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Scenic open space lands along the Bighorn Mountains in north-central Wyoming.

Ranch lands in western Wyoming preserved by a conservation easement.

Introduction

The Intermountain West[1] has witnessed rapid population growth in recent past. The greatest population growth in these states tended to be near urban fringe and/or housing development in rural areas. People are increasingly moving to areas with abundant environmental or natural amenities (McGranahan, 1999; Rudzitis, 1999) such as scenery, rural atmosphere, recreational opportunities, and varied topography (McGranahan, 1999; Rasker and Hansen, 2000). Population influxes into these areas increase land values, which put increased pressure on landowners to develop their land (Plantinga and Miller, 2001). Development of open space lands presents a serious threat to the environment and agriculture.

Open space has been defined as land that retains most of its natural characteristics. This includes lands involved in forestry, grazing, agriculture, and recreational areas such as parks (Fausold and Lilieholm, 1999). These lands are typically part of multi-functional landscapes that provide numerous goods and services simultaneously. Critical wildlife habitat, recreation opportunities, and cultural identity are among the numerous and varied amenities provided by these lands. Despite the importance of open space, conversion to other land uses threatens their existence. It is estimated that every day, more than 5,000 acres of land are developed in the U.S. (*Philosophy of the Land Trust Alliance*, 2009). At current rates, this equates to nearly two million acres of open space being lost each year. Given this rate of development, many natural places will be lost and fragmented in the near future. Potential losses of valuable environmental amenities due to conversion of open space lands to more singular uses, such as residential development, impact the public at large. As open space continues to decline, its relative value will increase, leading to higher demand by society to preserve and protect lands providing such amenities (Fausold and Lilieholm, 1999).

1 For purposes of this publication, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming compose the Intermountain West, which is a broader geographical region than some definitions found in the literature.

Land preservation or conservation programs have garnered more interest at both the national and local level as trends of land conversion have increased. Both the private and government sectors have instigated such programs. Various land planning techniques have been used as a means to limit development of natural landscapes. Two historically popular methods include zoning and tax incentives. Zoning techniques that prevent certain land uses are often temporarily effective but may not provide permanent protection from development (Daniels, 1991). Additionally, tax strategies, such as tax breaks for open space lands or increased taxes for developed lands, may discourage development, but these incentives or disincentives are often too small to prevent lucrative development ventures (Daniels, 1991).

One conservation tool that has emerged as a way to reduce open space disappearance is conservation easements. Development rights are generally sold or donated by landowners through conservation easement agreements. Conservation easements are voluntary, legally binding agreements in which the landowner chooses to prevent residential development of a property and/or limit future changes in land use either in perpetuity or, in some cases, for a limited term. In this way, the market for conservation easements helps ensure the continued production of open space amenities such as scenery, wildlife habitat, or land for agricultural activities.

Conservation easements are administered by both government agencies, such as the federal Natural Resources Conservation Service, and private organizations. The primary type of private organization involved in the purchase of conservation easements is a land trust. "A land trust is a non-profit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land or conservation easement acquisition, or by its stewardship of such land or easements (*2005 National Land Trust Census Report*, p.5, 2005)." Both land trusts and conservation easements are becoming more prevalent. According to the 2005 National Land Trust Census, there are about 1,667 land trusts nationwide, up 32 percent from 2000. Land trusts had conserved 11.9 million acres by 2005, with 6.2 million of those acres conserved through conservation easements (*2005 National Land Trust Census Report*, 2005). These statistics suggest that the market for conservation easements via demand from land trusts is experiencing rapid growth.

Rural subdivision in northwestern Wyoming.

Although land trusts are commonly local organizations, each land trust is unique. Individual land trusts have specific motives and objectives for land preservation. For example, the Rocky Mountain Elk Foundation focuses primarily on providing habitat for elk (*Rocky Mountain Elk Foundation*, 2009); the American Farmland Trust focuses on preservation of agricultural land (*American Farmland Trust*, 2009); and, the American Land Conservancy has a general focus on preserving any land with open space properties (*American Land Conservancy*, 2009). Most land trusts seek conservation easements, but for different reasons and with different underlying easement and land attributes (Merenlender et al., 2004). These differences impact their demand for conservation easements and suggest that land trusts may be segmented into groups with similar preferences for easements. While there is a growing body of published literature detailing land protection through conservation easements, relatively little is known about land trusts' preferences for purchasing and providing conservation easements. The objective of this research is to examine land trusts and their preferences for conservation easements. To accomplish this, data were collected from surveys sent to land trusts' staff and board members across the Intermountain West. This region offers unique opportunities related to the research objective as the American West is the fastest growing region for both the number of land trusts and the number of acres conserved (*2005 National Land Trust Census Report*, 2005).

Research Methods

Results presented in this bulletin were obtained using data collected from The Western Land Conservation Survey. Researchers at the University of Wyoming and Colorado State University, funded through a U.S. Department of Agriculture grant, administered The Western Land Conservation Survey to governing members of land trusts across the Intermountain West (Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming) in May through November 2007. The sample was based on the member directory of the Land Trust Alliance for these states. Survey questions were designed from extensive focus group interviews that were conducted with both land trust professionals and landowners regarding their preferences for conservation easements. Survey questions were designed to reveal land trusts' use of conservation easements, their attitudes about land uses and conservation, their array of preserved lands, conservation obstacles, and organizational characteristics.

A total of 417 surveys were distributed to 89 land trusts with an overall response rate of 69.5 percent. Responses represented 83.15 percent of the land trust organizations listed for the Intermountain West. The survey yielded responses from 290 individuals representing 74 organizations.

Results

Demographics

Respondents were asked to provide both individual and organizational demographic information. Responses provide an understanding of land trust employees and organizational characteristics. Just over half (51.4 percent) of those surveyed responded that they worked for the land trust in a voluntary role (**Table 1**). They lived within their current state for an average of 26 years. Most of the respondents were also highly educated with 55 percent indicating that they had some graduate education or higher. In general, land trusts attract workers who are local, educated, and, in many cases, willing to work in a volunteer position.

Table 1. Land trust staff demographics.

% of Respondents who were Volunteers	51.40%
Average Length of Residence in Current State	26 Years
Average Age	52.1 Years
% of Respondents who were Retired	22%
Average Level of Education	Some Graduate Education
Average Operating Budget	$100,000 to $300,000
Average Number of Paid Staff	11.3

Land trusts, on average, have an annual operating budget ranging from $100,000 to $300,000. This is an important statistic as budget may affect the amount of land they are able to preserve. It is likely to influence their decision to enter into easements where landowners are requesting a high payment. Due to limited budgets, land trusts are more likely to seek easements that are donated or low cost; however, land trusts' budgets are hard to define because of their reliance on government incentives for easement acquisition and a substantial number of donated easements. Additionally, in some instances the operating budgets of land trusts may be separate from the funds used to purchase easements. As such, land trusts may not view easement acquisition funds as part of their operating budgets. There are extremes among land trust budgets with 14 respondents indicating a budget less than $50,000 and 15 indicating a budget greater than $5 million. Small operating budgets are limiting factors related to the number of paid staff in each organization as indicated by an average of only 11.3 paid employees per land trust. On average, land trusts are small organizations with few employees and limited resources.

Organizational Attitudes

A large section of the survey was designed to identify land trusts' sense of place attachment. "Sense of place attachment" is the connection that an individual or an organization has for a specific geographic location or environment (Marshall et al., 2007). Five different dimensions of sense of place attachment were measured using multiple Likert scale questions: 1) community and family history attachment associated with the lands protected by the respondent's organization; 2) stewardship responsibility related to conserving habitat and open space amenities; 3) spiritual attachment that members of land trust organizations feel toward the lands they protect; 4) cognitive attachment to land, which is present when individuals reason that the certain land attributes present are the attributes they desire in a place of residence, and; 5) economic attachment land trusts believe their conservation donors and those considering conservation easements have for their land (for further explanation of these dimensions, see Cross et al., 2011). One of the primary motivations for landowners to engage in land preservation is their personal attachment to the land. Results from this section suggest that land trusts share this strong personal connection with the land. This is consistent with Keske (2008), which concluded that land trust agents interviewed in the sample were trying to preserve an overall sense of place through their efforts.

Questions addressing sense of place attachment were presented as Likert scale questions. Respondents were presented with a statement and asked to indicate if they agreed or disagreed on a scale of 1 to 5. One was entered if they strongly disagreed, two for disagreed, three for

Scenic open space and agricultural lands along the South Fork of the Shoshone River in northwestern Wyoming.

neutral, four for agreed, and five was given if they strongly agreed. For all tables reporting frequencies for the Likert scale questions, responses for strongly disagreed and disagreed have been aggregated (reported as % Disagree), and responses for agreed and strongly agreed were aggregated (reported as % Agree).

Table 2 reports responses to questions related to the dimension of community and family history attachment associated with the lands protected by the respondent's organization. Land trust respondents' answers indicated the highest percentage of responses in agreement

Table 2. Community and family history dimension (Likert scale questions, scale 1–5).

Question (Dimension): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
B.1.F (Community and Family History) Our organization believes that the conservation values we preserve should be protected for future generations.	285	4.88 (0.51)	1.40%	0.35%	98.25%
B.1.G (Community and Family History) Lands that our organization protect reflect the personal history and identity of those communities.	283	4.43 (0.78)	2.47%	7.42%	90.11%
B.1.H (Community and Family History) Land and the conservation of the values we protect are part of the historical character of those communities.	284	4.42 (0.83)	3.87%	6.34%	89.79%

Cattle on a scenic ranch in eastern Wyoming.

regarding statements about this dimension of sense of place as compared to the other dimensions presented earlier. Each question averages a response over 4 with an average response across the three questions of 4.58. A higher response equates to a stronger community and family history connection associated with their preserved lands. This strong connection signifies that land trust respondents believe that the lands they protect preserve cultural resources that define or characterize local communities. It may be important to landowners to know that the organizations holding their conservation easements care about their communities.

Questions presented in **Table 3** ask respondents about the stewardship dimension of place attachment. An average score of 4.78 for question B.1.I reveals that land trusts have a strong sense of responsibility related to conserving habitat and open space amenities. This suggests that land trusts may be acting as agents that represent the public's preferences related to open space conservation. The existence of land trusts may possibly be linked to some members of the public's desire for open space protection. The other two questions addressing stewardship (questions B.1.J and B.1.K) are related to land trusts' perceptions of landowners' stewardship responsibility. The first question (B.1.J) asks whether land trusts believe landowners' motivations related to land stewardship are derived from maximizing economic benefit. The mode

Table 3. Stewardship dimension (Likert scale questions, scale 1–5).

Question (Dimension): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
B.1.I (Stewardship) Our organization has a responsibility to conserve natural amenities (wildlife, open space).	285	4.78 (0.59)	1.40%	1.40%	97.19%
B.1.J (Stewardship) Landowners in our community manage land in a way that maximizes their economic benefits.	277	3.41 (0.84)	11.55%	42.24%	46.21%
B.1.K (Stewardship) Our organization believes that it is more critical for landowners, rather than conservation organizations, to steward protected lands.	276	3.49 (1.09)	17.39%	30.07%	52.54%

for this question is 3. This neutral response indicates that many land trusts do not believe that landowners manage their land with only economic benefits in mind. However, just over 46 percent agreed that landowners in their community managed their land consistent with economic maximizing behavior. This behavior may become an obstacle for land trusts that rely on landowners to donate easements. A wide range of responses for question B.1.K suggest that land trusts differ in their opinions on landowners' level of stewardship responsibility, but they more often responded in agreement that stewardship was primarily the responsibility of landowners.

Results to questions related to the spiritual dimension of place attachment (questions B.1.L-B.1.N) are reported in **Table 4**. These questions assess the amount of spiritual attachment that members of land trust organizations feel toward the lands they protect. Out of all the dimensions of sense of place attachment, this is perhaps the most personal in nature. The majority of respondents for these questions agreed that this connection exists. They generally have a feeling of belonging to these lands and also feel more themselves in these locations. While a sense of spiritual connection is common among most land trusts, the level of this dimension of attachment varies as each question has a standard deviation greater than 0.8. This implies a certain level of heterogeneity or differences among land trusts in regards to a spiritual attachment to their conserved lands.

Table 4. Spiritual dimension (Likert scale questions, scale 1–5).

Question (Dimension): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
B.1.L (Spiritual) The people in our organization have a personal attachment or "feeling of belonging" to the lands that our organization protect.	283	4.23 (0.82)	3.53%	12.72%	83.75%
B.1.M (Spiritual) The people in our organization seem to feel more themselves in the geographic area of the protected lands than anywhere else.	267	3.63 (0.97)	9.36%	34.83%	55.81%
B.1.N (Spiritual) The people in our organization seem to have a spiritual connection to the conservation values of the lands we protect.	275	3.71 (1.02)	10.91%	29.45%	59.64%

The cognitive attachment dimension is measured in questions B.1.O through B.1.R (**Table 5**). Cognitive attachment to land is present when individuals reason that certain land attributes present are the attributes they desire in a place of residence. The presence of these attributes in a location would make that place an attractive place to live. Relatively high mean responses for questions Q and R suggest that land trusts conserve lands having attributes that they believe members of their communities seek in a place of residence. This likely is a reflection of potential perceptions of community members' desires as well as land trust members' own desires. As such, this outcome is linked to the community dimension of place attachment. Questions O and P are composite questions that also address community attachment. Responses to question O indicate that land trusts believe that they preserve lands that reflect the values of the community. Interestingly, respondents did not agree that new residents place less value on conservation than longtime residents. This suggests that any observed conflicts from in-migration may not be related to a lack of desire for land conservation.

Table 5. Cognitive dimension (Likert scale questions, scale 1–5).

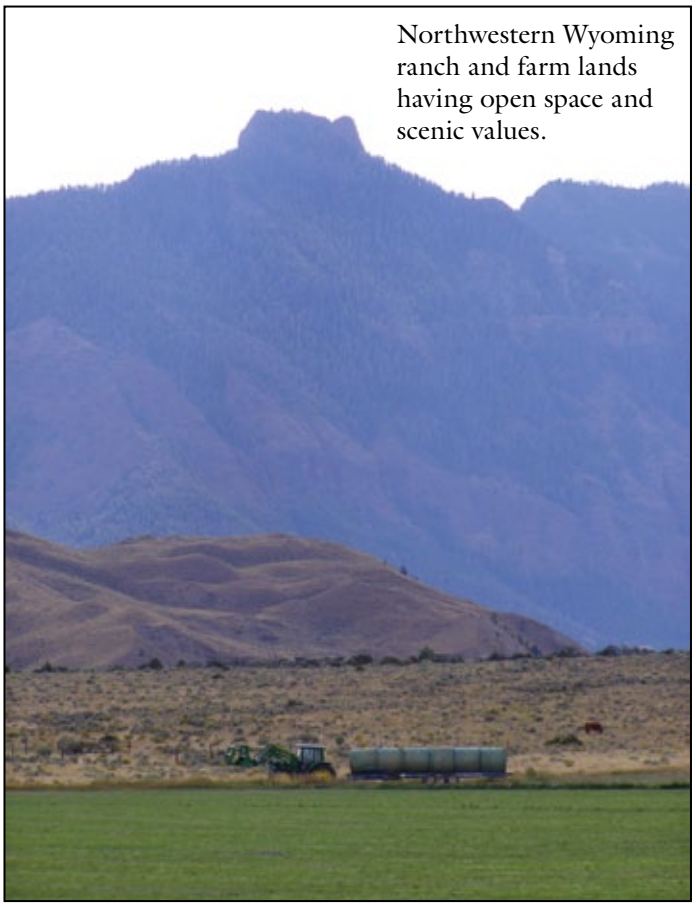
Question (Dimension): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
B.1.O (Cognitive) Our organization believes that the conservation values of the lands we protect reflect the values of the community.	281	4.17 (0.77)	2.49%	12.10%	85.41%
B.1.P (Cognitive) Our organization believes that new residents do not value conservation as much in our community as long-term residents do.	277	2.59 (0.99)	52.35%	29.24%	18.41%
B.1.Q (Cognitive) If the natural amenities in the community significantly changed in any way, many people would not stay in the community.	280	3.39 (0.94)	17.14%	33.93%	48.93%
B.1.R (Cognitive) Lands in our community offer the amenities that people in our organization seek when looking for a place to live.	280	4.18 (0.78)	2.50%	13.21%	84.29%

The last dimension of place attachment is economic. Specifically, this section measures the amount of economic attachment that land trusts believe their conservation donors and those considering conservation easements have for their land and if this attachment is an obstacle in placing an easement. All three of these questions have averages around 3 and high standard deviations (**Table 6**). This variability in responses indicates that although some land trust respondents believe that landowners may be economically attached to their lands, opinions vary as to whether they believe this dimension of attachment may be an obstacle for landowners placing an easement on their land. However, high variability in responses for questions B.1.S and B.1.U suggests that a segment of land trust respondents believe that easements may limit the economic productivity of the land and prevent easement transactions. Consequently, one easement attribute that may be a concern during the negotiation process is managerial control over production practices.

Table 6. Economic dimension (Likert scale questions, scale 1–5).

Variable Name (Dimension): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
B.1.S (Economic) The livelihood of our conservation donors depends on economic productivity from their lands, which may prevent the landowner from entering into a conservation contract.	278	3.03 (1.05)	31.29%	35.61%	33.09%
B.1.T (Economic) The future livelihood of our conservation donors depends on the flexibility to use their land in ways to gain economic returns.	279	3.57 (1)	14.70%	28.67%	56.63%
B.1.U (Economic) The financial well-being of people considering conservation easements frequently conflicts with conservation processes.	275	3.11 (1.06)	30.55%	31.64%	37.82%

Overall, responses from questions measuring sense of place attachment indicate that land trusts, on average, are organizations with people who are personally attached to the lands they protect, rather than organizations that lack personal connection to their work. Demographic results indicating the high percentage of volunteers working for land trusts also supports this notion that land trusts are organizations that operate based on a strong personal connection to the land. It may be expected that land trusts seek conservation easements that preserve amenities that impact their attachment to the land. Land amenities that may impact place attachment include natural landscapes, views, wildlife, and recreational opportunities (Brehm et al., 2004). Researchers have also found that sense of place attachment is an important factor in landowners' conservation easement decisions (see Cross et al., 2011; Keske, 2008; McGaffin, 2009; and Miller, 2007)



Northwestern Wyoming ranch and farm lands having open space and scenic values.

Lands and Amenities Protected by Land Trusts

Land trusts vary significantly from one organization to the next. They are differentiated based on a number of factors including: area-specific lands, missions, and amount of funding. Consequently, each land trust preserves lands with different underlying conservation characteristics. It is also expected that even though land trusts primarily use conservation easements, they seek easements with different attributes. Questions discussed in this section identify the extent to which conservation easements are used by land trusts and the array of lands that are being conserved.

Due to the low marginal costs of preserving open space land in perpetuity and the tax incentives for landowners who participate, conservation easements have become a popular conservation tool in recent years. As expected, a high percentage of land trusts use conservation easements. Just over 91 percent of respondents indicated that their land trust uses conservation easements as a means to preserve land (**Table 7**). For those indicating their organization used conservation easements, an average of 86.5 percent of their conserved lands are preserved using conservation easements. Interestingly, 48 percent of respondents who indicated they used conservation easements also indicated that all of their lands were conserved using conservation easements. However, 8.54 percent of respondents indicated that their land trust does not use conservation easements. It is assumed that these organizations use other more costly means of conservation such as fee simple purchase of land (Parker, 2004) or are offering

Table 7. Conservation easement use.

Variable Name : Question (Scale)	N	Mean (Std Dev)
A: Does your organization currently hold conservation easements? (0 for no, 1 for yes – mean reported as percent responding yes)	281	91.46%
A.1: If yes, roughly what percentage of your conservation land is under conservation easement? (0 - 100)	203	86.49% (24.28)
A.2: If yes, roughly what percentage of your conservation easement lands are agricultural lands? (0 - 100)	180	65.02% (27.76)

consultation on best management practices for environmental goals. Although conservation easements are popular, they are not used as the exclusive means of land preservation by land trusts.

Agricultural lands are some of the most prevalent land types being preserved under conservation easements. An average of 65 percent of lands preserved by conservation easements are agricultural, according to responses to question A.2 (**Table 7**). However, a standard deviation of 27.8 for this question suggests a wide range of variability in the amount of agricultural lands being preserved by conservation easements. Approximately 10 percent of land trust respondents indicated that 100 percent of their conservation easement lands were agricultural. Conversely, 10 percent of the land trust respondents indicated that less than 20 percent of their lands were agricultural. This supports the concept that land trusts have varying preferences for preserved lands and that each land trust seeks lands with specific attributes.

Scenic agricultural lands in north-central Wyoming protected by a conservation easement.

In addition to identifying the extent to which easements are used to preserve agricultural lands, a section of questions was included to identify the specific land attributes and conservation characteristics conserved by lands held by land trusts. These questions were presented as Likert scale questions with respondents indicating on a scale of 1 to 5 if they agreed with the statement.

Results to these questions suggest that land trusts vary greatly in the lands included in their portfolio of preserved lands (**Table 8**). Only three of the questions had averages greater than 4 (questions C.5.C, C.5.F, and C.5.G), which indicates that land trusts generally believe that they provide open space lands with wildlife habitat and excellent scenic views that buffer development. These questions also had the lowest standard deviations in the section, indicating fairly consistent preferences among land trusts for lands with these attributes. However, variability in responses to other questions related to working landscapes, ecosystem services, and recreational opportunities suggest that land trusts differ in their preferences for lands with these conservation characteristics.

Questions from part C.5 were grouped in accordance with the type of open space amenity that they preserved **(Table 9)**. The first variable is for working landscapes (WORKING), which sums the Likert scores for questions C.5.A and C.5.B, and the second summated Likert variable focuses on questions related to ecosystem services (ECOSYS – C.5.C, C.5.D, C.5.H, and C.5.I). Two of the strongest public preferences for land conservation are agrar-

Table 8. Conservation characteristics of lands that organizations are responsible for (Likert scale questions, scale 1–5).

Question : Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
C.5.A: Our preserved lands have excellent agricultural production capacity.	283	3.37 (1.13)	21.91%	27.56%	50.53%
C.5.B: Our preserved lands are also "working lands" that can be used for forestry, agriculture, or mineral extraction.	285	3.52 (1.2)	21.40%	18.60%	60.00%
C.5.C: Our preserved lands provide wildlife habitat, which may include migratory birds or predators.	286	4.6 (0.66)	1.75%	1.40%	96.85%
C.5.D: Our preserved lands provide habitat for threatened/endangered plant or animal species.	286	3.94 (0.97)	8.74%	21.68%	69.58%
C.5.E: Our preserved lands provide public recreational opportunities (including access to hiking, biking, or hunting).	287	2.97 (1.38)	41.11%	23.34%	35.54%
C.5.F: Our preserved lands provide excellent scenic views.	286	4.51 (0.72)	1.40%	5.94%	92.66%
C.5.G: Our preserved lands provide open space that buffers development.	285	4.25 (0.89)	5.26%	10.18%	84.56%
C.5.H: Our preserved lands are selected in an ecosystem planning process.	279	3.27 (1.22)	26.88%	27.96%	45.16%
C.5.I: Our preserved lands are contiguous with other preserved areas.	286	3.84 (0.95)	6.99%	21.33%	71.68%

ian amenities and environmental amenities, according to Duke and Aull-Hyde (2002), Duke and Ilvento (2004), Kline and Wichelns (1996), and Rosenberger (1998). Average question responses for both of these summated variables (WORKING and ECOSYS) exceed 3, indicating that the majority of land trusts focus on preserving both types of these amenities. However, variability among responses, as measured by the standard deviation, suggests that land trusts have varying preferences related to these characteristics. This heterogeneity or variability supports indications that individual land trusts focus on lands with different underlying attributes and conservation characteristics. Land trusts seek lands that provide amenities specific to their area and objectives.

Table 9. Summated Likert questions for working landscapes and ecosystem services.

Variable : Description	N	Mean (Std Dev)	Average Question Response	% Disagree	% Neutral	% Agree
WORKING: Summated variable from questions C.5.A and C.5.B.	282	6.9 (2.05)	3.45	25.18%	31.91%	42.91%
ECOSYS: Summated variable from C.5.C, C.5.D, C.5.H, and C.5.I. Questions C, D, H, I	276	15.64 (2.68)	3.91	5.43%	38.41%	56.16%

Another land attribute that differentiates land trusts is the value of the lands within each land trusts' portfolio of preserved lands. Respondents were asked to indicate either a range of land values or the average land value for lands within their portfolio prior to placing an easement on the lands. The median price per acre is $15,859 with a standard deviation of $34,157. For those who entered a range of prices of the lands they protect, the average lower bound is $7,803, and the average upper bound is $47,657. The minimum of any respondent was $50 per acre, and the maximum was $500,000. These statistics reveal a wide range of land values faced by land trusts. It is also of interest to note that 114, or 39.5 percent, of the respondents indicated that they did not know the average price per acre of the land they protect. Many respondents may not know what the average parcel value is per acre for conservation easement clients, or they may feel bound to keep the financial aspects of any conservation easement agreement private to protect landowners who may have received payments or tax benefits for their easements. It is clear from these statistics that in addition to preserving lands with an array of attributes, land trusts also preserve lands with an array of values.

Conservation Obstacles Faced by Land Trusts

A series of questions were included in the survey that identified obstacles that land trusts face when acquiring preservation lands. Because land trusts have unique missions and focus on preserving lands with different underlying attributes, it can also be assumed that they face a diverse set of obstacles. Some of the obstacles addressed in this section include: growth pressure, land values, landowner issues, tax issues, land problems, and funding obstacles.

Growth pressure is one of the primary threats to open space land. Growth pressure increases land values and puts increased pressure on landowners to develop their lands. Five Likert scale questions were included measuring each land trust's attitude and view toward growth pressure (**Table 10**). Results for the first four questions have a mean ranging from 3.6 to 4.27 indicating that land trusts generally agree that growth pressure negatively impacts open spaces and local communities. Responses to question B.1.E have a relatively high standard deviation and a fairly even distribution in response frequencies across disagree, neutral, and

Rural subdivision in western Wyoming near the Wind River Range.

agree choices (**Table 10**). This suggests that although many communities are facing growth pressure issues that are causing community conflicts and open space land disappearance, the majority of land trust respondents do not believe that these pressures are affecting the livelihood of community members who have large tracts of land.

Table 10. Growth pressure dimension (Likert scale questions, scale 1–5).

Question (Dimension): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
B.1.A (Growth Pressure): Our organization believes that there is too much development on rural and agricultural lands.	282	4.27 (0.86)	4.26%	8.51%	87.23%
B.1.B (Growth Pressure): The land our organization wants to protect is being purchased by people who have little interest in agriculture.	283	3.73 (0.99)	9.19%	32.16%	58.66%
B.1.C (Growth Pressure): Our organization believes that people moving into the community are changing the customs, cultures, and conservation values of the land.	282	3.67 (0.97)	11.35%	28.72%	59.93%
B.1.D (Growth Pressure): Our organization believes that population growth is a common cause of community conflicts.	274	3.6 (0.9)	9.49%	34.31%	56.20%
B.1.E (Growth Pressure): Our organization believes that population growth has led to more rules that threaten the livelihood of the people who own large tracts of land.	269	3.07 (1.08)	32.71%	33.83%	33.46%

As mentioned previously, growth pressure increases the developmental value of land and puts increased pressure on landowners to develop their land. High land values can become obstacles for land trusts with limited resources to purchase development rights. This is supported by responses to question C.3. This question asked respondents to indicate how an increase in land prices would affect their conservation efforts. Just over 71 percent of respondents indicated that they believe an increase in land prices would not create more conservation easement opportunities. These prices can become obstacles for organizations seeking conservation easements because high land prices often equate to higher monetary costs to purchase development rights (Plantinga and Miller, 2001).

Landowner issues, tax issues, land problems, and funding obstacles were measured through a series of Likert scale questions. Results are reported in **Table 11**. Responses to these questions have the highest variability of any section with Likert style questions. Out of all the things that separate land trusts, obstacles preventing conservation might be the major factor that affects their responses to this survey and their decisions related to easements. Questions regarding funding obstacles yield the highest average. This suggests that funding is a common obstacle to land conservation. The primary funding problem is that landowners believe they deserve a higher price for an easement than they are offered, and land trusts feel they don't have enough funding (see questions B, H, and I reported in **Table 11**). Also

Table 11: Potential issues or obstacles (Likert scale questions, scale 1–5).

Question (Obstacle Category): Description	N	Mean (Std Dev)	% Disagree	% Neutral	% Agree
C.6.A (Landowner): Landowners are in disagreement with their appraisal.	272	2.72 (1.01)	40.81%	38.97%	20.22%
C.6.B (Landowner): Landowners expect more financial benefits from enacting a conservation easement on their land than the compensation they currently receive.	273	3.25 (1.02)	22.34%	33.33%	44.32%
C.6.C (Land): Lands do not provide habitat for threatened or endangered plant or animal species.	274	2.18 (0.96)	66.06%	24.82%	9.12%
C.6.D (IRS): Landowners are concerned about being audited by the IRS.	268	2.92 (1.07)	36.19%	33.58%	30.22%
C.6.E (IRS): Land won't qualify based upon IRS conservation value criteria.	264	2.27 (1.11)	62.88%	21.97%	15.15%
C.6.F (Landowner): Landowners retain too many building envelopes or development rights.	275	2.73 (1.12)	45.45%	28.00%	26.55%
C.6.G (Land): Lands do not fit well with the conservation organization's strategic plan.	277	2.58 (1.11)	50.54%	27.80%	21.66%
C.6.H (Funding): Our conservation organization often does not have enough funding to acquire conservation properties.	273	3.72 (1.23)	20.15%	16.85%	63.00%
C.6.I (Funding): Our conservation organization often does not have enough funding to enact conservation easements.	275	2.95 (1.41)	42.91%	19.64%	37.45%

of interest is that land trusts more strongly agreed that they did not have enough funding for property acquisition as compared to acquiring conservation easements. One conclusion that might be drawn is that land trusts may prefer to acquire more properties but choose easements instead due to their lower costs to preserve land. Lower marginal costs to preserve a parcel of land using easements as compared to outright land purchase may be a major factor in explaining the rise in the popularity of conservation easements (Keske et al., 2007).

Land trusts rely heavily on federal tax incentives to encourage landowners to donate easements or to sell for less than their true value. Land trusts responded that a 10-percent increase in incentives (e.g., federal, state, or local funds) would increase their organization's holdings by an average of 17 percent, which indicates the importance of government funding for conservation easement programs. However, for landowners to qualify for these tax breaks, conserved lands must meet certain criteria. As such, problems related to taxes or lands not meeting IRS criteria may prevent easement transactions. Results for questions regarding tax issues varied. Land trusts on average were not worried that lands would not qualify; however, just over 30 percent of respondents indicated that the landowners who they worked with were worried about being audited. Overall, the results regarding land, IRS, and landowner problems are varied and suggest that land trusts face a diverse set of obstacles.

Discussion

The market for conservation easements facilitated by land trusts is experiencing rapid growth. This market has emerged as a means to address concerns about the provision of open space lands. The results presented here offer some insights into this market. Such knowledge could reduce matching risks and transaction costs for landowners interested in finding a land trust. Overall, analysis of survey responses offers some insights into land trusts' demographics, conservation attitudes, preferences, and land preservation, as well as obstacles to implementing easements. Some of the key findings and important considerations for landowners considering easements include:

- Previous research has shown that personal attachment to the land is one of the primary reasons for landowners to engage in land preservation (Keske et al., 2007). Results from a previous survey sent to landowners regarding conservation easement participation found that just over 70 percent of landowners did not trust land trusts (McGaffin, 2009). It should be influential to landowners to know that land trusts are also motivated by a strong sense of place attachment to their conserved lands.

- Land trusts preserve lands with an array of attributes. Results showed that land trusts typically preserve lands with wildlife habitat and excellent scenic views that provide open space to buffer development; however, results also revealed that land trusts exhibit a wide range of preferences for other land attributes and amenities including working lands, ecosystem services, and recreational opportunities. As such, landowners would likely be better served by finding a land trust that specifically seeks attributes that their lands provide.

- Land trusts exhibit varying preferences for conservation easement attributes. Because land trusts seek lands with different conservation characteristics, it can be assumed that land trusts seek easements with unique contract terms to ensure the protection of those amenities. It is important for landowners to understand that each land trust may seek differing sets of easement conditions. For example, previous research has shown that landowners are adverse to some easement terms such as public access to the conserved property (McGaffin, 2009). As not all land trusts desire this easement attribute, landowners should seek land trusts

with compatible easement preferences. For preliminary information regarding potential land trusts operating in a particular area and their mission statement, interested parties can go to the Land Trust Alliance website and click on the state of interest (http://www.ltanet.org/landtrustdirectory/).

• Land trusts are generally small organizations with limited resources. As such, land trusts rely heavily on donated or bargain-buy (purchased below the estimated market value) easements rather than purchased easements. Landowners considering an easement must understand that compensation from entering into an easement will most likely come in the form of tax breaks and incentives. The government provides tax incentives based on the value of the donated easement. This is an explanation as to why place attachment is one of the primary motivations for landowners to engage in an easement. Landowners engaging in easements are often landowners who derive non-monetary benefits from the transaction such as knowing that their lands will be preserved in open space and will preserve the family heritage.

• Land trusts face a wide variety of obstacles in the conservation process including growth pressure, landowner issues, land issues, and tax issues; however, perhaps the largest obstacle they face is funding. Respondents indicated on average that their organization did not have the funding necessary to acquire lands. One of the attributes of conservation easements that have led to their rise in popularity is their lower costs compared to fee simple purchase. Conservation easements are often chosen as a preferred method of preservation because they preserve some level of open space benefits for a reasonable cost. High standard deviations in responses to questions measuring obstacles indicate that each land trust faces a unique set of obstacles in their pursuit of conservation. These individually specific obstacles are most likely determined by the nature of the region in which they operate and their organizational mission.

Lands along the Upper Green River in western Wyoming conserved by an easement.

Conclusion

Land trusts are playing an increasingly influential role in conservation efforts. Results from this study have increased our understanding of these organizations acting in the market for conservation easements. Land trusts are complex organizations that are impacted by a variety of factors. The demand for conservation easements from land trusts is impacted by many of these factors. Understanding land trusts and the potential factors that may impact their demand for conservation easements provide valuable information regarding this growing market at a time when protecting open space lands is garnering more interest in many communities. It is hoped that information from this study will give landowners a better understanding of the motives and accomplishments of land trusts. Additionally, information provided here may improve this emerging market by helping landowners find a land trust with more compatible interests. A useful website for landowners interested in easements is the Land Trust Alliance web page (www.lta.org). It provides information regarding the objectives, mission, and area in which land trusts operate.

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