Incentivizing Private Landowners to Invest in Ecosystem Restoration Presented by

GREENE ECONOMICS

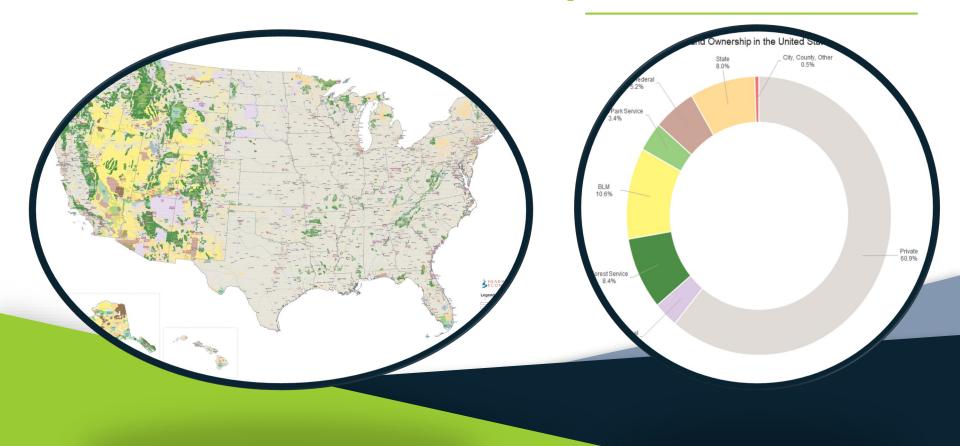
National Conference on Ecosystem Restoration, Albuquerque, NM 2024



- I. The Case for Incentives
- II. The Incentive Landscape
- III. Barriers and Constraints
- IV. Forest Carbon Incentives in WA-A Case Study



Private Land Ownership in the United States



The Incentive Landscape



The Case for Incentives

"The right incentive mechanisms can encourage changes in land- use patterns that achieve habitat objectives at lower cost."

Casey et al. 2006. Defenders of Wildlife: Incentives for Biodiversity Conservation: An Ecological and Economic Assessment



Center for Conservation Incentives

e of Environmental Defense launched with major support from the Doris Duke Charitable Foundation

> environmental defense finding the ways that work



Mechanisms for Increasing Biodiversity

- regulatory and economic disincentives,
- legal and statutory incentives,
- property rights innovations,
- market-oriented institutions,
- financial incentives,
- public tax incentives,

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- educational, technical assistance,
- administrative and recognition incentives

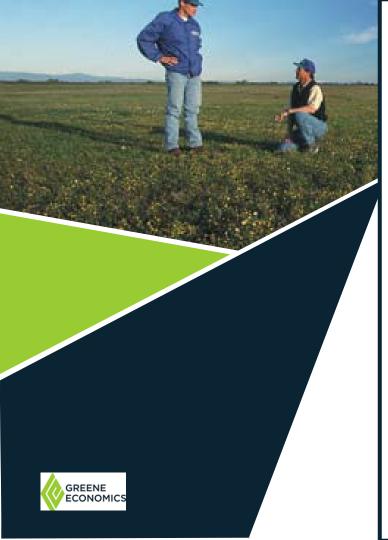


Table 2. Assessment Summary of Voluntary Stewardship Incentive Mechanisms

Type of Incentive	Biological Effectiveness	Economic Efficiency	Economic Efficiency
		Cost- Effectiveness	Transaction Costs
Institutional Innovation			
Legal/Statutory			
Safe Harbor	+	+	3
Candidate Agreements	?	?	?
Regulatory Relief	?	?	?
Property Rights			
Conservation Easements	+*	+	3
Covenant and Deed Restrictions	?	?	?
Stewardship Exchange Agreements	?	?	?
Market Oriented Institutions			
User Fees	+	+*	1
Ecotourism	+	+	1
Ecolabeling	+*	+*	3
Mitigation Banking	+*	-	3
Conservation Banking	+	+	2
Tradable Development Rights	+	+*	3
Financial Incentives			
Compensation Programs	+*	+	2
Cost-share Incentives	+	+	1
Land Rentals	+*	-	1
Conservation Contracts	?	?	?

Fast Forward to 2022

"Incentivizing the production of ecosystem services is critical to promote specific land management behaviors that improve ecological performance and ultimately sustain an environment for present and future generations."

Coleman and Machado, Ecosystem Services in Working Lands Practice and Policy of the U.S. Northeast: Successes, Challenges, and Opportunities for Producers and Extension, 2022.





Conclusion 1

Producers and land managers operate according to the "safetyfirst" principle and are often riskaverse.



Scaling-up conservation practices: how much can farmers afford?

Prairie strips have the potential to contribute a suite of ecosystem services. A new study from the MSU Keller Biological Station finds a large swath of corp cropland could be converted to prairie appropriate payment

Conclusion 2

Programs are structured to incentivize either a single ecosystem service or multiple layered services.



Conclusion 3

Very few programs reviewed in this assessment directly address resilience, and even fewer address resilience beyond the farm scale.



Conclusion 4

Ecosystem service provisioning programs for young and beginner farmers... may not be enough to entice young people into working lands-related careers.





Closer to Home



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ENVIRONMENT

Are WA forests worth more as carbon sponges or timber harvests?

'Working forests' like state-run T - but logging is deeply entrend

Washington's Small Forest Landowners in 2020

Status, trends and recommendations after 20 years of Forests & Fish

January 11, 2021



ANNUAL REPORT



Washington State and Private Forest Fact Sheet, 2024

Forest Facts and Accomplishments

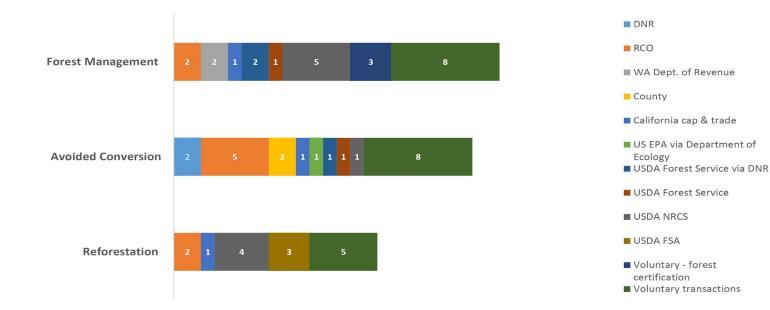
Selected Facts	Value
Population	7,705,281
Acres of Forest Land	22,063,697
Acres of Nonindustrial Private Forest Land	6,110,410
Number of NIPF Landowners	51,006
Acres of Federal Land Under State Fire Protection	180,756
Acres of Private Land Under State Fire Protection	12,194,932
Number of Rural Fire Departments	558
Cities and Towns	281
Forest Based Employment	28,970
Economic Impact of Forestry (by rank)	3
State Forestry Budget (All Sources)	145,877,000

FY 2023 Accomplishments	Value
Landowners Receiving Educational or Technical Assistance	11,340
Acres Covered by New or Revised Forest Stewardship Plans	751
Acres in Important Forest Resource Areas Covered by New or Revised Stewardship Plans	137
Volunteer Fire Departments Assisted	0
State Fire Communities Assisted	220
Coop Forest Health Acres Protected	1,000
Forest Legacy Project Acquisitions	0
Communities Provided Urban Forestry Program Assistance	136
Population Living in Communities Provided Urban Forestry Program Assistance	5,203,863
Urban Forestry Volunteer Assistance	108,402

Forest Carbon Incentives in Washington

Brian Kittler, Senior Director of Forest Restoration, American Forests, Washington Carbon Sequestration Advisory Group May 2020,

NUMBER OF INCENTIVES ARRAYED BY CARBON NEXUS



BARRIERS AND LIMITATIONS BY CARBON NEXUS

Carbon nexus	Incentive type	Length of commitment	Potential Barriers and Limitations
Reforestation	Annual rental payment	10 - 15 yrs eligible for re-enrollment	Funding amount is limited; perceived opportunity cost; potentially temporary.
	Carbon offset	25 yrs; +30 yrs; +100 yrs	Lack of demand for ex ante crediting (changing? e.g. Climate Forward).
	Practice cost-share	1 - 5 yrs	Cost-share may not include financial and technical assistance to optimize survival.
Avoided conversion	Grants for easement & acq.	10 yrs; 30 yrs; 50 yrs; +100 yrs; Permanent	Land is expensive; term-easements via HFRP are new and lack funding; financing involves multiple sources.
	Carbon offset	100 years; Permanent	Land is expensive; limitations for landowners based on ownership type, parcel size, and forest condition (e.g. carbon stocking).
	TDR market	Permanent	Land is expensive
	Public debt for acq.	Permanent	Land is expensive
Forest management	Carbon offset	1 yr; 5 yrs; 20 years; 40 years; +100 yrs	High transaction costs; high opportunity costs; project lengths can be long; limitations for landowners based on ownership type, parcel size, and forest condition (e.g. carbon stocking).
	Practice cost-share	1 - 5 yrs; 10 yrs; 30 yrs	Technical assistance just beginning to address carbon sequestration; carbon sequestration- specific cost-share is just now available, e.g. in CSP and RCPP but it is not being utilized.





- uncertainty/risk
- piecemeal

- high transactions and opportunity costs
- not enough funding



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THANK YOU