbon Market](#)

[Reuters Article: California group seeks standards for carbon market](#)

#### EVENTS

California Climate Action Registry [Calendar of Events](#)

#### CLIMATE ACTION NEWS

[View](#) this month's newsletter

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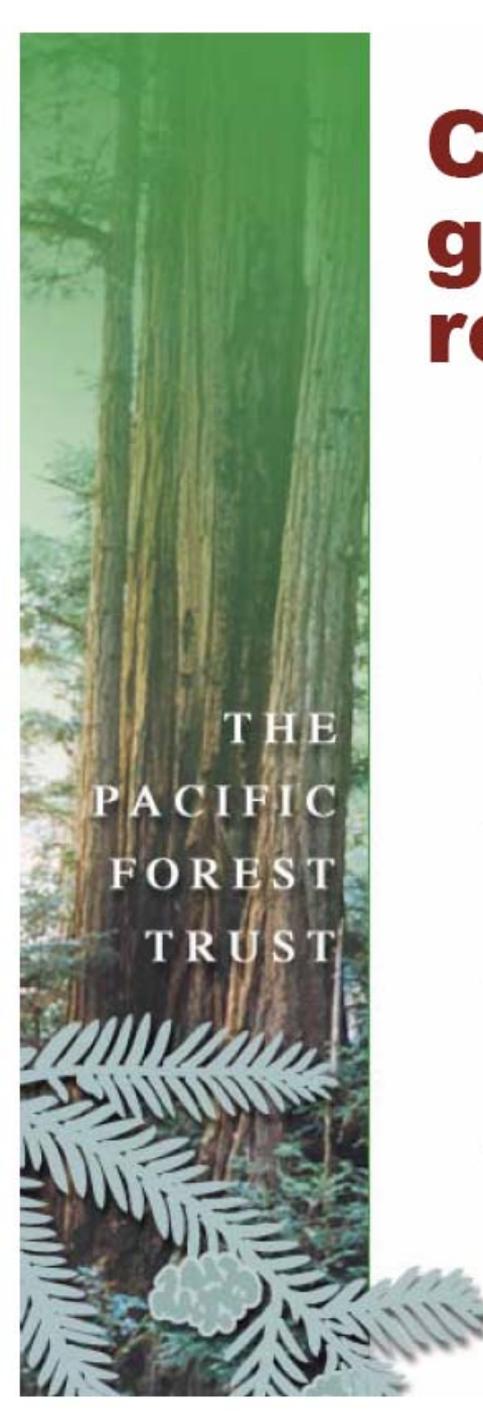


# Climate Change Program Key Provisions

- **Monitor and regulate GHG emission sources**
  - Adopt early action measures and GHG emissions reduction plan
  - Adopt 2020 statewide GHG emissions limit based on 1990 levels
  - Establish mandatory reporting rules for GHG emissions sources
  - Establish program to achieve quantifiable, cost-effective GHG emission reductions via regulations, market mechanisms and other actions

# California builds from global norms for emissions reduction projects

- **Baselines/Additionality**
  - Exceed BAU, including mandatory laws/land use rules
- **Permanence:**
  - Conservation easements as tool
- **Avoiding/Minimizing “Leakage”**
  - Entity-wide reporting
- **Third Party verification**
  - State licensed certifiers (foresters)
- **Environmental co-benefits**
  - Native species, sustainability, resiliency to stress of climate change

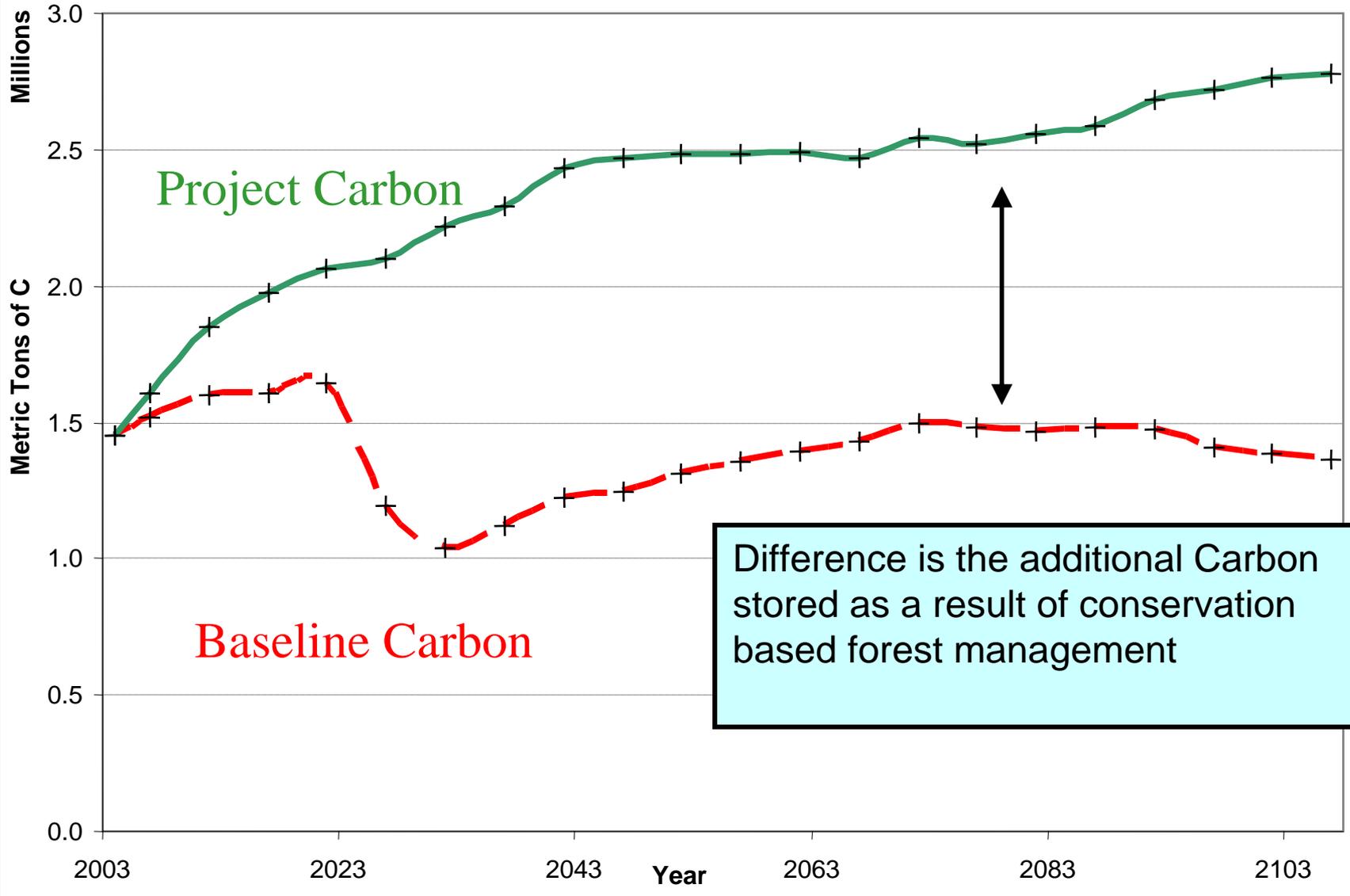


THE  
PACIFIC  
FOREST  
TRUST

# Steps to verify the emission reductions of the Garcia River Forest

- 1. Acquire property**
- 2. Join the California Climate Action Registry**
- 3. Conduct forest inventory**
- 4. Develop baseline scenario – clear cut on 60 year rotation with required buffers for streams, endangered species, and unstable slopes-- per Forest Practice Rules**
- 5. Develop project activity scenario – thin overstocked coniferous stands, reduce hardwood competition in mixed stands, selectively harvest for healthy growth rather than maximizing revenues– per Management Plan**
- 6. Model baseline and project activity using FPS or CRYPTOs**
- 7. Convert wood volume differential into CO2 equivalent to determine “biological emissions”**
- 8. Calculate organization’s energy and fuel usage to determine “non-biological emissions”**
- 9. Register “conservation-based forest management project” with CCAR**
- 10. Retain verifier to conduct audit and submit final report**

# Total Carbon (Live and Dead) Over Time



Difference is the additional Carbon stored as a result of conservation based forest management



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February 26, 2008

## PG and E Buys Some Hot Air In California Trees

Posted by Keith Johnson  
Rebecca Smith reports from California:

Pacific Gas and Electric Co., the big California utility, is buying its first carbon credits for forest conservation, a move that could be a model for other utilities.

Under the arrangement, PG&E is making annual purchases of 214,000 carbon-dioxide emission credits derived from California forest land. For PG&E, the deal is tiny, amounting to only about 1% of the utility's annual CO<sub>2</sub> emissions. But it marks a big purchase in the world of forestry-derived CO<sub>2</sub> credits, an area gaining interest around the globe. ([Here](#) and [here](#).)

PG&E will pay \$10 for each credit, for a total of about \$2 million per year. The deal satisfies the California Climate Action Registry, a standards-setting body that has created protocols to quantify and verify the mechanics of carbon storage.

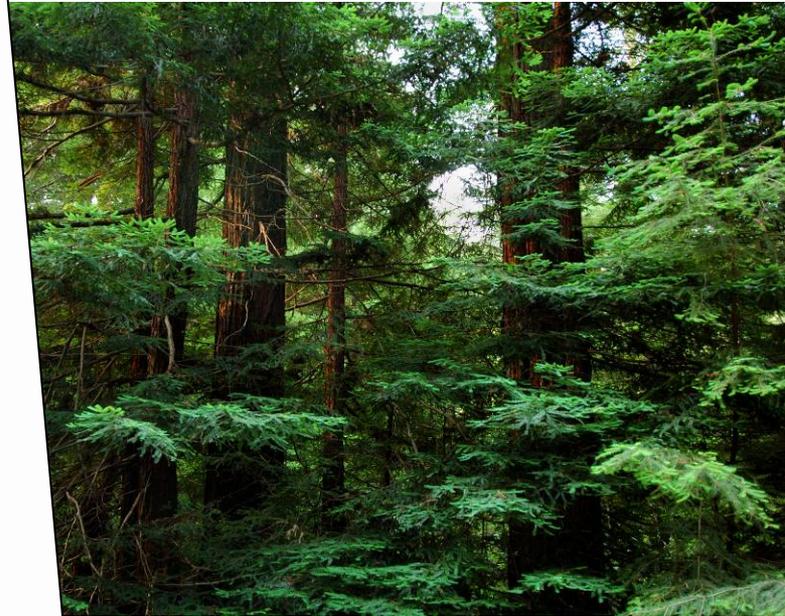
The utility is spending money from customers who volunteered for a program to make them "carbon neutral." In coming years, U.S. utilities likely will have to cut their carbon footprint to slow climate change. Most will cut emissions at power plants, but many likely will buy carbon offsets, too.

Most of PG&E's purchase – 200,000 annual credits – is going through The Conservation Fund, an environmental group. The credits

come from a 23,780-acre parcel in the Garcia River Forest of Mendocino County that was last logged in 2004 by other owners. The Conservation Fund, working with Nature Conservancy, plans to restore it and run it as a "sustainable" working forest with careful timber harvesting. Carbon sales will generate more cash than tree cutting — \$700,000 annually versus \$500,000.

"We're not just tree farmers anymore, we're carbon farmers," said Chris Kelly, California program director at the Conservation Fund. He estimates a redwood tree is worth more for its carbon credits than lumber at carbon prices above \$30 a ton.

A smaller part of the PG&E purchase – 14,000 annual credits – is coming through the Sempervirens Fund, formed in 1900 to protect California's giant sequoias. Those credits cover a 202-acre tract of redwoods and fir trees in the Lompico Headwaters Forest in Santa Cruz County that's been removed from active logging. Sempervirens bought it as part of a 425-acre parcel in 2006 for \$3.85 million from a timber company. Its aim is to transfer title to a water district for protected watershed. Sempervirens is placing a conservation easement on the 202-acre tract, permanently prohibiting logging.



# Estimated Costs for Initial Registration & Verification

- Timber Inventory and Cruise: \$80,000
  - Modeling/reporting carbon: \$75,000
  - Certification of project activity: \$35,000
- Total: \$190,000

## *Or as I prefer to think of it:*

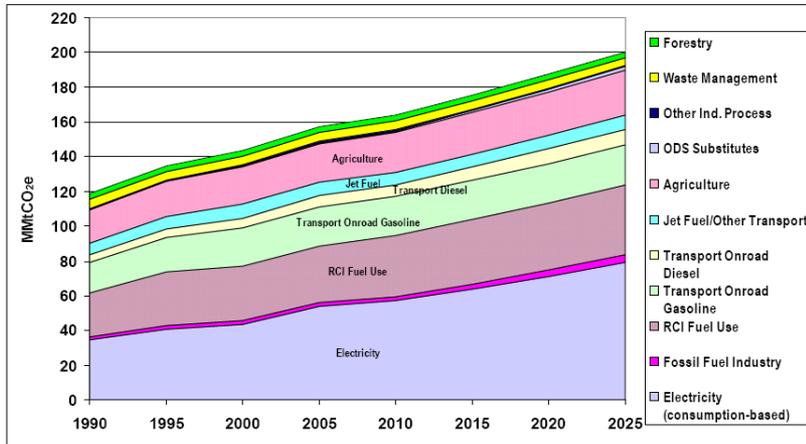
24,000 acres of cutover timberland...	= \$18,000,000
900 new inventory plots...	= \$80,000
2 years of resource planning...	= \$200,000
<u>1 Numerical Terradynamic Simulation grad student</u>	<u>= \$60,000</u>
Being paid to clean the atmosphere...	= PRICELESS!



*there are some things money can't buy,  
for everything else there's MasterCard.*

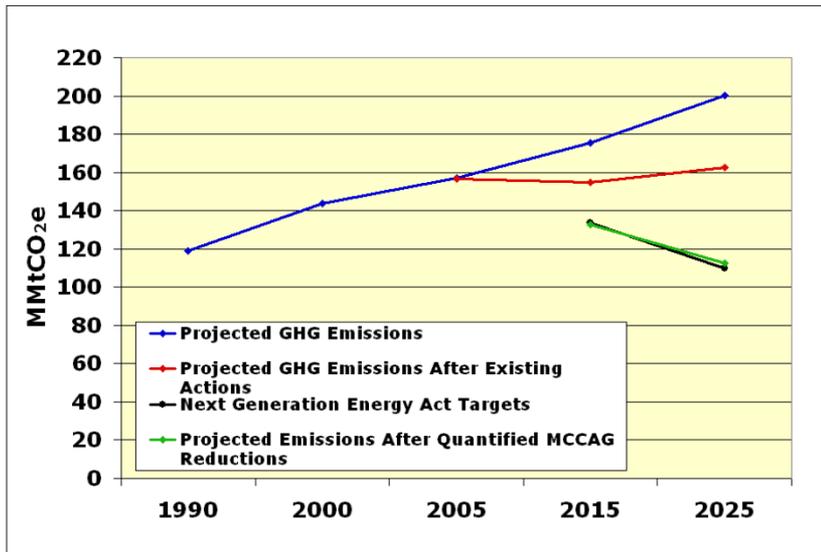
# Minnesota context

Figure EX-1. Gross GHG emissions by sector, 1990–2020: historical and projected (consumption-based approach) business as usual/base case



RCI = direct fuel use in residential, commercial, and industrial sectors; ODS = ozone depleting substance.

Figure EX-4. Annual GHG emissions: reference case projections and MCCAG recommendations (consumption-basis, gross emissions)



MMtCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent; GHG = greenhouse gas; MCCAG = Minnesota Climate Change Advisory Group.

Table EX-3 (continued). Agriculture, Forestry, and Waste Management Policy Recommendations

Policy No.	Policy Recommendation	GHG Reductions (MMtCO <sub>2</sub> e)			Net Present Value 2008–2025 (Million \$)	Cost-Effectiveness (\$/tCO <sub>2</sub> e)	Level of Support
		2015	2025	Total 2008–2025			
AFW-1	Agricultural Crop Management						Unanimous
	A. Soil Carbon Management	0.72	1.3	15	-\$34	-\$2	
AFW-2	B. Nutrient Management	0.79	1.3	15	-\$543	-\$37	Unanimous
	Land Use Management Approaches for Protection and Enrichment of Soil Carbon						
	A. Preserve Land	0.15	0.44	3.7	\$120	\$33	Unanimous
	B. Reinvest in Minnesota—Clean Energy (RIM-CE)	0.09	0.19	1.8	\$59	\$34	
	C. Protection of Peatlands & Wetlands	Not Quantified					
AFW-3	In-State Liquid Biofuels Production						Super-majority (4 objections)
	A. Ethanol Carbon Content	1.8	2.2	27	-\$242	-\$9	
	B. Fossil Diesel Displacement	0.03	0.19	1.4	\$74	\$55	
	C. Gasoline 35% Displacement	2.8	9.1	73	\$336	\$5	
AFW-4	Expanded Use of Biomass Feedstocks for Electricity, Heat, or Steam Production	1.3	3.8	31	\$102	\$3	Unanimous
AFW-5	Forestry Management Programs to Enhance GHG Benefits						Unanimous
	A. Forestation	0.55	2.2	17	\$218	\$13	
	B. Urban Forestry	1.2	2.7	26	-\$295	-\$12	
	C. Wildfire Reduction	Not Quantified					
	D. Restocking	2.1	8.4	65	\$2,187	\$33	
	E. Forest Health and Enhanced Sequestration	Not Quantified					
AFW-6	Forest Protection—Reduced Clearing and Conversion to Non-Forest Cover	2.2	2.7	34	\$101	\$3	Unanimous
AFW-7	Front-End Waste Management Technologies						Unanimous
	A. Source Reduction	0	3.6	20	\$59	\$3	
	B. Recycling	3.1	3.4	45	-\$207	-\$5	
	C. Composting	0.29	0.41	4.9	\$137	\$28	
AFW-8	End-of-Life Waste Management Practices						Unanimous
	A. Landfill Methane Recovery	0.07	0.73	4.4	\$5.7	\$1	
	B. Residuals Management	0.52	0.63	8.1	\$650	\$80	
	C. WTE Preprocessing	0.37	0.84	7.9	\$257	\$32	
	<b>Sector Total After Adjusting for Overlaps*</b>	<b>13.2</b>	<b>29.5</b>	<b>279</b>	<b>\$2,090</b>	<b>\$7</b>	
	<b>Reductions From Recent Actions</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
	<b>Sector Total Plus Recent Actions</b>	<b>13.2</b>	<b>29.5</b>	<b>279</b>	<b>\$2,090</b>	<b>\$7</b>	

GHG = greenhouse gas; MMtCO<sub>2</sub>e = million metric tons of carbon dioxide equivalent; \$/tCO<sub>2</sub>e = dollars per metric ton of carbon dioxide equivalent; WTE = waste-to-energy.

Negative values in the Net Present Value and the Cost-Effectiveness columns represent net cost savings associated with the recommendations. Totals in some columns may not add to the totals shown due to rounding.

\*Overlaps include an assumed 100% overlap of AFW-3b&3c with TLU-3 (reductions excluded from AFW totals); an assumed 100% overlap of AFW-4 with ES-5 (reductions and costs excluded from AFW totals); overlap of AFW-7&8 (incremental benefits and costs of AFW-8 included in the AFW totals).

# Suggestions for SFI Participants--

- Learn your acronyms– CCAR, CCX, VCS, RGGI, WCI.
- Acknowledge the challenges of forest projects.
- Talk to the buyers.
- Recognize the difference between voluntary and compliance systems.
- Be patient– this is still an emerging market.
- Get involved! Help be a voice for forests in state and national discussions.

## References—

- <http://www.coastalconservancy.ca.gov/Programs/NorthCoast/CF%20book-web.pdf>
- <http://conserveonline.org/workspaces/GRF>
- <http://www.climateregistry.org/>
- <http://www.mnclimatechange.us/>