

# Landowners, Land Management, and Conservation Program Participation in Ohio and Iowa

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**Brandi Hall, M.S.**

**Tomas M. Koontz, Ph.D.**

**ECARP Working Group**

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**School of Natural Resources**  
College of Food, Agricultural, and Environmental Sciences



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**School of Natural Resources**  
**College of Food, Agricultural, and Environmental Sciences**  
**The Ohio State University**  
210 Kottman Hall  
2021 Coffey Road  
Columbus, Ohio 43210-1085

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### Introduction

Sprawling growth has caused many to speak out about land conversion, especially the conversion of farmland. Future food production and self-sustainability concern some people. Others worry about the loss of views and environmental resources. Some are concerned about the loss of those values that attracted them to their place of residence, or about the loss of farming as a livelihood.

Many initiatives have sprung up over the last few decades in response to these concerns. “Smart growth” encourages development that is more organized, and may even limit how much development should take place in a certain amount of time. Some states have enacted purchase of development rights (PDR) and transfer of development rights (TDR) programs. Most states allow the conveyance of easements restricting the future uses of the land in question. Certain government programs encourage open space maintenance as well.


Voluntary programs offered by the United States Department of Agriculture’s (USDA) Natural Resource Conservation Service (NRCS) in particular promote open space maintenance and environmentally sound farming practices. These programs include the Environmental Quality Initiatives Program, Wildlife Habitat Incentives Program, and the Wetlands Reserve Program. The Farm Service Agency (FSA), also a part of the USDA, offers another important program – the Conservation Reserve Program (CRP).

Such programs each serve a purpose to meet particular environmental goals, from soil erosion prevention to nutrient management to habitat protection. In return for participating in these programs, landowners receive cost-share to aid in the cost of the project. CRP also gives landowners a rental payment for each acre enrolled in the program.

Those who administer conservation programs face challenging conditions when working with those who own land in the transition area from urban to rural lands. There tends to be a sense of impermanence in this transition area as change is constantly occurring. Farmers in particular experience this impermanence (Berry 1978). Land values increase due to pending development, which may also increase property taxes. Farming infrastructure such as tractor dealerships, fertilizer retailers, and grain elevators often close or move farther from the urban area. New residents from urban areas often oppose farming practices. With growing exurban populations, the line between urban and rural has blurred (Hart 1995).

The rural-urban fringe presents its own set of circumstances to landowners. As federal, state, and local policy makers try to balance many objectives in making decisions about voluntary conservation programs and urban growth issues, it is important to understand how urban proximity affects landowners’ land management activities. It is also important for the administering agencies to understand how urban proximity affects landowners’ decisions to participate in the conservation programs they offer. This study examines the role of urban

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proximity in landowners' management activities and decisions to participate in conservation programs.

## Research Methods

Two states are considered in this study: Ohio and Iowa. These states share similar types of dominant agricultural crops, yet they are located in different regions of the country. Two counties in each state were chosen for the survey: one county on the fringe or an urban core county, that is experiencing rapid growth (urban), and one not metro and not urban influenced (rural) county were selected from both Ohio and Iowa, for a total of four counties. In Ohio, the counties are Delaware (urban) and Auglaize (rural); In Iowa the counties are Dallas (urban) and Washington (rural). Each of these four counties is located within the Corn Belt region and had land ownership information available in electronic form.

A database of parcel ownership from each county, obtained from the county auditor or information technology department, was used to identify the population from which the sample was selected for the survey. In each county, we selected 450 privately owned parcels of at least forty acres in size (forty acres is a quarter-quarter section in the Public Lands Survey System). Surveys were sent using the Dillman (2000) tailored design method between February and May 2004. A series of four contacts with survey subjects was used. We asked those individuals who are the primary decision maker for the parcel to fill out the survey. A total of 840 responses were received from 1782 deliverable addresses for a response rate of 47%.

The questionnaire sought information about A) location and land management, B) participation in conservation programs, C) conservation easements, D) farming, and E) background. This report is a summary of some of the findings of the questionnaire. Specifically, this report addresses the following questions:

1. What are the characteristics of survey respondents?
2. What is the level of current and expected development near respondents?
3. What are the management goals for respondents' land?
4. What is current participation in conservation programs like?
5. How important are agent characteristics and agency type to landowners?



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## Results

### Characteristics of Survey Respondents

Even though subject selection was random to ensure a variety of responses, respondents shared similar characteristics. Many respondents were of similar age and the majority were male.

#### *What is the age of respondents?*

Respondents were asked to indicate their age as of their last birthday on the questionnaire. Overall, the age of respondents ranged from 25 to 100, with the majority of respondents between the ages of 50 and 70. The average age of respondents was 63.89.

#### *What is the gender of respondents?*

The majority of respondents were male, ranging from 75.5% in Dallas County to 84.3% in Auglaize County. Across all of the respondents, 79.1% were male.

#### *How much education have respondents had?*

Respondents were asked to indicate how many years of education they had completed. An example of a high school degree being counted as twelve years was given. Most respondents (48.2%) have received a high school degree. Some (17.2%) of the respondents have also received a bachelor's degree. Dallas County had the highest mean education level with 14.4 years. Delaware County had the lowest mean education level with 13.3 years.

### Location and Land Management

#### *What is the current level of development?*

Respondents were asked to describe the level of residential development near their current residence. Choices given included: city, suburb, small town, countryside (lots of houses), and countryside (not very many houses). Most respondents, 73.2%, indicated that they live in the countryside rather than a town. Delaware County had the highest proportion (90.6%) of respondents indicating they lived in the countryside (see Figure 1).

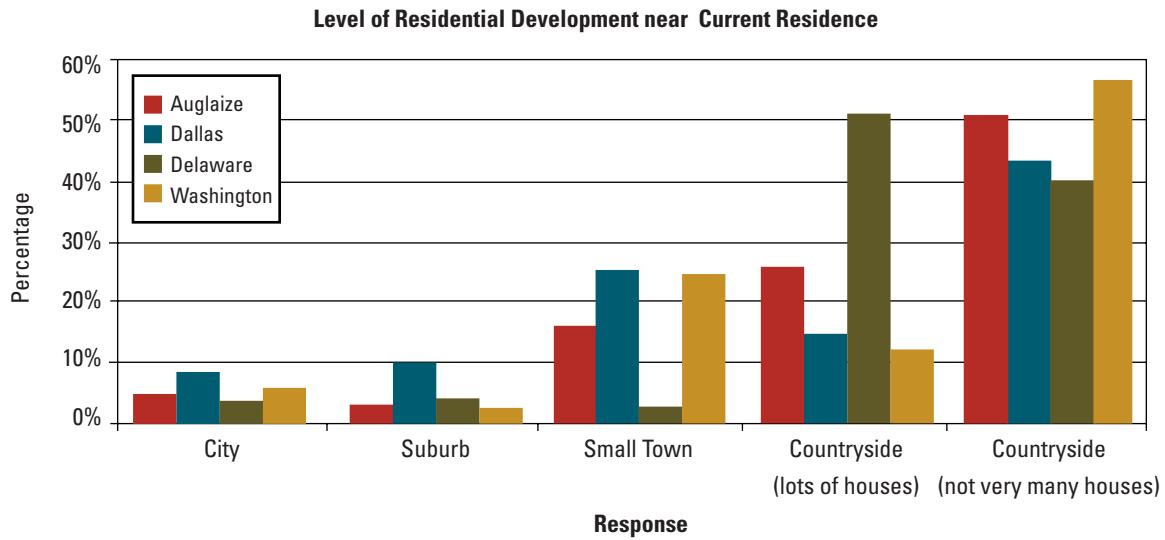


Figure 1. Level of residential development near current residence (n = 824).

*Is there development pressure?*

Respondents were asked to indicate how much open space they felt would be converted to development in the next ten years within about a mile from their land. Choices given included none, a little, a lot, and very much. Most respondents (75.6%) indicated they thought there was going to be at least a little development near their land. Respondents in Delaware County indicated they expect the most amount of development. Rural county respondents (Auglaize and Washington) indicated they expect the least amount of development. Figure 2 summarizes the responses by county.



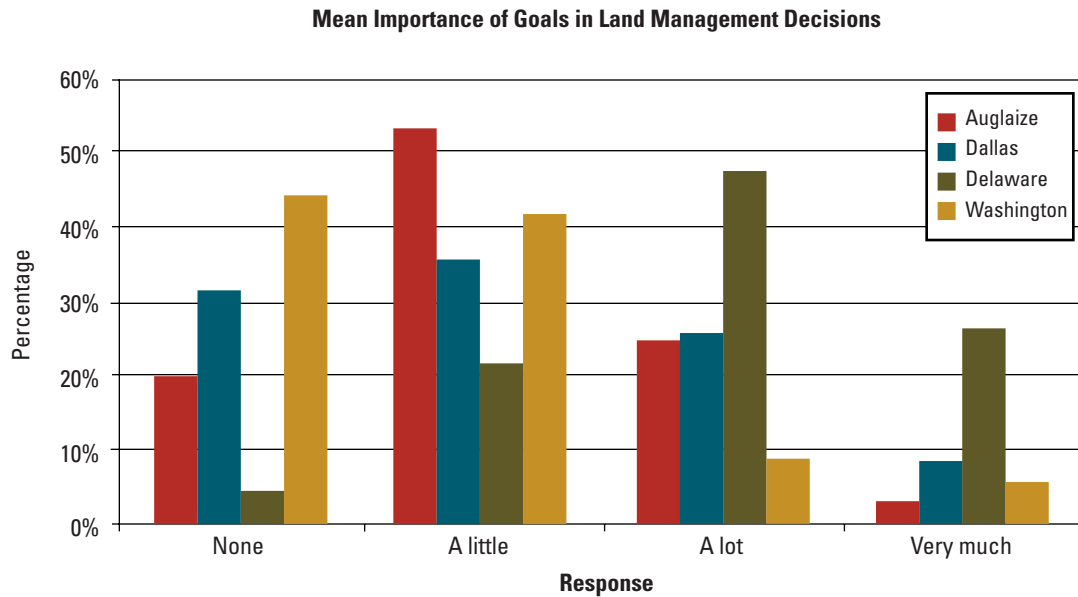


Figure 2: Amount of open space thought likely to be converted to development (n = 789)

*Which land management goals are most important?*

Respondents were asked to indicate how important various goals were in their land management decisions. Each goal was given a scale from 1 to 4, with 1 = not at all important, 2 = a little important, 3 = moderately important, 4 = very important. Most of the goals have a mean value close to 3, indicating respondents felt the goals were moderately important. Overall, controlling erosion, protecting water quality, and achieving production efficiency were viewed as the most important goals. Mean values between counties were significantly different only for the goals of performing conservation practices and controlling erosion. There was no significant difference between county mean values for the other goals (see Figure 3).



**Mean Importance of Goals in Land Management Decisions**

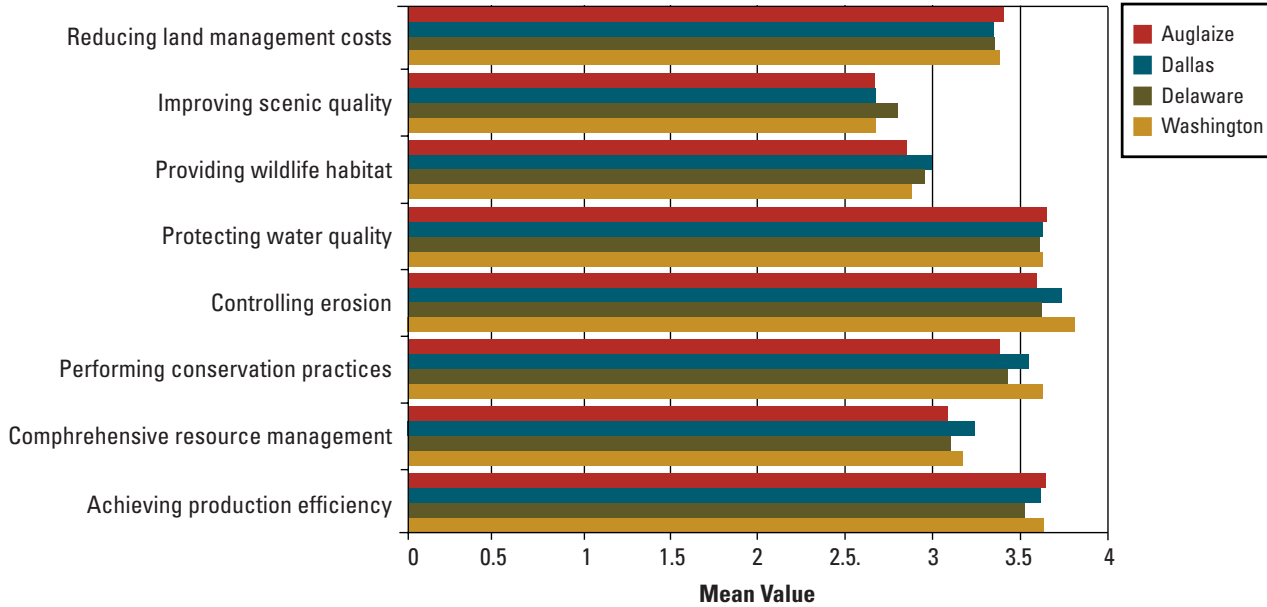


Figure 3: Mean importance of goals in land management decisions (n = 777)

## Participation in Conservation Programs

*How many respondents have received technical assistance?*

Respondents were asked to indicate if they had ever received technical assistance for managing their land from a government or non-government conservation program. Technical assistance was defined as “help from someone with expertise in conservation practices, costs, laws, or regulations.” A larger percentage of respondents from Washington County (70.9%) had received technical assistance than had not. The other three counties had a larger percentage of respondents who had not received technical assistance. Dallas, Auglaize, and Delaware counties had similar percentages of respondents who received technical assistance (41.3%, 41.5%, and 41.9%). Overall 48.4% of respondents have received technical assistance.



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*How many respondents have received financial assistance?*

Respondents were asked to indicate whether they had ever received financial assistance for managing their land, from a government or non-government conservation program. Financial assistance was defined as “funding or cost-share for conservation practices or improvements.” Again, Washington County had the highest percentage response of “yes” with 67.4%. The other counties had a lower response of “yes,” with Delaware County the lowest at 28.4%. Overall 44.2% of respondents had received financial assistance, which is about the same as the proportion who had received technical assistance.

*How many respondents participate in conservation programs?*

Respondents were asked to indicate if they currently participate in any of the listed federal government conservation programs. Nearly four in ten (38.4 %) respondents reported they were currently participating in at least one of the nine listed programs (Conservation Reserve Program, Conservation Reserve Enhancement Program, Wetlands Reserve Program, Farm and Ranch Lands Protection Program, Environmental Quality Initiatives Program, Wildlife Habitat Incentives Program, Grassland Reserve Program, Forestry Incentives Program, and Forest Stewardship Program).

The Conservation Reserve Program has the most participants, with 277 (see Table 1). Washington County has the most participation across the nine programs, with 195 total “yes” responses. Both current and past participation is noted because some participants may not have chosen, or been able, to renew the program contract. In addition, a large number of respondents (259) have conservation compliance plans, which are required for enrolling in certain government programs. Another important voluntary conservation tool is the conservation easement. Just 55 respondents (7.3 %) currently have conservation easements on their land, over half of which are with federal agencies (NRCS, Farm Service Agency, etc.), and nearly one quarter with county agencies such as soil and water conservation districts.

Table 1: Participation in conservation programs

		Auglaize	Dallas	Delaware	Washington	4-county Total
Conservation Reserve Program (CRP)	Yes	55	79	22	121	277
	No, but in the past	21	22	17	11	71
Conservation Reserve Enhancement Program (CREP)	Yes	14	13	12	15	54
	No, but in the past	2	3	3	10	18
Wetlands Reserve Program (WRP)	Yes	3	13	1	21	38
	No, but in the past	1	0	2	3	6
Farm and Ranch Lands Protection Program (FRPP)	Yes	2	2	1	3	8
	No, but in the past	3	0	0	5	8
Environmental Quality Initiatives Program (EQIP)	Yes	19	6	16	13	54
	No, but in the past	13	4	1	7	25
Wildlife habitat Incentives Program (WHIP)	Yes	6	8	1	13	28
	No, but in the past	4	3	5	5	17
Grassland Reserve Program (GRP)	Yes	5	7	3	8	23
	No, but in the past	7	0	6	7	20
Forestry Incentives Program (FIP)	Yes	9	5	2	9	25
	No, but in the past	3	4	0	4	11
Forest Stewardship Program (FSP)	Yes	4	5	2	5	16
	No, but in the past	5	3	1	3	12
Other conservation programs	Yes	2	12	4	7	25
	No, but in the past	2	0	1	1	4
Conservation Compliance Plan	Yes	44	62	38	115	259
	No, but in the past	17	15	12	12	56
Conservation Easement	Yes	10	19	11	15	55

*How important are agent characteristics?*

Respondents were asked to indicate how important certain characteristics are when working with a government or non-government conservation program agent. Each characteristic was rated on a scale of 1 to 4, with 1 = not at all important, 2 = a little important, 3 = moderately important, and 4 = very important.

Respondents considered the majority of the characteristics to be at least moderately important, as the characteristics have means greater than three. There was no significant difference between the way urban landowners felt and the way rural landowners (at the county level) felt except one characteristic. In this instance, the “I have worked with the agent before”



characteristic was more important to those in the rural counties with a mean of 2.50, while urban counties had a mean value of 2.34.

Comparing the importance of different characteristics to each other, trusting the agent to work in his or her best interest ranked as the most important characteristic. The least important characteristic was the only one that differed between urban and rural counties; therefore an overall ranking including all counties was created (see Table 2).

Table 2: Landowners’ ranking of the importance of specific conservation program agent characteristics (n = 715)

Rank	Agent Characteristic	Mean Score (on 1 to 4 scale)
1	I trust the agent to work in my best interest	3.59
2	The agent wants to help me	3.49
3	The agent values the environment similar to the way I do	3.37
4	The agent has a farming background	3.31
4	The agent values economics similar to the way I do	3.31
4	The agent actively promotes conservation programs	3.27
7	The agent’s office is in my county	3.22
8	The agent has lived in the area for a long time	2.83
9	I have worked with the agent before	2.42

*How willing are landowners to enroll in a conservation easement program?*

Respondents were asked to indicate how willing they would be to enroll in a conservation easement program through a variety of organizations. Each organization was rated on a scale of 1 to 4, with 1 = not at all willing, 2 = somewhat willing, 3 = moderately willing, and 4 = very willing.

All of the organizations have mean values close to 2, indicating that respondents are somewhat willing to enroll in a conservation easement program. Mean values for each organization were also ranked. Respondents were most willing to work with a county or local agency such as a Soil and Water Conservation District. Table 3 summarizes the rankings. There were no significant differences between urban and rural respondents.

Table 3: Rankings of organizations based on respondents' willingness to participate in a conservation easement program (n = 677)

Rank	Agent Characteristic	Mean Score (on 1 to 4 scale)
1	County or local agency	2.48
2	Farm Bureau	2.04
3	State agency	1.95
3	Federal agency	1.91
5	National non-profit organization	1.75
5	Local non-profit organization	1.72

*How willing are landowners to enroll acres in a no-till program?*

If respondents farmed their land, they were asked to indicate how willing they would be to enroll in a no-till program through a variety of organizations. Each organization was rated on a scale of 1 to 4, with 1 = not at all willing, 2 = somewhat willing, 3 = moderately willing, and 4 = very willing.

Once again, all agencies had mean values near 2, indicating respondents are somewhat willing to enroll. The ranking results differ slightly from the previous question (Table 3), in that here the Farm Bureau ranks third, behind federal agency (see Table 4). There were no significant differences between urban and rural responses.

Table 4: Rankings of organizations based on respondents' willingness to participate in a no-till program (n = 565)

Rank	Organization	Mean Score (on 1 to 4 scale)
1	County or local agency	2.28
2	Federal agency	1.92
3	Farm Bureau	1.79
3	State agency	1.79
5	National non-profit organization	1.58
5	Local non-profit organization	1.58



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## Discussion

Characteristics of respondents indicate that, in our four study counties, 50- to 70-year old males with at least a high school diploma are the primary land management decision-makers on private parcels at least 40 acres in size.

Even though many respondents indicated they currently live in the countryside, they did not necessarily feel they were immune to development pressure, particularly in the more urban counties. For example, respondents in Delaware County mostly indicated they currently live in the countryside, but 74.0% perceived there would be “a lot” to “very much” open space converted to development within about a mile of their land. In contrast, respondents in the rural counties indicated a different scenario. In Washington County, 44.4% of respondents perceived that “none” of the open space within a mile of their land would be converted to development.

When considering land management options, landowners are taking many goals into account. Respondents indicated that the listed economic and environmental goals were moderately important to their land management decisions, and most important were controlling soil erosion, achieving production efficiency, and protecting water quality.

Agent characteristics are important to landowners, as indicated by their strong feelings toward the listed characteristics. Most important was that landowners wanted to trust the agent to work in their best interest. Landowners also placed great importance on feeling that the agent wants to help them. Additionally, landowners thought it was important for the agent to value the environment similar to themselves, have a farming background, and value economics similar to themselves.

By far, respondents were most willing to participate in voluntary programs offered through county or local agencies such as Soil and Water Conservation Districts. Other levels of government such as federal and state were also ranked highly. Interestingly, non-profit organizations such as land trusts were ranked lowest. Respondent comments indicated this was because they were less familiar with these organizations and less certain of their permanence. Respondents were also quite willing to participate in programs offered by the Farm Bureau.

## Conclusions

Even though many landowner characteristics were similar, program administrators should remember there are a variety of landowners, and location relative to an urban area affects land management decisions. Programs targeting a specific area should be promoted to appeal to that area. This is particularly true for urban areas versus rural areas. Promotion should appeal to factors affecting more urban landowners, such as development pressure and the uncertainties inherent in that pressure. Program objectives may also need to be altered depending on the location where the program is being applied. There may be a need for different incentives, types



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of commitments, or requirements depending on location. It is interesting to note several items that are similar across different levels of urbanization: landowner goals, willingness to work with different organizations, and importance of different agent characteristics.

Landowners appear to be more willing to participate in government conservation programs than in non-profit organization programs. Many respondents noted they felt more uncertain about the future of non-profit organizations and were less familiar with them. Familiarity also factors into county or local agencies being highly ranked, as respondents noted they knew the personnel and had worked with them previously. Government agencies should take advantage of this familiarity to increase participation in conservation programs. On the other hand, non-profit organizations such as land trusts seeking to encourage landowner conservation practices should know that landowners are less positive about such programs than they are about government programs. Non-profit organizations might wish to devote efforts to ensuring landowners that the organization will continue into the future (permanence) and to making landowners more familiar with the organization. In addition, non-profit organizations might effectively partner with local government agencies to increase landowner participation in voluntary conservation programs, given their stated preferences for working with local government programs.



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## About the ECARP (Environmental Communication, Analysis, and Research for Policy) Working Group

Located within the School of Natural Resources, the ECARP (Environmental Communication, Analysis, and Research for Policy) Working Group is a vibrant and multi-disciplinary research, development, and consultation center staffed by a core group of affiliated faculty members and graduate research associates representing the social, management, and natural sciences. In addition to a core of faculty leaders, ECARP serves as a clearing-house, tailored to particular projects, by gathering research and support personnel from across the campus and nation as needed.

### The ECARP has five fundamental objectives:

1. To apply technical knowledge and analytical methods to key environmental and natural resource questions identified by clients such as Federal, State, and local management agencies and private entities.
2. To advance the state of knowledge and disseminate findings for concepts and methods concerned with environmental and natural resource issues.
3. To conduct innovative and valuable research that helps frame thinking and debate about environmental and natural resource issues.
4. To recruit top-quality graduate students to the School of Natural Resources and provide students with opportunities to work with faculty on projects within the ECARP Working Group.
5. To serve as a focus for student and faculty research by applying for and securing research funding from Federal, State, University, non-governmental, and other sources.



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Some examples of the types of research and client-based projects the ECARP might undertake include the research and development of:

- policy analysis tools to gauge the effects of policy instruments on target populations and the environment
- stakeholder collaboration and citizen participation processes in natural resources policy
- structured environmental decision making approaches
- cutting edge research in the natural sciences to inform environmental policy choices
- comprehensive environmental risk communication approaches
- innovative environmental education and interpretive efforts
- courses to be offered in the School of Natural Resources for students as well as the community of environmental professionals

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As part of its effort to develop and disseminate knowledge, ECARP publishes analytical reports related to environmental and natural resource issues. These reports are available through the ECARP website.



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