



Land Use and Planning Report

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Extension

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

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- *"Federal and state agency personnel were most concerned with water quality, quantity, and rural/urban sprawl."*
- *"Elected officials expressed the most concern about water quantity, the preservation of 'rural lifestyle' and agricultural profitability."*
- *"Private sector professionals were most concerned about agricultural profitability, water quality and quantity."*
- *"Advocacy groups, including many producers' organizations, rank agricultural profitability as their most pressing concern."*
- *"The educator's group, strongly dominated by Extension personnel, expressed the most concern over agricultural profitability, water quantity and agricultural land conversion."*

Introduction

Communities, particularly in rural or formerly rural areas, are facing changing demographics, values, and demands on their human and natural resources. Growth and change have created additional challenges and

opportunities for many Colorado communities. Particularly in rural or formerly rural areas, communities are facing changing demographics, values, and demands on their human and natural resources. Recent research has shown that growth, budgetary concerns and economic development needs are the most pressing county-level issues in Colorado. Moreover, land use issues and increasing demands on social services were shown to be the most challenging growth concerns facing Colorado counties (DOLA, 1997).

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. People with professional interests in land and other natural resource use and management in Colorado were targeted in this survey effort. However, the type of professional interest or responsibilities of the respondent may affect individual concerns, skills, and needs with regard to this subject matter. In order to facilitate analysis, respondents' professions were divided into five broad categories according to potential differences in measured

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responses and educational programming needs. The similarities and distinctions among these five occupational categories are reported here.

Approach

In the spring of 1999, a skills, abilities and needs assessment of Colorado professionals with agriculture and natural resource managing responsibilities was undertaken. Colorado State University Cooperative Extension, Colorado State Forest Service and American Farmland Trust agreed to collaborate on survey design, mailing lists, finance, analysis, dissemination of results and follow-up programming from this research effort.

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 make up the "Elected Officials" category. 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, and personnel of the relevant state governmental agencies (i.e., State Forests, Parks, and Department of Local Affairs) were grouped under "Federal and State Agency Personnel." Cooperative Extension and Community College personnel make up the "Educators" group. County assessors and real estate appraisers, bankers, lenders, and independent consultants comprise the "Private Sector Professionals" category. The fifth group, labeled "Advocacy Groups," is made up of representatives of farmers' and ranchers' organizations, environmentally oriented non-governmental organizations, and land trusts.

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).

In this document mean responses to Parts 1-3 above are reported by occupational group. 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. In addition, the relative ranks of mean responses to each statement by occupational group 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 (see APR00-06 for survey documentation).

Table 1 illustrates the response rates from each of the targeted occupational groups. All occupations provided high response rates increasing the confidence with which results can be extrapolated. However, several of the targeted occupations had very low sample populations. As a result, logically grouped occupation categories facilitate the statistical validity of the derived analyses.

Results

Concerns

In Table 2 a side-by-side comparison of respondents' mean scoring of concerns over 16 dimensions of land and natural resource use planning and management organized by occupational group is provided. Table 3 provides the relative ranking of each of the occupational groups to each of the measured dimensions of concern. The "mean" category is the mean of all usable survey responses to the statement in question. The "weighted mean" category gives equal weight to each of the occupational groups regardless of the number of observations within each group.

Federal and state agency personnel indicated neutral to concerned responses on all tested dimensions. They were most concerned about water quality, quantity, and rural/urban sprawl in decreasing rank of concern. Agency personnel top concerns paralleled overall responses with the exception that rural/urban sprawl ranked only seventh in the overall survey and agricultural profitability, third overall, was rated 13 of 16 categories among agency personnel. Although still expressing some concern, they were least troubled about affordable housing, large lot, low-density development and public finance issues.

Table 1: Survey Return Rates, by Occupation

Occupation	Received	Sent	Return (%)
<i>Elected Officials</i>			
County Commissioners	115	194	59.28
Ute Indian Reps	2	3	66.67
<i>Federal & State Agency Personnel</i>			
Colorado Rural Development Council	11	14	78.57
USDA Agencies	7	10	70.00
BLM, U.S. Forest, Parks, Fish & Wildlife	54	70	77.14
Co State Forests	18	21	85.71
Co Dept of Local Affairs	8	13	61.54
Co State Parks	32	35	91.43
Other State Government	6	7	85.71
<i>Educators</i>			
Cooperative Extension	60	70	85.71
Community Colleges	2	2	100.00
<i>Private Sector Professionals</i>			
Assessors, Appraisers, Ag Lenders and Bankers	194	316	61.39
Independent Research & Education Consultants	3	4	75.00
<i>Advocacy Groups</i>			
Farmers' & Ranchers' Organizations	21	36	58.33
Land Trusts & Environmental NGOs	5	10	50.00
<i>Total with occupation identified</i>	549	822	66.79
<i>Total</i>	550	822	66.91

Note: 16 surveys were returned "undeliverable." Two surveys were identified as "protests."

Table 2: Comparison of Group Results, Concerns, mean scores

How concerned are your clientele about...	G1	G2	G3	G4	G5	Weighted Mean	Mean
Rural/urban sprawl	5.83	4.67	4.76	5.56	5.14	5.19	5.11
Agricultural profitability	4.96	5.96	6.11	6.36	6.06	5.89	5.78
Land speculation	5.01	4.89	4.93	5.36	5.21	5.08	4.99
Agricultural land conversion	5.54	5.60	5.25	5.88	5.90	5.63	5.50
Forestland conversion	5.15	4.47	4.35	4.60	4.19	4.55	4.58
Wildlife habitat conversion	5.70	5.05	4.67	5.40	4.77	5.12	5.07
Multi-jurisdictional planning	5.18	4.81	4.63	4.88	4.62	4.82	4.83
Public finance (e.g., schools, roads)	4.92	5.95	5.53	4.80	5.51	5.34	5.42
Open space preservation	5.56	4.78	4.63	5.17	5.13	5.05	4.99
Affordable housing	4.14	5.25	4.72	3.52	5.27	4.58	4.68
Preservation of public outdoor recreation	5.55	4.64	4.71	4.40	4.82	4.82	4.92
Large lot, low density development	4.69	4.63	4.18	4.16	4.47	4.43	4.44
Air quality	5.16	4.96	5.09	5.67	5.05	5.19	5.10
Water quality	5.92	5.75	5.81	6.04	5.71	5.85	5.82
Water quantity	6.07	6.03	6.00	6.32	5.92	6.07	6.03
Preservation of the "rural lifestyle."	5.54	5.98	5.56	5.72	5.65	5.69	5.66

Scores reported on a 7 pt Likert scale where 1=not concerned, 4=neutral, 7=very concerned. Largest possible number of responses = 550. G1=State and Federal agency personnel; G2=Elected officials; G3=Private sector professionals; G4=Advocacy organizations; G5=Educators. "Weighted mean" assigns equal weight to each region's response. "Mean" gives equal weight to each individual response.

Table 3: Comparison of Group Results, concerns, relative ranking

How concerned are your clientele about...	G1	G2	G3	G4	G5	Weighted Mean	Mean
Rural/urban sprawl	3	13	9	7	9	8	7
Agricultural profitability	13	3	1	1	1	4	3
Land speculation	12	10	8	9	8	9	10
Agricultural land conversion	7T	6	6	4	3	5	5
Forestland conversion	11	16	15	13	16	14	14
Wildlife habitat conversion	4	8	12	8	13	9	9
Multi-jurisdictional planning	9	11	13T	11	14	12	13
Public finance (e.g., schools, roads)	14	4	5	12	6	8	6
Open space preservation	5	12	13T	10	10	10	11
Affordable housing	16	7	10	16	7	11	15
Preservation of public outdoor recreation	6	14	11	14	12	11	12
Large lot, low density development	15	15	16	15	15	15	16
Air quality	10	9	7	6	11	9	8
Water quality	2	5	3	3	4	3	2
Water quantity	1	1	2	2	2	2	1
Preservation of the "rural lifestyle."	7T	2	4	5	5	5	4

Largest possible number of responses = 550. G1=State and Federal agency personnel; G2=Elected officials; G3=Private sector professionals; G4= Advocacy organizations; G5=Educators. "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.

As a group, elected officials expressed some concern over all of the queried dimensions. Elected officials expressed the most concern about water quantity, the preservation of "rural lifestyle" and agricultural profitability. Public finance was also a highly ranking concern. On average, they were least concerned about forestland conversion, large lot, low-density development and the preservation of public outdoor recreation.

Private sector professionals also expressed some concern over all of the criteria. They were most concerned about agricultural profitability, water quality and quantity in decreasing degrees of concern. They were least concerned about large-lot, low-density development, forestland conversion, multi-jurisdictional planning and open space preservation.

Advocacy groups, including many producers' organizations, rank agricultural profitability as their most pressing concern. Only affordable housing received a neutral to negative response in terms of degree of concern over an issue. Water quality and quantity follow profitability as areas of greatest concern. Advocacy groups are least concerned about affordable housing, large-lot, low-density development, and the preservation of public outdoor recreation in increasing order of concern.

The educator's group, strongly dominated by Extension personnel, also indicated concern over all of the polled categories. They expressed the most concern over agricultural profitability, water quantity and agricultural land conversion. Water quality and the preservation of "rural lifestyle" followed closely in educators' concerns. Forestland conversion, large-lot, low-density development and multi-jurisdictional planning were the lowest ranking concerns of educators.

All groups indicated that water quantity is a high priority concern. Water quality is a relatively high priority issue across all groups, with elected officials expressing somewhat less relative concern over that dimension. All groups except for federal and state agency personnel consider agricultural profitability to be a priority issue. Agency personnel see sprawl, wildlife habitat, open space preservation, and the preservation of public outdoor recreation as relatively more important concerns in the state of Colorado. Large lot development and forestland conversion are low priorities across occupational groups, even among agency personnel where the responses of both state and national forest employees were combined. Educators and elected officials appear to view affordable housing as a higher priority issue than the other occupations. Agricultural land conversion is a relatively strong concern

across occupations, yet, interestingly, elected officials view sprawl as a substantially lower priority concern relative to the other groups.

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 separated according to occupation 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 occupation to compare responses.

Table 4: Occupational Group Results, Knowledge and Skills, mean scores

How knowledgeable are you about...	G1	G2	G3	G4	G5	Overall
Strategic planning	5.00	4.69	3.89	4.24	4.21	4.41
Land purchases	4.44	4.69	5.27	4.24	3.79	4.71
Purchase of Development Rights (PDR)	4.00	3.95	3.66	3.84	3.38	3.79
Land banking	3.54	3.50	4.20	3.48	3.08	3.72
Zoning (e.g., agricultural, performance)	4.38	5.66	4.57	4.24	3.82	4.64
Cluster Development	3.95	4.77	3.47	3.76	3.41	3.87
Planned Unit Development (PUD)	3.82	4.79	3.73	3.00	3.13	3.87
Capital Improvement Programming (CIP)	3.51	3.94	2.90	2.48	2.74	3.24
Impact fees and exactions	3.24	4.35	3.12	2.76	2.98	3.37
Development timing (phased)	3.44	4.02	3.26	2.68	2.89	3.40
Cooperative agreements (e.g., tax-base sharing)	3.56	3.68	2.92	2.68	2.93	3.24
Environmental impact statements (EIS)	5.51	4.67	3.73	4.48	4.16	4.49
Moratoria	3.03	3.63	2.72	2.48	2.75	2.99
Tax credits	3.23	3.90	3.89	3.40	3.31	3.63
Special designations	3.47	3.46	3.12	3.00	2.82	3.25
"Bargain" land sales	2.70	2.99	3.32	3.16	2.66	3.00
Conservation easements	5.08	4.77	4.32	4.80	4.31	4.64
Transferable Development Rights (TDR)	3.59	4.04	3.16	3.52	3.43	3.50
Land trusts	4.41	4.30	3.78	4.36	3.67	4.07
Water banking/trusts	3.33	3.34	3.08	2.96	2.93	3.17
Housing land trusts	2.64	3.23	2.76	2.36	2.74	2.80
Outright donations of property	4.23	3.78	3.73	3.92	3.27	3.83
Innovative private-public partnerships	4.64	4.00	3.02	3.92	3.07	3.71
Holistic framing of public issues	4.00	3.27	2.45	3.12	3.38	3.18
Civic participation and dialogue approaches	4.48	4.27	3.04	3.64	3.41	3.75
Multi-jurisdictional or regional planning approaches	4.66	4.44	3.03	3.48	3.39	3.82
Overall land & other natural resource planning tools	5.49	4.71	3.53	4.12	4.07	4.39

Scores reported on a 7 pt Likert scale where 1=no knowledge, 4=neutral, 7=very knowledgeable. Largest possible number of responses = 550. G1=State and Federal agency personnel; G2=Elected officials; G3=Private sector professionals; G4= Advocacy organizations; G5=Educators.

Table 5: Occupational Group Results, Knowledge and Skills, relative rankings

How knowledgeable are you about...	G1	G2	G3	G4	G5	Overall
Strategic planning	4	6T	5T	4T	2	5
Land purchases	8	6T	1	4T	6	1
Purchase of Development Rights (PDR)	12	16	12	10	12T	13
Land banking	18	22	4	14T	17	15
Zoning (e.g., agricultural, performance)	10	1	2	4T	5	2T
Cluster Development	14	3T	13	11	9T	8T
Planned Unit Development (PUD)	15	2	8T	19T	16	8T
Capital Improvement Programming (CIP)	19	17	24	25T	25T	21T
Impact fees and exactions	23	10	17T	22	19	20
Development timing (phased)	21	14	15	23T	23	19
Cooperative agreements (e.g., tax-base sharing)	17	20	23	23T	20T	21T
Environmental impact statements (EIS)	1	8	8T	2	3	4
Moratoria	25	21	26	25T	24	27
Tax credits	24	18	5T	16	14	17
Special designations	20	23	17T	19T	22	23
"Bargain" land sales	26	27	14	17	27	26
Conservation easements	3	3T	3	1	1	2T
Transferable Development Rights (TDR)	16	13	16	13	8	18
Land trusts	9	11	7	3	7	7
Water banking/trusts	22	24	19	21	20T	25
Housing land trusts	27	26	25	27	25T	12
Outright donations of property	11	19	8T	8T	15	10
Innovative private-public partnerships	6	15	22	8T	18	16
Holistic framing of public issues	13	25	27	18	12T	24
Civic participation and dialogue approaches	7	12	20	12	9T	14
Multi-jurisdictional or regional planning approaches	5	9	21	14T	11	11
Overall land & other natural resource planning tools	2	5	11	7	4	6

Largest possible number of responses = 550. G1=State and Federal agency personnel; G2=Elected officials; G3=Private sector professionals; G4= Advocacy organizations; G5=Educators. A rank of "1" indicates the highest mean score within the occupational group and knowledge and skills category. A rank of "27" is indicative of the lowest mean score by group and category.

State and federal agency personnel indicated neutral to positive knowledge on ½ of the evaluated criteria and neutral to negative responses on the other half. They indicated greatest knowledge of environmental impact statements, planning tools in general and conservation easements. Agency personnel indicated the least amount of familiarity with housing land trusts, "bargain" land sales, and moratoria. Interestingly, except for holistic public issues framing (mean score 4.00, rank 13), agency personnel ranked their knowledge of social process methodologies relatively highly.

Elected officials, largely county commissioners, indicated neutral to positive knowledge on 15 of 27 dimen

sions. They indicated greatest knowledge of zoning, followed by planned unit development, cluster development and conservation easements. Elected officials indicated the least knowledge of "bargain" land sales, housing land trusts and holistic framing of public issues. On social process methods, elected officials indicated relatively moderate knowledge. Holistic issues framing was the only social process dimension rated as neutral to low level of knowledge by this group.

Private sector professionals, largely rural bankers and real estate appraisers, indicated neutral to positive knowledge for only four of the 27 polled dimensions

and 5 criteria were rated below 3.00, indicating relatively little knowledge base in those areas. They felt that they possessed the most knowledge of fee simple land purchases, zoning, and conservation easements. Land banking was the only other criterion on which private sector professionals indicated neutral to positive knowledge. While generally pessimistic regarding their skill base in this area, they indicated the least knowledge of the holistic framing of public issues, moratoria, and housing land trusts.

The advocacy group indicated that they possessed neutral to positive skills and abilities in 7 of 27 and little knowledge of 7 of the rated criteria. They reported greatest knowledge of conservation easements, environmental impact statements, and land trusts. The group indicated least knowledge of housing land trusts, moratoria, and capital improvement programming. Among social process variables, only strategic planning earned a neutral to positive knowledge rating from this group.

Interestingly, in assessing their knowledge and skills, the educators' group rated only 4 of 27 measured criteria neutral to positive, while 7 criteria were rated as areas of relatively little knowledge base (<3.00). They felt they were most knowledgeable about conservation easements, strategic planning, and environmental impact statements. The overview or overall land use tools factor was the fourth somewhat positively rated criterion. Educators rated "bargain" land sales, capital improvement programming, and housing land trusts as their least knowledgeable areas. Moratoria were also considered an area of relatively weak knowledge base. Among social policy criteria, only strategic planning received a neutral to positive knowledge and skills score with this group.

Needs and Interests

Occupationally 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).

Federal and state agency personnel rated 14 of the 27 factors neutral to positive in evaluating their degree of

interest or need in educational programming. The group was most interested in programming covering land use tools overall, innovative private public partnerships, and conservation easements. They were least interested in information covering moratoria, housing land trusts, and impact fees and exactions. The five social process variables were all ranked relatively highly, indicating interest in educational programming or information.

Elected officials indicated neutral to positive interest in all except one measured criterion. They were most interested in planning tools overall, zoning, and strategic planning programming or educational information. They were least interested in moratoria, "bargain" land sales, and special designations. Other than strategic planning, innovative public-private partnerships and multi-jurisdictional or regional planning approaches were ranked relatively highly, whereas holistic issues framing and civic participation was perceived as a lower priority need or interest among measured social process methods.

The private sector professionals rated 9 of the 27 variables as neutral to positive in terms of need or interest in educational programming. They were most interested in land use planning tools overall, zoning and conservation easements. They were least interested in moratoria, holistic public issues framing, and cluster development. Innovative public-private partnerships was the only social process method ranked relatively highly by private sector professionals.

The advocacy group indicated neutral to positive interest in educational programming surrounding 11 of the 27 measured factors. They were most interested in information about conservation easements, overall tools, transferable development rights programs and land trusts. They were least interested in educational programming around housing land trusts, capital improvement programming and moratoria. In this group, regional planning, public-private partnerships and strategic planning gained relatively high priority ranking as social process methods.

The educators' group indicated a potential desire for educational information on 20 of the 27 measured criteria. They were most interested in information on tools in general, conservation easements, and water banking or trusts. They were least interested in information on moratoria, development timing, and

Table 6: Occupational Group Results, Interests and Needs, mean scores

How interested are you in an educational program or materials on...	G1	G2	G3	G4	G5	Overall
Strategic planning	4.68	4.89	3.74	4.36	4.48	4.35
Land purchases	4.05	4.41	4.27	4.00	4.33	4.23
Purchase of Development Rights (PDR)	3.99	4.52	3.81	3.75	4.28	4.06
Land banking	3.90	4.39	3.92	3.54	4.13	4.02
Zoning (e.g., agricultural, performance)	4.21	5.16	4.42	4.04	4.61	4.52
Cluster Development	3.75	4.50	3.52	3.32	4.10	3.84
Planned Unit Development (PUD)	3.63	4.31	3.62	3.04	3.83	3.77
Capital Improvement Programming (CIP)	3.61	4.61	3.69	2.84	3.98	3.86
Impact fees and exactions	3.40	4.84	3.78	3.08	3.92	3.88
Development timing (phased)	3.50	4.25	3.53	3.00	3.82	3.68
Cooperative agreements (e.g., tax-base sharing)	3.90	4.68	3.87	3.32	4.17	4.05
Environmental impact statements (EIS)	4.35	4.29	4.03	4.08	4.33	4.21
Moratoria	3.23	3.67	3.29	2.88	3.75	3.38
Tax credits	3.48	4.46	4.37	3.92	4.11	4.10
Special designations	3.65	4.15	3.72	3.48	3.89	3.80
"Bargain" land sales	3.64	4.11	3.90	3.48	3.95	3.86
Conservation easements	5.23	4.85	4.39	5.08	5.03	4.81
Transferable Development Rights (TDR)	4.30	4.58	3.95	4.48	4.54	4.27
Land trusts	4.66	4.38	4.16	4.48	4.77	4.43
Water banking/trusts	4.47	4.73	4.28	3.84	4.87	4.47
Housing land trusts	3.24	4.45	3.60	2.72	4.27	3.71
Outright donations of property	4.53	4.32	3.83	4.12	4.17	4.17
Innovative private-public partnerships	5.46	4.87	4.08	4.32	4.59	4.68
Holistic framing of public issues	4.78	4.20	3.40	3.40	4.56	4.07
Civic participation and dialogue approaches	4.78	4.49	3.60	3.76	4.20	4.18
Multi-jurisdictional or regional planning approaches	5.08	4.74	3.78	4.12	4.46	4.43
Overall land & other natural resource planning tools	5.58	5.21	4.44	4.54	5.05	4.98

Scores reported on a 7 pt Likert scale where 1=not interested, 4=neutral, 7=very interested. Largest possible number of responses = 550. G1=State and Federal agency personnel; G2=Elected officials; G3=Private sector professionals; G4= Advocacy organizations; G5=Educators. Overall is the "all responses" mean score by criterion.

planned unit development. Interest in all social process methods was expressed, gaining medium priority in educators' rankings.

Concluding Remarks

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. We have shown occupational distinctions and similarities in needs and skill levels that could potentially assist educators in educational program planning. With this information Cooperative Extension and other educationally ori-

ented private and public agencies can hope to better serve our clientele.

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Table 7: Occupational Group Results, Interests and Needs, relative ranks

How interested are you in an educational program or materials on...	G1	G2	G3	G4	G5	Overall
Strategic planning	7	3	18	5	9	8
Land purchases	14	17	6	11	11T	10
Purchase of Development Rights (PDR)	15	12	15	15	13	16
Land banking	16T	18	11	16	18	18
Zoning (e.g., agricultural, performance)	13	2	2	10	5	5
Cluster Development	18	13	25	20T	20	22
Planned Unit Development (PUD)	21	21	21	23	25	24
Capital Improvement Programming (CIP)	22	10	20	26	21	20T
Impact fees and exactions	25	6	16T	22	23	19
Development timing (phased)	23	23	24	24	26	26
Cooperative agreements (e.g., tax-base sharing)	16T	9	13	20T	16T	17
Environmental impact statements (EIS)	11	22	9	9	11T	11
Moratoria	27	27	27	25	27	27
Tax credits	24	15	4	12	19	14
Special designations	19	25	19	17T	24	23
"Bargain" land sales	20	26	12	17T	22	20T
Conservation easements	3	5	3	1	2	2
Transferable Development Rights (TDR)	12	11	10	3T	8	9
Land trusts	8	19	7	3T	4	6T
Water banking/trusts	10	8	5	13	3	4
Housing land trusts	26	16	22T	27	14	25
Outright donations of property	9	20	14	7T	16T	13
Innovative private-public partnerships	2	4	8	6	6	3
Holistic framing of public issues	5T	24	26	19	7	15
Civic participation and dialogue approaches	5T	14	22T	14	15	12
Multi-jurisdictional or regional planning approaches	4	7	16T	7T	10	6T
Overall land & other natural resource planning tools	1	1	1	2	1	1

Largest possible number of responses = 550. G1=State and Federal agency personnel; G2=Elected officials; G3=Private sector professionals; G4= Advocacy organizations; G5=Educators. A rank of "1" indicates the highest mean score within the occupational group and knowledge and skills category. A rank of "16" is indicative of the lowest mean score by group and category.

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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.