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Market Supply Analysis: Landowner Preferences for Ecosystem Service Provision in Wyoming

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Market Supply Analysis: Landowner Preferences for Ecosystem Service Provision in Wyoming

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Upper Green River Conservation Exchange

Our team is establishing a Payment for Ecosystem Services (PES) market, whereby landowners (primarily engaged in cattle and hay production) implement best management practices that result in provision of ecosystem services (wildlife habitat and water resources/riparian function), in exchange for payment from voluntary buyers (for example, energy companies in need of off-site mitigation credits). The PES market is called the Upper Green River Conservation Exchange and is currently conducting pilot transactions.



The Problem

How do we structure the market to ensure voluntary landowner (i.e., seller) participation? Issues include:
 How to deal with grazing allotments on public lands.
 How to structure the risk of non-attainment of ecological target outcomes; and
 Which ecosystem services/management practices and contract terms are of interest on a working landscape in this region.

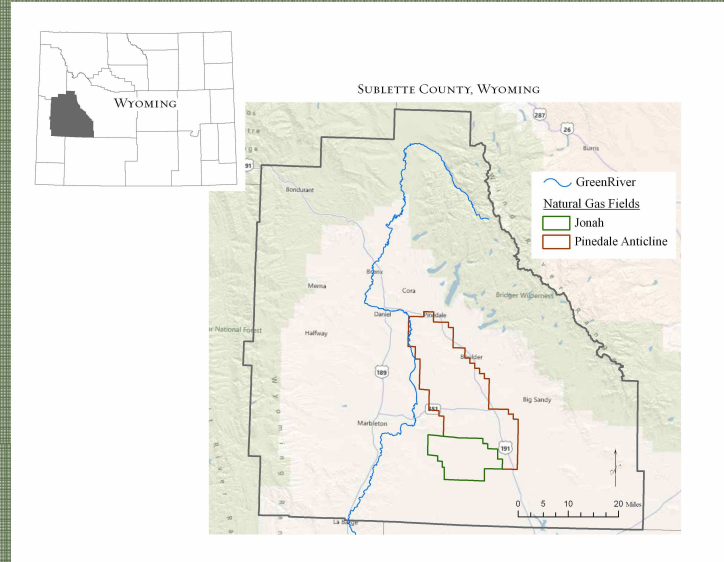


Objectives

We conducted a survey in which we collected information related to demographics, land use, socio-economic status, PES familiarity, and other pertinent factors to inform analyses of:
 •Factors affecting landowners' stated willingness to participate in a PES market; and
 •Program design preferences: what ecosystem services (wildlife habitat and water resources/riparian function) and program features (management practice, contract length, payment level) are of interest to landowners (choice experiment analysis).



Study Site: Upper Green River Basin, Southwestern Wyoming



Key Finding and Conclusions

Landowners indicated three primary reasons for not enrolling in existing conservation programs:
 1. Concern about government restrictions
 2. Paperwork/general hassle
 3. Concern about government access to private land
 These responses indicate the importance of transparent governance of a PES market and a straightforward interface for landowners.

Landowners expressed interest in keeping land in the family and concern about environmental regulations limiting what they can do on their land. A PES program could address both these concerns, by providing landowners with an additional stream of revenue that compensates them for making changes to their ranching operations.

Anecdotal evidence had indicated that landowners preferred shorter contracts that preserved their flexibility to change operations in the future. The CE analysis indicates that landowners do not actually prefer shorter contracts to longer ones.

The CE analysis also indicates that landowners must be compensated more to implement certain management practices: for example, removing fencing and adjusting headgates slowly for fish: these practices may have a greater impact on their ranch operations than other management practices.



Choice Experiment Example

Program Features		Program A		Program B
	Management Practice:	Manage flood irrigation to maximize return flow, sub-irrigation, and riparian benefits.		Open gates in known wildlife corridors during migration periods in spring and fall.
	Target Outcome:	Riparian habitat, water quality, and fish habitat.		Wildlife Migration Corridors
	Contract Length:	5 years		10 years
\$	Payment Level: (per year)	\$ 500 Per irrigated acre		\$ 5 Per gate opened
I would prefer to enroll in...		<input type="checkbox"/> Program A	<input type="checkbox"/> Neither	<input type="checkbox"/> Program B
The program I think would be more popular in Sublette County is...		<input type="checkbox"/> Program A	OR	<input type="checkbox"/> Program B

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 •The Wyoming NRCS office for a Conservation Innovation Grant to scope the feasibility of a PES market; and
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Photos from M. Purcell, Sublette County Conservation District, unless otherwise attributed

