

Market Based Conservation Initiative – Conservation Innovation Grant

Conservation Credit Supply

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MBCI/CIG Innovation Grant Project
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Economics

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Conservation Credit Supply

- Objective: Provide a supply of conservation credits
 - Assess the willingness of landowners
 - Associated incentives/certainty
 - For conservation habitat credits and related ecosystem services
- Approach to assess landowner interest
 - Literature – e.g. Shari Rodriguez et al.
 - Survey
 - Choice based conjoint analysis



Prior Research & Literature Examples

Wildlife Society Bulletin; DOI: 10.1002/wsb.159

Original Article



Private Landowner Interest in Market-Based Incentive Programs for Endangered Species Habitat Conservation

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Prior Research & Literature Examples

- Sorice, Michael G., Wolfgang Haider, J. Richard Conner, and Robert Ditton. 2011. Incentive Structure of and Private Landowner Participation in an Endangered Species Program. *Conservation Biology* 25(3):587-596
- Serenari, Christopher, M. Nils Peterson, Chris Moorman, Fred Cabbage, Suzanne Jervis. 2015. Application of Choice Experiments to Determine Stakeholder Preferences for Woody Biomass Harvesting Guidelines. *Journal of Sustainable Forestry*. In review.



Survey and Software

- ❑ Proposed market based credit based system
- ❑ Survey with general questions and Conjoint parts
- ❑ Sawtooth / Choice Based Conjoint Software
- ❑ Online survey
- ❑ Quantify perceived preferences for attributes and levels of landowner willingness to supply credits
- ❑ Each scenario of possible payments will be set up as performance contract
- ❑ 5 possible combinations of options



Proposed Contract Options

- ❑ Contract Length (years)
 - 5, 10, 20, 30
- ❑ Cost Share Rate
 - 25%, 50%, 75%, 100% of \$250/ac
- ❑ Incentive Payment (\$/ac/yr)
 - \$25, \$50, \$75, \$100
- ❑ Level of obligation
 - Full, baseline, no obligation
- ❑ Level of assistance
 - Next slide



Proposed Contract Options

- Level of assistance
 - No assistance
 - Assistance in developing a management plan
 - Assistance in developing a management plan and consultation in implementation of the plan
 - Assistance in developing a management plan with full implementation provided throughout the program



How Choice Based Conjoint Works

- ❑ Use random contract combinations to find best / tradeoffs among options
- ❑ Need at least 6 respondents per choice scenario
- ❑ This means at least 300 responses
- ❑ Plus online simulator to examine preferred packages
- ❑ Survey sample from forest / farm associations
 - Sample should be more than 2000 landowners
 - **We need your help with this!**



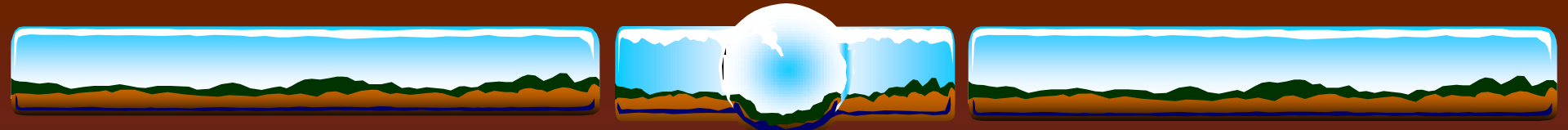
Proposed Outcomes

- ❑ Determined level of economic incentives required for private landowners to implement habitat improvement practices through performance based contracts
- ❑ Recommendations and consideration for increasing participation through incentive program structure
- ❑ suggested improvements in market based approaches



Survey Choice Experiment Samples

- Assume you have land suitable for endangered species protection.
- Now assume someone(s) was interested in using your land to provide endangered species habitat in exchange for your financial compensation.
- The following 12 slides depict four performance contracts (a legal instrument in which you, the landowner, receive the full financial benefits once the criteria of the program have been satisfied).
- You will be asked to choose the one you prefer most after considering each of the five (5) factors in the scenario independently.



**If these were your only options, which would you choose?
Choose by clicking one of the buttons below.**

Level of Assistance = Outside help to manage the land under contract.

Responses include: None; Consultation prior to initiating the contract only; Consultation prior to and through implementing the duration of the contract (i.e., Full).

Cost Share = Percent of total costs required to establish (\$200/acre [one time payment]) and maintain (\$75/acre annually) endangered species habitat.

Incentive Payment = The amount of money the landowner receives for providing habitat. Payment is in \$/acre.

Assurance = Level of legal obligation assigned to landowners to maintain habitat for the endangered species once the program ends. **No Obligation** = landowners will not be obligated to maintain endangered species habitat after the contract ends; **Baseline** = landowners are NOT obligated to maintain endangered species habitat above the level that existed before the contract started; **Full** = landowners must maintain habitat they create until the species has recovered and been delisted.

Typical Question

(1 of 12)

Cost Share	50%	100%	
Level of Assistance	None	Full consult	
Assurance	No Obligation	Full	NONE: I wouldn't choose any of these.
Incentive Payment	\$100	\$25	
Contract Length (years)	20	Permanent	
	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>



0%  100%

Second Randomized Question

(2 of 12)

Cost Share	50%	25%	NONE: I wouldn't choose any of these.
Level of Assistance	None	None	
Assurance	Baseline	Baseline	
Incentive Payment	\$25	\$50	
Contract Length (years)	5	10	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Third Randomized Question

(3 of 12)

Cost Share	100%	25%	
Level of Assistance	Consult prior only	Full consult	
Assurance	Baseline	Full	NONE: I wouldn't choose any of these.
Incentive Payment	\$100	\$75	
Contract Length (years)	Permanent	10	
	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>



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Eleventh Randomized Question, Etc.

(11 of 12)

Cost Share	25%	100%	
Level of Assistance	None	Consult prior only	
Assurance	Full	Full	NONE: I wouldn't choose any of these.
Incentive Payment	\$50	\$75	
Contract Length (years)	5	20	
	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>



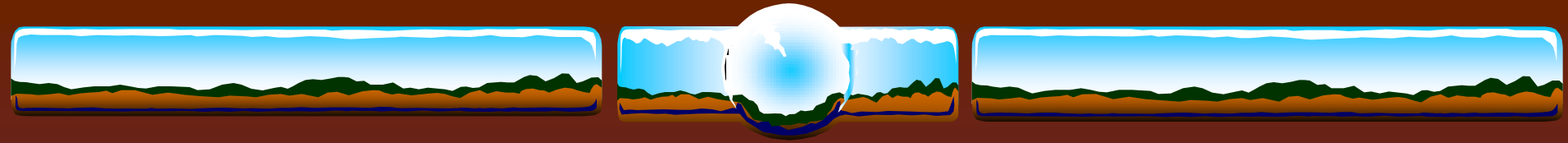
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Owner Objectives Questions Sample

What are your current objectives for your land? (Please rank the top three with "1" being your the highest priority.)

- Agricultural income
- Forest income
- Recreation
- Hunting
- Hunting leases
- Wildlife conservation
- Land investment



Questions and Comments?