Land Trust Biodiversity Survey, Winter 2006

Purpose of Survey

To better understand local land trusts' current activities and interest in biodiversity conservation, Defenders of Wildlife conducted a national web-based survey of a sample of land trusts using SurveyMonkey.com in January 2006. The survey also explored land trusts' interest in increasing their biodiversity conservation activities in the future and barriers they face in doing this work. The survey was designed to take less than 15 minutes to complete and to have minimal overlap with the questions asked by the Land Trust Alliance in their 2005 membership censuses, which was distributed soon after our survey. The survey was conducted by consultants Will Murray and Leni Wilsmann with Conservation Impact (Denver), who drew on years of experience working with land trusts to analyze and interpret the results summarized here.

Methods

The web survey was sent to the 787 respondents to the Land Trust Alliance 2003 Census who had included their email address and did not represent a major national or regional land trust (e.g. The Nature Conservancy, Trust for Public Land, Rocky Mountain Elk Foundation). Of those, 55 were returned with defunct email addresses. Of the remaining 732 survey recipients, 135, or 18.4%, responded to the survey, representing 28 states. Of those, 14 were eliminated because they were mostly blank or they represented regional land trusts or organizations that do not do land conservation as part of their mission. Thus, the responses summarized here represent about 15% of the original sample. Of the 121 useable responses, most but not all completed every question. Most of the survey responses were correlated to LTA 2003 Census data for specific land trusts in order to expand the scope of information for each respondent.

Findings

Several key findings from the survey are summarized here. Following the findings are the survey questions with raw responses.

(1) Land trusts across the country report that they are engaged in wildlife habitat and biodiversity conservation.
All but four of the 121 survey respondents (97%) identified conservation of wildlife habitat or biodiversity as part of their mission. Approximately 60% of respondents identified habitat conservation as a primary focus of their organization and reported that half or more of the acres they have protected have included biodiversity conservation as a goal. When asked what conservation values their organization seek to protect, the top six of 20 responses were, in descending order: wildlife habitat, scenic or open space, natural communities or natural areas, plant habitat, riparian ecosystems and watershed functions.

(2) Few land trusts use tools other than conservation easements to conserve biodiversity.
The LTA 2003 Census indicated that 78% of the acres conserved by land trusts were protected through conservation easements on lands owned by others. The biodiversity survey explored how much habitat management and restoration is occurring on these lands. A critical first step toward biodiversity conservation is developing a habitat management plan. A quarter of survey respondents reported having no habitat management plans in place for their projects, while about a third of the organizations have completed management plans for half or more of their projects. Only 10% of the respondents reported having management plans in place for all project areas, which is about the same percentage of organizations that reported managing for biodiversity and restoring habitat on all of their project areas.

Living Lands is a Defenders of Wildlife project, in collaboration with the Land Trust Alliance, to support and increase the capacity of the land trust community to conserve biodiversity on private lands through financial and technical assistance.

(3) Annual operating budget seems to relate to level of management activities.
After reviewing a few dozen land trust budgets, it seems that operating budget is a relevant proxy for staff size, which relates to acres conserved. Overall, about 40% of survey respondents are managing half or more of their projects for biodiversity and about 25% are restoring habitat on half or more of their projects. About 40% of land trusts also report ecological monitoring on half or more of their projects. The frequency of management, restoration and monitoring, as measured by a land trust's mean score across those activities (each scored 1 to 6), is correlated with annual operating budget ($r = 0.67$) and much less so with the land trust age and presumably operational maturity of the organization ($r = 0.09$). Past experience with land trusts suggests that respondents may have confused ecological monitoring with easement monitoring, therefore the analysis discounted the survey responses on ecological monitoring.

(4) Organizational capacity seems to be the largest barrier to significant habitat conservation.
Survey respondents identified several capacity and funding factors that inhibit their organizations from doing more biodiversity conservation. Limited funding for stewardship and monitoring and limited staff capacity were identified by 60% of respondents as major barriers and by 90% as moderate or major barriers. Staff expertise and funders who did not recognize biodiversity conservation as a priority were moderate to major barriers for at least 50% of respondents. Almost half of responding organizations have protected fewer than 1,000 acres, averaging just over 350 acres per organization (Figure 1), which is significantly less than one square mile per land trust, even though most were founded more than five years ago. An additional 32% have protected between 1,000 and 5,000 acres and only 12% have protected more than 10,000 acres. Highly effective organizations can occur at almost any age of an organization (Figure 1). Funding appears to play a role (Figure 2) in this success, though the correlation ($r = 0.51$) indicates that other factors must also be important. Our experience tells us that the driving critical success factor is a competent executive director. Fully three-quarters of responding land trusts said that partnering or merging with another organization for greater effectiveness would be helpful.

(5) Small-acreage land trusts are not contributing significantly to biodiversity conservation.
Some land trusts may focus their small-acreage portfolio specifically on rare plant sites or habitat remnants, but this approach is rare. Even with this approach, the long-term biological viability is dismal for small populations of plants and animals in highly fragmented landscapes. Small, disconnected populations are more susceptible to elimination by flood or fire, or loss of food, pollinators or suitable mates. Conservation of relatively small areas can be effective for some species and localized special habitats, but larger, connected areas are important for most species and for functioning ecosystems and biodiversity. Until land trusts can implement larger scale, functionally proximal and often complex projects in their service area, most management and restoration activities will probably not have long-term biodiversity benefits.

(6) Land trusts are interested in biodiversity pilot projects, training and assistance.
Overall, 65% of responding organizations voiced an interest in a pilot project related to biodiversity conservation. When asked about other training and assistance needed to do more biodiversity conservation, respondents identified the need for help in nearly all areas. However, assistance typically scored about 10 points higher, around 70%, than training in all categories. Many local land trusts have immediate needs for training or assistance in conservation planning, resource management, restoration and monitoring, but currently lack the capacity to undertake biodiversity conservation projects. This speaks to organizational effectiveness and the need to improve capacity both internally and across land trusts and other partners for more effective biodiversity conservation on private lands.

(7) Public funding is not being tapped by land trusts to pay for local conservation.
Only half of the land trusts surveyed have received federal dollars and only slightly more report receiving state funds. Most of the federal programs listed in the survey were used by only 10 to 30% of respondents. About 30% of the land trusts had used the Farm and Ranchlands Protection Program, Forest Legacy Program, Landowner Incentive Program, North American Wetlands Conservation Grants, Partners for Fish and Wildlife, and Wildlife Habitat Incentives Program, though only about half of these identified them as important sources of funding. While these programs provide funding useful to many land trust projects, a minority of land trusts prefer not to use government funds at all in their projects. State and local programs were used more often than federal programs, with 30% of respondents identifying them as important. However, nearly 50% of the organizations had never used state and local assistance. Matching funds were identified as the greatest need for effectively tapping into public funding, followed by more knowledge about available funding sources and training or assistance with grant writing.

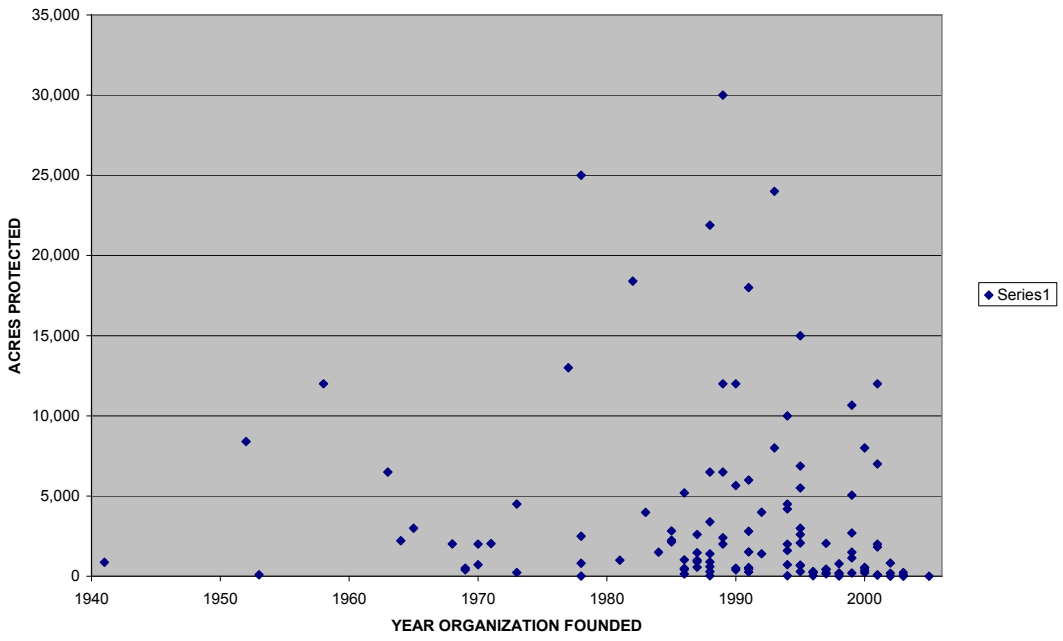

Figure 1. Total number of acres protected by land trusts varies widely with the age of the organization.

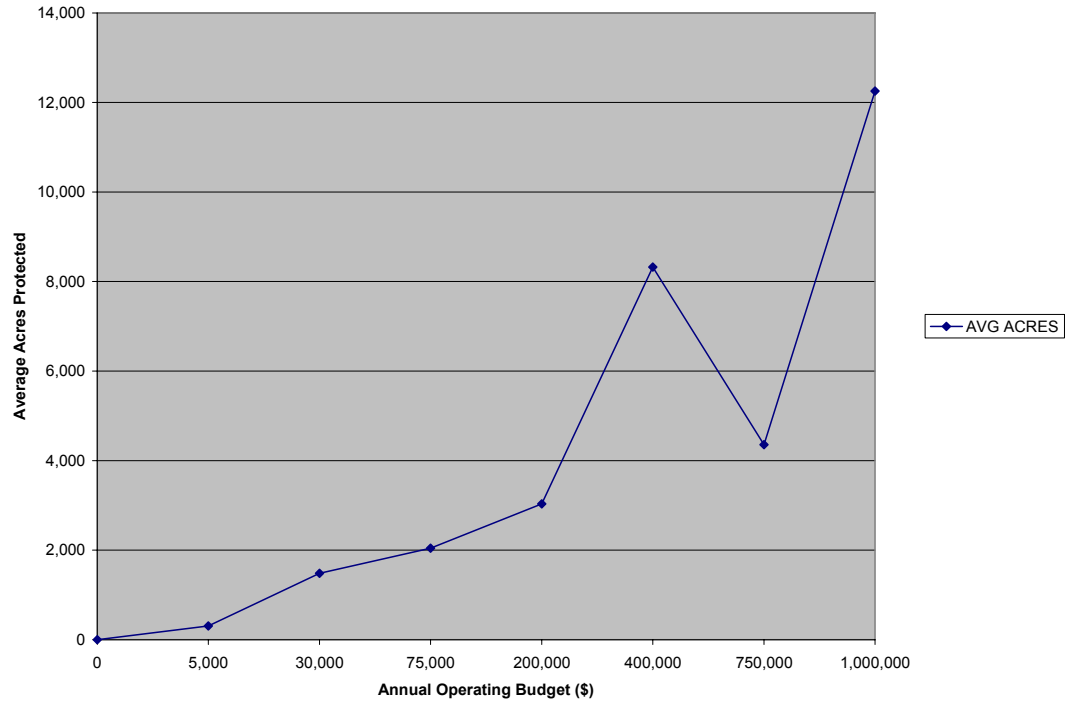

Figure 2. Total number of acres protected by land trusts is positively related to the organization's annual operating budget.

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Survey Questions and Raw Responses (135 Responses)

The Living Lands Project of the Defenders of Wildlife seeks to help local land trusts become increasingly effective at biodiversity conservation and restoration. We define biodiversity to include native plants, native animals, and natural communities, along with their habitats, and the ecosystem functions that support them. This survey is the first step in the Living Lands Project and is intended to assess the current level of biodiversity conservation activity and interest among local land trusts, as well as training and assistance that could increase effectiveness. This project is conducted in partnership with the Land Trust Alliance and with funding from the Biophilia Foundation. We very much appreciate your willingness to participate in this survey and estimate that the survey will take 10 minutes to complete. If you have additional comments on specific questions or in general, please enter them in Question 24.

Organizational Information

1. Your name

2. Your job title

3. Your email address

4. Name of your organization

Total Respondents	134
(skipped this question)	1

5. In which state(s) does your organization work? (states with no responses are not included in this table)

	AK	AR	AZ	CA	CO	CT	FL	IA	ID	IL	IN
Primary state	1% (1)	1% (2)	2% (3)	**12% (16)**	4% (5)	4% (5)	1% (1)	1% (1)	1% (1)	3% (4)	4% (6)
Second state	0% (0)	0% (0)	0% (0)	0% (0)	11% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Third state	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)

	KS	KY	LA	MA	MD	ME	MI	MN	MS	MT	NC
Primary state	1% (1)	1% (1)	1% (1)	7% (9)	1% (1)	5% (7)	4% (6)	1% (1)	1% (1)	1% (1)	2% (3)
Second state	0% (0)	0% (0)	0% (0)	**22% (2)**	0% (0)	11% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)
Third state	0% (0)	0% (0)	0% (0)	17% (1)	17% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)

	NH	NJ	NM	NV	NY	OH	OR	PA	RI	SC	TN
Primary state	1% (2)	0% (0)	2% (3)	0% (0)	9% (12)	3% (4)	3% (4)	6% (8)	2% (3)	1% (1)	1%
Second state	0% (0)	0% (0)	0% (0)	11% (1)	0% (0)	0% (0)	11% (1)	0% (0)	11% (1)	11% (1)	0%
(0)Third state	17% (1)	0% (0)	0% (0)	0% (0)	17% (1)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)

	TX	VA	VT	WA	WI	WV	WY	Response Total
Primary state	2% (3)	1% (2)	2% (3)	2% (3)	4% (6)	1% (1)	1% (1)	134
Second state	0% (0)	0% (0)	0% (0)	0% (0)	0% (0)	11% (1)	0% (0)	9
Third state	17% (1)	0% (0)	0% (0)	17% (1)	0% (0)	0% (0)	0% (0)	6

6. How many acres has your organization protected?

	Response Percent	Response Total
0 – 500 acres	**30.6%**	37
501 – 1000	15.7%	19
1001 – 5000	**30.6%**	37
5001 – 10,000	11.6%	14
10,001+	11.6%	14
Total Respondents	131	
(skipped this question)	4	

Conservation Priorities

7. Which of these concepts is included in your organization's mission? Select all that apply.

	Response Percent	Response Total
Biodiversity	66.1%	84
Native plants	77.2%	98
Native wildlife	74%	94
Habitat	**96.1%**	122
Endangered species	53.5%	68
Total Respondents	127	
(skipped this question)	8	

8. How do you view habitat conservation relative to your organization's primary focus?

	Response Percent	Response Total
Primary focus	**63.1%**	82
Secondary focus	36.2%	47
Not a focus	0.8%	1
Total Respondents	130	
(skipped this question)	5	

9. What is the setting for most of your organization's work? Choose one.

	Response Percent	Response Total
Urban	4.7%	6
Suburban	20.3%	26
Rural	**74.2%**	95
Wilderness	0.8%	1
Total Respondents	128	
(skipped this question)	7	

10. What percent of the acres you have protected include biodiversity conservation as a goal?

	Response Percent	Response Total
0% (None)	9.4%	12
1-25% (Few)	17.3%	22
26-50% (Some)	14.2%	18
51-75% (Many)	21.3%	27
75-100% (Most)	**37.8%**	48
Total Respondents	127	
(skipped this question)	8	

11. Please indicate the conservation values your organization seeks to protect.

	Never	Rarely	Sometimes	Often	Usually	Average
Agricultural land	11% (13)	17% (21)	**26% (32)**	25% (31)	20% (25)	3.28
Working forests	19% (23)	18% (22)	21% (25)	**22% (27)**	19% (23)	3.04
Scenic values or open space	1% (1)	2% (3)	12% (15)	32% (40)	**53% (66)**	4.34
Plant habitat	0% (0)	2% (3)	21% (26)	31% (38)	**45% (54)**	4.18
Wildlife habitat	0% (0)	2% (2)	8% (10)	37% (47)	**53% (67)**	4.42
Migration corridors or stopover areas	2% (3)	10% (12)	29% (35)	22% (26)	**37% (44)**	3.80
Endangered and threatened species	6% (7)	12% (15)	**36% (44)**	20% (24)	27% (33)	3.50
Other at-risk species	5% (6)	13% (16)	**37% (44)**	20% (24)	25% (30)	3.47
Game species	16% (19)	23% (27)	**28% (33)**	22% (26)	9% (11)	2.85
Forest ecosystems	8% (9)	3% (3)	17% (20)	24% (28)	**50% (59)**	4.05
Prairie ecosystems	**54% (61)**	15% (17)	11% (12)	8% (9)	13% (15)	2.12
Riparian ecosystems	4% (5)	1% (1)	16% (20)	35% (44)	**44% (55)**	4.14
Wetland ecosystems	2% (3)	6% (7)	17% (21)	37% (45)	**38% (47)**	4.02
Natural lake ecosystems	23% (27)	25% (29)	**26% (31)**	10% (12)	16% (19)	2.72
Watershed functions	2% (2)	6% (7)	17% (21)	32% (40)	**44% (55)**	4.11
Marine ecosystems	**68% (76)**	13% (14)	9% (10)	4% (4)	6% (7)	1.67
Natural communities or natural areas	0% (0)	2% (2)	13% (16)	36% (46)	**50% (63)**	4.34
Water quality or quantity	3% (4)	5% (6)	16% (19)	38% (46)	**39% (47)**	4.03
Core habitat or large blocks of habitat	3% (4)	10% (12)	**32% (39)**	27% (33)	28% (34)	3.66
Buffer around core habitat	4% (5)	10% (12)	**35% (44)**	25% (31)	26% (33)	3.60
Total Respondents	129					
(skipped this question)	6					

Information and Planning

12. What sources of biodiversity information do you rely upon to guide your conservation decisions?

	Never	Rarely	Sometimes	Often	Usually	Response Average
Your organization's conservation plan	10% (11)	6% (7)	17% (19)	31% (35)	**36% (41)**	3.78
Local expert knowledge	0% (0)	1% (1)	12% (16)	41% (53)	**45% (58)**	4.31
Field surveys of sites	2% (2)	5% (6)	25% (31)	**35% (44)**	34% (43)	3.95
Local or regional master plans	5% (6)	18% (21)	**34% (40)**	24% (29)	19% (23)	3.35
County natural area surveys	17% (20)	24% (28)	**28% (33)**	16% (18)	15% (17)	2.86
State or regional biodiversity conservation plans	8% (10)	16% (20)	**28% (35)**	25% (31)	22% (27)	3.37
Endangered species recovery plans	26% (31)	**27% (32)**	20% (23)	19% (22)	8% (9)	2.54
Natural heritage program info	14% (17)	15% (18)	**25% (30)**	23% (28)	24% (29)	3.28
NatureServe information	**70% (79)**	13% (15)	11% (12)	4% (4)	3% (3)	1.56
State wildlife conservation plans	12% (14)	19% (22)	**36% (42)**	21% (24)	13% (15)	3.03
Watershed plans	8% (9)	15% (18)	**32% (39)**	28% (33)	18% (21)	3.33
Wildlife management plans	12% (14)	20% (23)	**43% (49)**	12% (14)	12% (14)	2.92
The Nature Conservancy's ecoregional assessments	24% (28)	24% (28)	**33% (39)**	13% (15)	8% (9)	2.57
Total Respondents	130					
(skipped this question)	5					

13. What percent of your project areas have a completed habitat management plan?

	Response Percent	Response Total
0% (None)	**25.6%**	33
1-25% (Few)	21.7%	28
26-50% (Some)	17.8%	23
51-75% (Many)	11.6%	15
76-99% (Most)	13.2%	17
100% (All)	10.1%	13
Total Respondents	129	
(skipped this question)	6	

14. What percent of your project areas are being:

	0% (None)	1-25% (Few)	26-50% (Some)	51-75% (Many)	76-99% (Most)	100% (All)	Response Average
Managed for biodiversity (e.g. prescribed burning, invasive species removal)	17% (22)	**24% (31)**	18% (23)	12% (15)	20% (26)	9% (12)	3.22
Restored for biodiversity (e.g. planting native vegetation)	21% (27)	**36% (46)**	19% (24)	8% (10)	9% (12)	8% (10)	2.72
Ecologically monitored (e.g. status of native species or communities)	9% (12)	**28% (36)**	22% (28)	9% (12)	16% (20)	16% (21)	3.43

Total Respondents	129
(skipped this question)	6

Organizational Capacity

15. Is your organization interested in increasing its capacity or ability to do projects that focus on biodiversity conservation?

	Response Percent	Response Total
Very	**54.0%**	68
Somewhat	34.9%	44
A little	9.5%	12
Not	1.6%	2
Total Respondents	126	
(skipped this question)	9	

16. What are the barriers to your organization doing more biodiversity conservation?

	Not a Barrier	Slight Barrier	Moderate Barrier	Major Barrier	Response Average
Lack of access to biodiversity info	**37% (45)**	36% (44)	21% (26)	5% (6)	1.94
Limited stewardship/monitoring $	2% (3)	8% (10)	32% (39)	**58% (71)**	3.45
Limited staff capacity	2% (2)	6% (7)	28% (35)	**65% (80)**	3.56
Limited staff expertise	14% (17)	29% (35)	**34% (41)**	24% (29)	2.67
Not a priority for state or federal conservation agencies	**38% (45)**	34% (40)	23% (27)	6% (7)	1.97
Not a local priority	27% (33)	**30% (37)**	27% (33)	16% (20)	2.33
Not a board priority	**55% (68)**	24% (30)	19% (24)	2% (2)	1.68
Not a priority of funders	22% (27)	28% (34)	**34% (41)**	16% (20)	2.44
Unsuccessful grant apps	**36% (41)**	26% (30)	25% (29)	12% (14)	2.14
Uninterested landowners	27% (32)	**31% (36)**	30% (35)	12% (14)	2.26
Total Respondents	126				
(skipped this question)	9				

17. What training or other assistance would help you do more biodiversity conservation?

	Not Helpful	Slightly Helpful	Moderately Helpful	Very Helpful	Response Average
Conservation planning training	10% (12)	35% (42)	**36% (43)**	19% (23)	2.64
Conservation planning assistance	7% (9)	27% (33)	**33% (40)**	32% (39)	2.90
Resource management training	8% (9)	33% (39)	**38% (45)**	22% (26)	2.74
Resource management assistance	6% (7)	23% (27)	**37% (43)**	34% (40)	2.99
Species management training	9% (11)	29% (35)	**42% (51)**	19% (23)	2.72
Species management assistance	8% (9)	20% (23)	**44% (51)**	29% (34)	2.94
Restoration training	8% (10)	**36% (43)**	34% (40)	22% (26)	2.69
Restoration assistance	5% (6)	22% (26)	**40% (48)**	33% (39)	3.01
Monitoring training	13% (16)	29% (35)	**33% (39)**	24% (29)	2.68
Monitoring assistance	10% (12)	23% (27)	30% (35)	**37% (44)**	2.94
Grant info / application assistance	3% (4)	25% (29)	30% (35)	**42% (50)**	3.11
Grant writing training	21% (25)	**33% (39)**	21% (25)	25% (30)	2.50
Partnering or merging with other orgs for greater effectiveness	10% (12)	17% (20)	**38% (45)**	36% (43)	2.99
Legal guidance for conservation activities	19% (22)	**34% (40)**	27% (31)	20% (23)	2.47
Total Respondents	123				
(skipped this question)	12				

Funding

18. Have you received public funding for conservation or habitat restoration on private lands?

	Yes	No	Average
Federal	**51% (61)**	49% (59)	1.49
State	**57% (70)**	43% (53)	1.43
Local/city/county	36% (42)	**64% (76)**	1.64
Total Respondents	123		
(skipped this question)	1		

19. What are the most important sources for those funds? Activities funded by the programs: A=acquisition, CS=cost share, E=easement, EP=enhancement payment, PP=practice payment, R=rental

	Important	Use Sometimes	Don't Use	Response Average
Coastal Wetland Conservation Grants (E, A)	7% (7)	7% (7)	**86% (89)**	2.80
Conservation Reserve Program (CS, R)	4% (4)	17% (17)	**79% (80)**	2.75
Conservation Reserve Enhancement Prog (CS, R)	3% (3)	9% (9)	**88% (86)**	2.85
Conservation Security Program (EP, PP)	0% (0)	2% (2)	**98% (99)**	2.98
Emergency Watershed Protection Program (CS, E)	3% (3)	2% (2)	**95% (97)**	2.92
Environmental Quality Incentives Program (CS)	7% (7)	10% (10)	**84% (87)**	2.77
Farm and Ranch Lands Protection Program (E)	16% (16)	15% (15)	**70% (72)**	2.54
Forest Legacy Program (A, E)	14% (15)	15% (16)	**70% (74)**	2.56
Grassland Reserve Program (CS, E)	2% (2)	11% (11)	**87% (90)**	2.85
Healthy Forests Reserve Program (CS, E)	2% (2)	3% (3)	**95% (97)**	2.93
Landowner Incentive Program (CS, E)	12% (13)	20% (21)	**67% (70)**	2.55
N Amer. Wetlands Conservation Grants (A, E, CS)	17% (18)	14% (15)	**69% (72)**	2.51
Partners for Fish and Wildlife (CS)	16% (17)	15% (16)	**68% (71)**	2.52
Private Stewardship Program (CS)	9% (9)	16% (17)	**75% (78)**	2.66
Wetland Reserve Program (CS, E)	6% (6)	20% (21)	**74% (77)**	2.68
Wildlife Habitat Incentives Program (CS)	15% (15)	17% (17)	**69% (70)**	2.54
State easement purchase programs	31% (32)	24% (25)	**45% (47)**	2.14
State/local species/habitat cost-share or grants	30% (31)	23% (24)	**48% (50)**	2.18
Local easement or purchase of development rights programs	33% (34)	15% (15)	**52% (54)**	2.19

Total Respondents	111
(skipped this question)	24

20. What other public or private sources of funding do you use?

(Open-ended responses not compiled here)

Total Respondents	85
(skipped this question)	50

21. What would help you tap into state, federal, or local dollars more effectively?

	Not Helpful	Slightly Helpful	Moderately Helpful	Very Helpful	Response Average
Knowledge of available funding sources	2% (3)	9% (11)	28% (34)	**61% (74)**	3.47
Grant-writing capacity or expertise	9% (11)	23% (27)	31% (36)	**37% (43)**	2.95
Matching funds	3% (3)	7% (8)	20% (24)	**71% (84)**	3.59
Conservation planning expertise	8% (10)	25% (30)	**40% (47)**	26% (31)	2.84
Species or habitat management and restoration skills	8% (9)	25% (30)	**45% (53)**	23% (27)	2.82
Closer relationships w/ NRCS or SWCD's	5% (6)	32% (38)	**34% (40)**	29% (34)	2.86

Total Respondents	123
(skipped this question)	12

22. What is your organization's annual operating budget?

	Response Percent	Response Total
$0	0%	0
$1 – 10,000	16.3%	20
$10,000 – 49,999	17.9%	22
$50,000 – 99,999	14.6%	18
$100,000 – 299,999	**23.6%**	29
$300,000 – 499,999	13.8%	17
$500,000 – 1,000,000	4.9%	6
More than $1,000,000	8.9%	11
Total Respondents	123	
(skipped this question)	12	

23. How many paid staff FTE's (full-time + part-time) does your organization have?

	Response Percent	Response Total
0 -- All volunteer	30.1%	37
1 – 2	**30.9%**	38
3 – 5	19.5%	24
6 – 10	13.8%	17
11 – 15	1.6%	2
16 – 20	0.8%	1
21 – 30	1.6%	2
more than 30	1.6%	2
Total Respondents	123	
(skipped this question)	12	

24. Comments. If you would like to elaborate on any question(s), please indicate the question number(s) with your comments.

(Open-ended responses not compiled here)

Total Respondents	42
(skipped this question)	93

Future Participation

25. The Living Lands Project will develop pilot projects to help local land trusts more effectively implement biodiversity conservation. If you are interested in being contacted about being involved in a pilot project, please check the box below and be sure your contact information is complete in Questions 1 and 3.

	Response Percent	Response Total
Yes, please contact me about being involved in a pilot project	**65%**	88
Total Respondents	88	
(skipped this question)	47	

Thank you for participating in the Living Lands Project.