



Land Use and Planning Report

Colorado
State
University

Extension

Department of Agricultural and Resource Economics, Fort Collins, CO 80523-1172

<http://dare.colostate.edu/pubs>

REGIONAL DISTINCTIONS AND SIMILARITIES AMONG COLORADO PROFESSIONALS' CONCERNS, ABILITIES, AND NEEDS FOR LAND USE PLANNING

Andrew Seidl¹

- *"Front Range respondents were most concerned about water quantity, quality, and rural/urban sprawl. They were least worried about forestland conversion."*
- *"Southeastern Coloradans were most concerned about water quantity, air quality and agricultural profitability. They were least concerned with rural/urban sprawl."*
- *"Southwestern Colorado demonstrated the most concern with water quantity, preservation of the 'rural lifestyle' and water quality. They were least concerned about multi-jurisdictional planning."*

Introduction

The rate and magnitude of private (usually agricultural) land use change is a function of farm profitability, urban growth pressures, land values, personal decisions about work and retirement, community expectations, taxes and government programs, and incentives and regulations (AFT, 1997; Daniels and Bowers, 1997). Many of these factors are location dependent. Colorado's population increased by 1/4 to more than 4 million between 1990 and 1999, but 80% of this population growth has occurred in the Front Range region

(CDLG, 1999). While most of the Colorado economy is growing, the agricultural economy is in a period of decline. It is logical to argue that agriculturally dependent communities are benefiting less from this extended period of general prosperity than other regions of the state. In this climate of disparate economic opportunity, land (and other natural resource) use and planning pose particular challenges to the people and communities of Colorado.

Communities, particularly in rural or formerly rural areas, are facing changing demographics, values, and demands on their human and natural resources. Growth of rural and non-metropolitan communities driven by people without prior life experience in rural areas can fuel conflict with the sights, sounds, and smells of historically agriculture-based economies (Johnson and Beale, 1994). Stock market and computer industry booms have created a new generation of young wealthy retirees, many of whom are attracted to Colorado's natural environment and lifestyle. Telecommuting and e-commerce, minimizing the importance of location in business decisions, are likely to increase growth challenges for attractive rural Colorado communities.

¹ Assistant Professor and Extension Economist—Public Policy, Department of Agricultural and Resource Economics, Colorado State University, Ft. Collins, CO, 80523-1172. Comments and questions to: 970-491-7071 or Andrew.Seidl@colostate.edu.

Extension programs are available to all without discrimination.

Tools and strategies exist for communities to plan for and guide their futures. A variety of public and private, state, federal, and local agencies might provide training, insight or information to their clientele or constituencies regarding the tools and strategies available to them to manage their natural resources toward both private and collective objectives. Concerns, skills, abilities and needs for natural resource use and planning programming may vary by location within Colorado due to differing regional priorities, pressures and varied experiences of survey respondents. Colorado has 63 counties and Colorado State University Cooperative Extension groups them into five regions. In order to facilitate programming, and mitigate potential statistical challenges with few observations in some counties, responses were analyzed based upon these regional groupings.

Approach

In the spring of 1999, a skills, abilities and needs assessment of Colorado professionals with agriculture and natural resource managing responsibilities was undertaken. A comprehensive mailing list of the individuals employed by the following organizations was compiled: County Commissioners and representatives of the Ute Mountain Ute and the Southern Ute Indian tribes, members of the Colorado Rural Development Council, Colorado-based personnel of the four agencies of the U.S. Department of Agriculture (i.e., Rural Development, Farm Service Association, Natural Resource Conservation Service, and Resource Conservation and Development), the Bureau of Land Management, the U.S. Forest, Parks and Fish and Wildlife Services, Colorado State Forests, Parks, and Department of Local Affairs, Cooperative Extension and Community College personnel, county assessors and real estate appraisers, bankers, lenders, and independent consultants, representatives of farmers' and ranchers' organizations, environmentally oriented non-governmental organizations, and land trusts.

Ultimately, 822 six-page surveys were mailed and the Dillman (1978) method was followed with one adaptation. An overall return rate of 67% (550 usable surveys) was reached employing the common adaptation of the inclusion of a \$1 courtesy incentive for completion of the survey in the first mailing to all recipients except Extension personnel. In accordance with the methodology, the first mailing (introductory letter, survey, and \$1) was followed by a postcard reminder to nonrespondents after 2-3 weeks, which was followed

by a second survey mailing (reminder letter, and survey) to remaining nonrespondents after 2-3 additional weeks (see APR00-06). Two clear "protest" surveys were received and 16 surveys were returned as "undeliverable."

In addition to demographic information, respondents were queried regarding their:

- 1) Degree of concern over identified growth issues (16 statements);
- 2) Knowledge of common growth management tools, agricultural land and open space preservation tools, and comprehensive strategic planning and visioning tools (27 statements);
- 3) Interest in educational programming on each of the statements in found in part 2 (27 statements); and
- 4) Educational preferences for media, location, duration, cost, format etc. (30 statements).

Cooperative Extension's Northeast region is comprised of Weld, Morgan, Logan, Washington, Sedgwick, Phillips, Yuma and Kit Carson counties. The Northwest Region is made up of Moffat, Routt, Jackson, Grand, Summit, Eagle, Garfield, Rio Blanco, Mesa, Delta, Montrose, Ouray, San Miguel, Gunnison, and Pitkin counties. The Southwest is comprised of Dolores, Montezuma, San Juan, La Plata, Hinsdale, Archuleta, Mineral, Saguache, Rio Grande, Conejos, Alamosa, and Costilla counties. The Southeast is contains Lake, Chaffee, Park, Fremont, Teller, Custer, Pueblo, Huerfano, Elbert, Lincoln, Cheyenne, Kiowa, Crowley, Otero, Bent, Prowers, Las Animas, and Baca counties. Finally, the Front Range Region is made up of Larimer, Boulder, Gilpin, Clear Creek, Jefferson, Denver, Adams, Arapahoe, Douglas, El Paso, and soon, Broomfield counties.

In this document the mean responses to Parts 1-3 above by Cooperative Extension region are reported. In Parts 1-3 respondents were asked to reflect their preferences on a 7-point Likert scale. On this scale "1" indicates strongly disinterested, unlikely, or unconcerned, "4" reflects a neutral response, and "7" indicates strongly interested, highly likely, or highly concerned (Appendix 3). In addition, the relative ranks of mean responses to each statement within a category (i.e., concerns, knowledge and skills, interests and needs) are reported. On this scale "1" indicates highest ranking response within a category and each number higher reflects an ordinal step lower in mean response.

Table 1 provides the number of responses by county and Extension Region and county population. The fewest responses to our survey from a Colorado county were 2 from Gilpin County. The greatest number of county responses was 23 from Mesa County. On a

regional basis, the most responses were received from the Northwest Region (150). Responses from the other four regions were fairly even with the Front Range contributing the fewest survey responses received (91).

Table 1: Survey responses, by Colorado county and Extension Region

Region	Cty	#	1997 Ppn*	Ppn/#	Region	Cty	#	1997 Ppn*	Ppn/#
Front Range					Northwest				
	Adams	13	314,191	24,169		Delta	13	25,979	1,998
	Arapahoe	14	464,319	33,166		Eagle	5	32,105	6,421
	Boulder	9	264,970	29,441		Garfield	12	38,250	3,188
	Clear Creek	3	8,865	2,955		Grand	8	9,877	1,235
	Denver	19	504,701	26,563		Gunnison	9	12,305	1,367
	Douglas	5	130,684	26,137		Jackson	7	1,770	253
	El Paso	13	481,779	37,060		Mesa	23	110,665	4,812
	Gilpin	2	4,060	2,030		Moffat	11	12,464	1,133
	Jefferson	9	503,908	55,990		Montrose	13	30,996	2,384
	Larimer	17	226,328	13,313		Ouray	5	3,262	652
	<i>Subtotal</i>	<i>91</i>	<i>2,903,805</i>	<i>31,910</i>		Rio Blanco	7	7,119	1,017
Northeast						Routt	10	17,346	1,735
	Kit Carson	8	7,454	932		San Miguel	6	5,567	928
	Logan	17	18,826	1,107		Summit	9	18,811	2,090
	Morgan	12	26,697	2,225		<i>Subtotal</i>	<i>150</i>	<i>326,516</i>	<i>2,177</i>
	Philips	7	4,649	664	Southwest				
	Sedgwick	6	2,731	455		Alamosa	21	15,703	748
	Washington	8	5,383	73		Archuleta	6	8,543	1,424
	Weld	20	156,533	7,827		Conejos	8	7,881	985
	Yuma	13	9,627	741		Costilla	3	3,497	1,166
	<i>Subtotal</i>	<i>96</i>	<i>231,90</i>	<i>2,416</i>		Dolores	3	1,725	575
Southeast						La Plata	14	40,943	2,925
	Baca	3	4,585	1,528		Mineral	2	680	340
	Bent	7	5,813	830		Montezuma	13	22,697	1,746
	Chaffee	6	15,716	2,619		Rio Grande	15	12,037	802
	Cheyenne	5	2,397	479		Saguache	3	5,911	1,970
	Crowley	5	4,519	904		San Juan	4	555	139
	Custer	6	3,217	536		<i>Subtotal</i>	<i>95</i>	<i>120,172</i>	<i>1,265</i>
	Elbert	3	17,487	5,829		Total	547	3,920,183	7,167
	Fremont	8	42,375	5,297					
	Huerfano	3	7,541	2,514					
	Kiowa	4	1,780	445					
	Lake	3	8,301	2,767					
	Las Animas	7	15,78	2,257					
	Lincoln	8	6,549	819					
	Otero	17	21,455	1,262					
	Park	5	12,581	2,516					
	Prowers	12	13,922	1,160					
	Pueblo	10	133,869	13,387					
	Teller	6	19,885	3,314					
	<i>Subtotal</i>	<i>115</i>	<i>337,790</i>	<i>2,937</i>					

* Source: Census of Colorado, 1998

Due to our survey design, largely targeting county level elected officials and educational service providers, our responses showed relatively greater representation of less populated counties if viewed on a per capita basis. The fewest responses received from a county per capita were 1 response for every 55,900 residents in Jefferson County. The greatest number of responses per county population was San Juan with 1 response for every 139 residents. On a per capita basis, the Southwest Region had the most responses, calculated at 1 response for every 1,265 residents. Predictably, the Front Range, boasting 3/4 of Colorado's population, had the fewest responses on a per capita basis (1:31,90).

Results

Concerns

Table 2 illustrates the mean rating of respondents to 16 measured "concerns" organized by Cooperative Extension region. Table 3 reviews the same information providing the relative ranking of mean respondent ratings by region for the measured "concerns" dimensions.

Respondents from the Front Range were fairly strongly concerned about all dimensions of concern queried. They were most concerned about water quantity, quality, and rural/urban sprawl. Although they still note considerable concern, they were least worried about affordable housing, large lot, low-density development, and forestland conversion.

Respondents from the Northwest were also strongly concerned about the factors under examination. They were most concerned with agricultural land conversion, water quantity, and rural/urban sprawl. They were least concerned about affordable housing, large lot, low-density development, and multi-jurisdictional or regional planning.

Respondents from Northeastern Colorado demonstrated neutral to positive concern for 13 of the 16 dimensions estimated. They were most strongly concerned about agricultural profitability, water quantity and quality. They were also quite concerned about public finance and the preservation of "rural lifestyle."

Table 2: Regional Results, Concerns, mean scores

How concerned are your clientele about...	FR	NW	NE	SW	SE	Weighted Mean	Mean
Rural/urban sprawl	5.56	5.78	4.13	5.12	4.68	5.05	5.11
Agricultural profitability	5.09	5.49	6.69	5.80	5.91	5.80	5.78
Land speculation	4.87	5.19	4.56	5.38	4.89	4.98	4.99
Agricultural land conversion	5.32	5.87	5.00	5.68	5.44	5.46	5.50
Forest land conversion	4.75	5.13	3.09	5.36	4.33	4.53	4.58
Wildlife habitat conversion	5.10	5.51	4.19	5.45	4.90	5.03	5.07
Multi-jurisdictional planning	5.12	4.90	4.48	4.89	4.73	4.82	4.83
Public finance (e.g., schools, roads)	5.20	5.61	5.62	5.54	5.70	5.53	5.42
Open space preservation	5.28	5.51	3.79	5.29	4.83	4.94	4.99
Affordable housing	4.18	4.78	4.74	4.86	4.77	4.67	4.68
Preservation of public outdoor recreation	4.90	5.26	4.16	5.24	4.86	4.88	4.92
Large lot, low density development	4.60	4.79	3.73	4.66	4.28	4.41	4.44
Air quality	5.52	5.23	4.68	5.20	5.96	5.32	5.10
Water quality	5.96	5.71	5.79	5.93	5.81	5.84	5.82
Water quantity	6.07	5.79	5.95	6.21	6.23	6.05	6.03
Preservation of the "rural lifestyle."	5.02	5.68	5.76	6.09	5.70	5.65	5.66

Scores reported on a 7 pt Likert scale where 1=not concerned, 4=neutral, 7=very concerned. Largest possible number of responses = 547. FR=Front Range; NW=Northwest Region; NE=Northeast Region; SW=Southwest Region; and SE=Southeast Region. "Weighted mean" assigns equal weight to each region's response. "Mean" gives equal weight to each individual response.

Table 3: Regional Results, Concerns, relative ranking

How concerned are your clientele about...	FR	NW	NE	SW	SE	Weighted Mean	Mean
Rural/urban sprawl	3	3	13	13	14	9	7
Agricultural profitability	10	9	1	4	3	5	3
Land speculation	13	12	9	8	9	10	10
Agricultural land conversion	5	1	6	5	7	5	5
Forest land conversion	14	13	16	9	15	13	14
Wildlife habitat conversion	9	7T	11	7	8	8	9
Multi-jurisdictional planning	8	14	10	14	13	12	13
Public finance (e.g., schools, roads)	7	6	5	6	5T	6	6
Open space preservation	6	7T	14	10	11	10	11
Affordable housing	16	16	7	15	12	13	15
Preservation of public outdoor recreation	12	10	12	11	10	11	12
Large lot, low density development	15	15	15	16	16	15	16
Air quality	4	11	8	12	2	7	8
Water quality	2	4	3	3	4	3	2
Water quantity	1	2	2	1	1	1	1
Preservation of the "rural lifestyle."	11	5	4	2	5T	5	4

Largest possible number of responses = 547. FR=Front Range; NW=Northwest Region; NE=Northeast Region; SW=Southwest Region; and SE=Southeast Region. "Weighted mean" assigns equal weight to each region's response. "Mean" gives equal weight to each individual response. A rank of "1" indicates the highest mean score in the "Concerns" category. A rank of "16" is indicative of the lowest mean score in the category.

Respondents from the Northeast were relatively unconcerned with forestland conversion, large lot, low-density development, and open space preservation.

Respondents from Southwestern Colorado demonstrated concern for all of the estimated dimensions. They were most concerned with water quantity, preservation of the "rural lifestyle" and water quality. They were least concerned about large lot, low-density development, affordable housing, and multi-jurisdictional planning.

Southeastern Coloradans indicated concern for all of the dimensions under consideration. They were most concerned about water quantity, air quality and agricultural profitability. Water quality was also a priority concern for this group. They were least concerned with large lot, low-density development, forestland conversion, and rural/urban sprawl.

Knowledge and Skills

Among the purposes of this survey was to gage the level of knowledge and ability of surveyed individuals in using common land use planning and management tools. Respondents' knowledge and skills were sepa

rated according to region in order to identify areas of perceived expertise and potential need. This approach should improve both the appropriateness and efficiency of educational programming efforts in the land use-planning arena.

Respondents rated their knowledge and skill base on 27 dimensions related to land and other natural resource use and planning. Most (21) of factors evaluated could be categorized as legal "tools." Several (5) of the variables evaluated could be seen as social policy, planning or visioning approaches. One statement solicits an overall or overview assessment. Table 4 reviews the mean scores of responses to these 27 criteria by occupation. Table 5 illustrates the same information using a rank ordering of each measured variable by region to compare responses.

Respondents from the Front Range indicated neutral to positive knowledge and skill bases for 1/2 of the evaluated criteria. They felt they had the strongest skill base in conservation easements, environmental impact statements and strategic planning. They felt they had the weakest skill base in housing land trusts, moratoria, and "bargain" land sales. On social process measures

Table 4: Regional Results, Knowledge and Skills, mean scores

How knowledgeable are you about...	FR	NW	NE	SW	SE	Overall
Strategic planning	4.66	4.58	4.12	4.29	4.32	4.41
Land purchases	4.64	4.75	4.75	4.83	4.59	4.71
Purchase of Development Rights (PDR)	4.08	4.07	3.34	3.83	3.52	3.79
Land banking	3.71	3.68	4.01	3.38	3.80	3.72
Zoning (e.g., agricultural, performance)	4.47	4.72	4.53	4.93	4.54	4.64
Cluster Development	4.13	4.41	3.35	3.87	3.42	3.87
Planned Unit Development (PUD)	4.08	4.30	3.39	4.03	3.44	3.87
Capital Improvement Programming (CIP)	3.25	3.49	2.96	3.26	3.14	3.24
Impact fees and exactions	3.44	3.71	2.94	3.57	3.08	3.37
Development timing (phased)	3.51	3.60	2.94	3.72	3.15	3.40
Cooperative agreements (e.g., tax-base sharing)	3.44	3.47	2.92	3.28	3.03	3.24
Environmental impact statements (EIS)	4.70	4.97	3.89	4.57	4.12	4.49
Moratoria	3.09	3.22	2.55	3.31	2.70	2.99
Tax credits	3.63	3.45	3.73	3.78	3.65	3.63
Special designations	3.36	3.38	2.93	3.38	3.14	3.25
"Bargain" land sales	3.14	3.00	2.89	3.05	2.95	3.00
Conservation easements	4.98	5.02	4.07	4.74	4.27	4.64
Transferable Development Rights (TDR)	3.97	3.89	3.01	3.39	3.14	3.50
Land trusts	4.52	4.48	3.57	4.04	3.63	4.07
Water banking/trusts	3.30	3.30	3.01	3.28	2.97	3.17
Housing land trusts	2.93	3.02	2.50	2.79	2.69	2.80
Outright donations of property	4.11	4.13	3.48	3.84	3.50	3.83
Innovative private-public partnerships	4.12	4.12	3.19	3.49	3.46	3.71
Holistic framing of public issues	3.42	3.70	2.76	3.05	2.76	3.18
Civic participation and dialogue approaches	4.04	4.29	3.19	3.70	3.35	3.75
Multi-jurisdictional or regional planning approaches	4.19	4.19	3.22	3.87	3.40	3.82
Overall land & other natural resource planning tools	4.48	4.28	3.75	4.42	4.16	4.39

Scores reported on a 7 pt Likert scale where 1=no knowledge, 4=neutral, 7=very knowledgeable. Largest possible number of responses = 547. FR=Front Range; NW=Northwest Region; NE=Northeast Region; SW=Southwest Region; and SE=Southeast Region.

other than strategic planning, they indicated relative weakness on holistic issues framing and reasonable abilities in other areas.

Respondents from Northwestern Colorado indicated neutral to positive knowledge and skill bases for ½ of the measured criteria. They reported greatest knowledge of conservation easements, environmental impact statements and land purchases. Zoning, strategic planning, and land trusts were additional areas of relative strength. On the other hand, this group indicated relatively little knowledge base in “bargain” land sales, housing land trusts and moratoria. On methods of social policy other than strategic planning, responses indicated moderate to neutral knowledge.

Northeastern Colorado residents indicated neutral to positive knowledge of only 5 of 27 evaluated criteria. They indicated they had the strongest knowledge of fee simple land purchases, zoning, and strategic planning. They felt they had the weakest knowledge of housing land trusts, moratoria, and holistic issues framing. Other than strategic planning, their skill base of social policy methods was considered by them to be relatively weak.

Respondents from Southwestern Colorado indicated neutral to positive skills in 8 of 27 of the cases examined. They felt they had the strongest abilities in zoning, land purchases, and conservation easements. They felt they had the weakest abilities in housing land

Table 5: Regional Results, Knowledge and Skills, relative rankings

How knowledgeable are you about...	FR	NW	NE	SW	SE	Overall
Strategic planning	3	5	3	6	3	5
Land purchases	4	3	1	2	1	1
Purchase of Development Rights (PDR)	12T	14	13	12	10	13
Land banking	16	18	5	19T	7	15
Zoning (e.g., agricultural, performance)	7	4	2	1	2	2T
Cluster Development	9	7	12	9T	14	8T
Planned Unit Development (PUD)	12T	8	11	8	13	8T
Capital Improvement Programming (CIP)	24	20	19	24	18T	21T
Impact fees and exactions	19T	16	20T	16	21	20
Development timing (phased)	18	19	20T	14	17	19
Cooperative agreements (e.g., tax-base sharing)	19T	21	23	22T	22	21T
Environmental impact statements (EIS)	2	2	6	4	5	4
Moratoria	26	25	26	21	26	27
Tax credits	17	22	8	13	8	17
Special designations	22	23	22	19T	18T	23
"Bargain" land sales	25	27	24	25T	24	26
Conservation easements	1	1	4	3	4	2T
Transferable Development Rights (TDR)	15	15	17T	18	18T	18
Land trusts	5	6	9	7	9	7
Water banking/trusts	23	24	17T	22T	23	25
Housing land trusts	27	26	27	27	27	12
Outright donations of property	11	12	10	11	11	10
Innovative private-public partnerships	10	13	15T	17	12	16
Holistic framing of public issues	21	17	25	25T	25	24
Civic participation and dialogue approaches	14	9	15T	15	16	14
Multi-jurisdictional or regional planning approaches	8	11	14	9T	15	11
Overall land & other natural resource planning tools	6	10	7	5	6	6

Largest possible number of responses = 547. FR=Front Range; NW=Northwest Region; NE=Northeast Region; SW=Southwest Region; and SE=Southeast Region. A rank of "1" indicates the highest mean score in the "Concerns" category. A rank of "27" is indicative of the lowest mean score in the category.

trusts, "bargain" land sales, and holistic public issues framing. Other than strategic planning, knowledge of other social policy tools was ranked low as well.

Southeast Coloradoans indicated neutral to positive knowledge of 6 of the 27 estimated criteria. They felt their knowledge base was strongest on fee simple land purchases, zoning, and strategic planning. They felt their weakest skill base was in housing land trusts, moratoria, and holistic public issues framing methods. On other social policy criteria the skill base was considered relatively weak.

Needs and Interests

Regionally stratified knowledge and skill information can be combined with needs and interests information to determine the primary thrust, target audience and level of information communicated in educational efforts. Respondents were asked to rate their degree of interest in receiving educational materials on the same factors on which they provided their level of knowledge. These results are illustrated in Table 6 (mean scores) and Table 7 (relative ranking).

Table 6: Regional Results, Needs & Interests, mean scores

How interested are you in information on...	FR	NW	NE	SW	SE	Overall
Strategic planning	4.38	4.39	3.78	4.72	4.43	4.35
Land purchases	4.24	4.14	3.89	4.78	4.19	4.23
Purchase of Development Rights (PDR)	4.01	4.20	3.60	4.60	3.85	4.06
Land banking	3.82	4.05	3.70	4.34	4.12	4.02
Zoning (e.g., agricultural, performance)	4.20	4.39	4.53	4.87	4.65	4.52
Cluster Development	3.77	4.10	3.41	4.33	3.50	3.84
Planned Unit Development (PUD)	3.62	3.91	3.40	4.36	3.50	3.77
Capital Improvement Programming (CIP)	3.41	4.05	3.56	4.32	3.83	3.86
Impact fees and exactions	3.38	4.03	3.73	4.33	3.83	3.88
Development timing (phased)	3.33	3.82	3.44	4.11	3.62	3.68
Cooperative agreements (e.g., tax-base sharing)	3.70	4.14	3.84	4.50	4.03	4.05
Environmental impact statements (EIS)	4.03	4.31	3.73	4.53	4.33	4.21
Moratoria	3.09	3.45	3.14	3.91	3.31	3.38
Tax credits	3.93	3.89	4.03	4.59	4.16	4.10
Special designations	3.56	3.88	3.52	4.24	3.74	3.80
"Bargain" land sales	3.64	3.86	3.71	4.28	3.80	3.86
Conservation easements	4.72	4.99	4.37	5.29	4.63	4.81
Transferable Development Rights (TDR)	4.38	4.50	3.79	4.68	3.93	4.27
Land trusts	4.52	4.63	4.03	4.66	4.22	4.43
Water banking/trusts	4.07	4.55	4.22	4.67	4.75	4.47
Housing land trusts	3.28	3.85	3.50	4.14	3.69	3.71
Outright donations of property	4.17	4.25	3.70	4.69	4.05	4.17
Innovative private-public partnerships	4.86	4.94	4.11	4.88	4.54	4.68
Holistic framing of public issues	3.90	4.50	3.60	4.38	3.80	4.07
Civic participation and dialogue approaches	4.08	4.47	3.64	4.53	4.04	4.18
Multi-jurisdictional or regional planning approaches	4.52	4.56	3.85	4.71	4.41	4.43
Overall land & other natural resource planning tools	4.91	5.21	4.59	5.27	4.84	4.98

Scores reported on a 7 pt Likert scale where 1=no knowledge, 4=neutral, 7=very knowledgeable. Largest possible number of responses = 547. FR=Front Range; NW=Northwest Region; NE=Northeast Region; SW=Southwest Region; and SE=Southeast Region.

Respondents from the Front Range Region of Colorado indicated neutral to positive interest in educational programming on ½ of the measured criteria. They were most interested in information about land use policy overall, innovative public-private partnerships, and conservation easements. Land trusts and regional planning approaches were also relatively strongly expressed needs. On the other hand, Front Range respondents indicated that they were least interested in programming on moratoria, housing land trusts, and development timing.

Respondents from Northwestern Colorado indicated a need or interest in educational materials on 20 of 27 measured indicators. They were most interested in

information on land use policy overall, conservation easements, and innovative public-private partnerships. Land trusts, water banking and regional planning were other areas of interest indicated. They were least interested in programming efforts on moratoria development timing, and housing land trusts.

Northeastern Colorado respondents expressed interest in only 7 of the 27 features evaluated. They were most interested in information about land use policy overall, zoning, and conservation easements. They were least interested in educational programming in the area of moratoria, planned unit development, and cluster development.

Table 7: Regional Results, Needs & Interests, relative rankings

How interested are you in information on...	FR	NW	NE	SW	SE	Overall
Strategic planning	6T	10T	12	6	6	8
Land purchases	8	15T	8	5	9	10
Purchase of Development Rights (PDR)	14	14	19T	12	16	16
Land banking	17	18T	16T	19	11	18
Zoning (e.g., agricultural, performance)	9	10T	2	4	3	5
Cluster Development	18	17	25	20T	25T	22
Planned Unit Development (PUD)	21	21	26	18	25T	24
Capital Improvement Programming (CIP)	23	18T	21	22	17T	20T
Impact fees and exactions	24	20	13T	20T	17T	19
Development timing (phased)	25	26	24	25	24	26
Cooperative agreements (e.g., tax-base sharing)	19	15T	10	16	14	17
Environmental impact statements (EIS)	13	12	13T	14T	8	11
Moratoria	27	27	27	27	27	27
Tax credits	15	22	6T	13	10	14
Special designations	22	23	22	24	23	23
"Bargain" land sales	20	24	15	23	19T	20T
Conservation easements	3	2	3	1	4	2
Transferable Development Rights (TDR)	6T	8	11	9	15	9
Land trusts	4T	4	6T	11	8	6T
Water banking/trusts	12	6	4	10	2	4
Housing land trusts	26	25	23	26	22	25
Outright donations of property	10	13	16T	8	12	13
Innovative private-public partnerships	2	3	5	3	5	3
Holistic framing of public issues	16	7	19T	17	19T	15
Civic participation and dialogue approaches	11	9	18	14T	13	12
Multi-jurisdictional or regional planning approaches	4T	5	9	7	7	6T
Overall land & other natural resource planning tools	1	1	1	2	1	1

Largest possible number of responses = 547. FR=Front Range; NW=Northwest Region; NE=Northeast Region; SW=Southwest Region; and SE=Southeast Region. A rank of "1" indicates the highest mean score in the "Concerns" category. A rank of "27" is indicative of the lowest mean score in the category.

Respondents from Southwestern Colorado indicated a potential interest in educational programming on 26 of the 27 measured criteria. Only moratoria were considered less than neutral on a level of interest scale. They were most interested in programming on conservation easements, land use policy tools in general and public-private partnerships. Other than moratoria, they were least interested in educational information about housing land trusts and development timing.

In the Southeast Region, respondents indicated potential interest in educational materials on ½ of the measured variables. They were most interested in programming on policy tools in general, water banking and zoning. They were least interested in moratoria, cluster development and planned unit development. Of the

social policy tools, holistic issues framing and civic participation were considered of less interest while strategic planning, public-private partnerships and regional approaches were considered of moderate relative interest.

Conclusions and Further Directions

This survey provides an essential first step toward cost effective and useful educational programming on land use planning topics in the state of Colorado. It identifies areas of relative skill and ability, areas of relative need, and areas of relative concern. Here regional distinctions and similarities in the level of concern, knowledge and need were highlighted in order to guide educational programming within and among Colorado's 5 extension regions. With this information

Cooperative Extension and other educationally oriented private and public agencies can hope to better serve our clientele.

Acknowledgements

The Colorado State Forest Service, American Farmland Trust and Colorado State University Cooperative Extension enabled this study. Substantial time and effort in crafting the survey instrument, mailing list and in reviewing the results were expended by the following individuals: Phil Schwolert, Jeff Jones, Martha Sullins, Bob Hamblen, Elizabeth Garner, Sheila Knop, and Dennis Lamm. Administrative support was provided by Jessica Wells and by a number of students and staff in the CSU-Department of Agricultural and Resource Economics. The author is indebted to these individuals and institutions for their support of this project. However, as usual, all errors of interpretation and omission remain mine.

Sources referenced and related resources

American Farmland Trust. 1997. Saving American Farmland: What Works. American Farmland Trust, Northampton, MA. 334 p.

CDLG. Demography Section of the Colorado Division of Local Government, *Population Projections and Ten Largest and Fastest Growing Counties*, Aug. 8, 1999. <http://www.dlg.oem2.state.co.us/demog/demog.htm>.

Colorado Land Use and Land Protection Workbook. 2000. Forthcoming. Contact: Elizabeth Garner or Andy Seidl, Department of Agricultural and Resource Economics, Colorado State University, Ft. Collins, CO, 80523-1172.

Daniels, Tom and Deborah Bowers. 1997. Holding Our Ground: Protecting America's Farms and Farmland. Island Press, Washington, D.C. 334 pp.

Dillman, Don A. 1978. Mail and Telephone Surveys: The Total Design Method. John Wiley and Sons: New York.

Edelman, Mark A., Jon Roe, and David B. Patton. 1999. Land Use Conflict: When City and County Clash. Farm Foundation, Chicago, Illinois. 44 pp.

Johnson, K.M. and C. Beale. 1994. Nonmetropolitan Population Change in the 1990s. *Choices*, pp 22-23 (Fourth Quarter, 1994).

Seidl, A. 2000. Regional Distinctions and Similarities Among Colorado Professionals' Concerns, Abilities and Needs for Land Use Planning. APR00-04. Agricultural and Resource Policy Report, Department of Agricultural and Resource Economics, Colorado State University, Ft. Collins, CO, 80523-1172.

Seidl, A. 2000. Occupational Distinctions and Similarities Among Colorado Professionals' Concerns, Abilities and Needs for Land Use Planning. APR00-05. Agricultural and Resource Policy Report, Department of Agricultural and Resource Economics. Colorado State University, Ft. Collins, CO, 80523-1172.

Seidl, A. 2000. Materials used for the 1999 survey of Colorado Professionals' Concerns, Abilities, and Needs for Land Use Planning. APR00-06. Agricultural and Resource Policy Report, Department of Agricultural and Resource Economics. Colorado State University, Ft. Collins, CO, 80523-1172.

USDA. United States Department of Agriculture, 1997 Census of Agriculture - Colorado, 1999.