

# Citizen Participation in Ohio Watershed Groups

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### Introduction

Over the past few decades, collaborative watershed groups have become important actors in efforts to preserve and restore water quality. A collaborative watershed group is a set of governmental and nongovernmental stakeholders, organized on a watershed scale, working together to achieve ecosystem-oriented goals such as water quality improvement. The governmental participants may include federal, state, or local agency personnel, elected officials, or university Extension personnel, while the nongovernmental participants may represent organizations like industry or advocacy groups, or they may be individual citizens speaking on behalf of their own interests. Many are new, having emerged within the last 10 to 15 years. Over 100 collaborative watershed groups exist in Ohio alone, and thousands more operate across the United States.

This new paradigm of collaborative watershed management is based largely on citizen participation. Local citizens and stakeholders are essential members of watershed groups because they can provide localized information about the area's natural and sociopolitical systems, as well as support for measures to address nonpoint source pollution. In fact, the Ohio Department of Natural Resources (ODNR) has stated that the involvement of local citizens and stakeholders is "critical to the success of any nonpoint source pollution control program" (ODNR, 2000). But not all watershed groups are equally successful in attracting and maintaining active citizen participation.

For any watershed group seeking to grow its roster of active participants, a critical question is, What factors encourage people to participate more in group activities? While watershed group members may know the factors that motivate their own participation, and watershed group leaders may have ideas from their own group experience, it is instructive to gather and share information from a wide range of watershed groups. In this way, lessons learned might be used by people seeking to enhance watershed group participation. We hope the research described in this report will provide insights to help answer this important question.

Fortunately, we do not need to start from scratch. Prior studies in Ohio, as well around the country, have provided some answers about who participates in volunteer organizations and why. These study findings can be divided into two categories, individual and group characteristics. As shown in Table 1, individual characteristics are things that equip and motivate people to participate. Across a wide range of volunteer opportunities, higher levels of participation are found among individuals of higher socio-economic status (Wilson and Musick 1998). In addition, people who have more social connections, sense of civic duty, and feelings of personal efficacy have been found to more actively participate in civic life (Putnam 1993).

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<b>Individual Characteristics</b>	<b>Group characteristics</b>
Gender	Group type (citizen- or government-based)
Age	Capability of accomplishing goals
Marital status	Distinct participant roles/ responsibilities
Number of school-age children	Ability to produce tangible results
Homeowner status	Presence of an effective leader
Social connections	Impact in final decisions
Length of residence	Bringing benefits to local community
Income	Flow of communication
Social status	Homogeneous attitudes of participants
Employment status	Making meaningful contributions
Education	Appreciation from other participants
Number of outside commitments	Valuing the group's goals
Sense of civic duty	
Sense of efficacy	
Political affiliation	
Social capital	
Environmental ethics	

Table 1: Factors thought to affect participation, as suggested by previous studies

Group characteristics found to encourage participation are those features that make a group seem to be accomplishing its goals and making good use of members' time. For example, a group that is perceived to be producing tangible results, bringing benefits to the community, and well-organized with effective communication can generate higher levels of participation (Byron and Curtis 2002).

Another group characteristic thought to affect participation is the composition of the group. Groups might fall into one of three categories: government-based, citizen-based, or mixed. Government officials and personnel make up a substantial portion of a government-based watershed group's membership, while citizen-based watershed groups are primarily composed of local citizens and stakeholders. Mixed groups occupy an intermediate position, with about half of their members coming from the private sector and half being government officials. Prior studies have found important differences between the actions and accomplishments of these different types of groups (Koontz and Johnson, 2004; Moore and Koontz, 2003). With regard to citizen participation, lack of trust may discourage local citizens and stakeholders from participating in government-based efforts. In addition, many government agencies, traditionally, have not emphasized citizen participation as a vital part of watershed management. In contrast, citizen-based groups have been described as actively seeking citizen participation



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and incorporating citizen concerns into the group's goals and endeavors. As result, group type might be an important factor in watershed group participation.

When we discuss citizen participation, we are referring to more than just the number of individuals who belong to a group. While some voluntary groups are justifiably proud of their large or growing membership, simply looking at a group roster can give misleading conclusions about citizen participation. The roster likely includes those whose membership stems only from donating money to the group, without participating in meetings or other group activities. In this study, we recognize the importance of people spending time to help groups achieve their goals, so we are interested in understanding how much time individuals spend on group activities, the types of activities in which they engage, and why they do so.

## Research Questions

Increasingly, there is a need for locally-based watershed groups to implement watershed management activities. Much of the success of these groups can be attributed to active stakeholder participation, making it worthwhile to identify and understand the factors affecting stakeholder participation with such groups. With existing theories in mind, the research questions for this study are as follows:

- (1) What are the demographic characteristics of survey respondents?
- (2) What proportion of interested stakeholders are participating in watershed groups?
- (3) Which types of activities do stakeholders most often engage in?
- (4) Which things most encourage and discourage stakeholder participation in watershed groups?
- (5) Why do stakeholders participate in watershed groups?

## Research Methods

Prior studies in Ohio have distinguished among three types of watershed groups, based on member composition. A survey questionnaire was distributed to participants of four government-based watershed groups, four citizen-based watershed groups, and four mixed watershed groups in Ohio, with two in each type operating in rural locations and the other two in urban locations. The twelve groups were selected such that each group had citizen participants (group members) and offered similar volunteer opportunities to group members. Survey questions sought information about members' level of involvement with the group, motivations for participating, perceptions of group characteristics, and individual characteristics.

In cooperation with watershed group leaders, the researchers obtained contact information for listed members of each of the 12 watershed groups. We selected a random sample of up to 42



members from each group, for a total of 478 members across the twelve groups. (For groups with fewer than 42 members, each member was included in the study and sent a questionnaire.) Questionnaires were distributed following standard survey procedures (see Dillman 2000), with a series of four contacts between September 29 and December 1, 2004. A total of 297 questionnaires were returned from the 478 deliverable addresses, for a response rate of 62.1%. Returned questionnaires included both private citizens and government officials, but for this analysis we focus only on the citizen responses. We include all questionnaires from citizens, except three questionnaires that listed greater than 200 hours per month in participation (we thought these outliers were reporting errors, given that they were so much higher than all of the other responses).

## Results

### Individual Characteristics of Survey Respondents

Respondents had many characteristics in common. Citizen respondents tended to be male, employed full-time, have at least a bachelor's degree, between 44-63 years of age, and of white/Caucasian ethnicity (see Table 2).

Demographic Characteristic	Citizen-based groups	Mixed groups	Government-based groups	Total all groups
Age (average)	55	58	49	54
Gender	65% male	55% male	57% male	59% male
Level of education	42% bachelor's or higher	38% bachelor's or higher	49% bachelor's or higher	43% bachelor's or higher
Employment status	56% full-time	43% full-time	60% full-time	54% full-time
Ethnicity	100% white/Caucasian	100% white/Caucasian	96% white/Caucasian	98% white/Caucasian

Table 2: Individual characteristics of citizen respondents, by group type

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

Respondents were asked to report their age as of their last birthday. Overall, the age of citizen respondents across all group types ranged from 22 to 87 years, with a majority of citizen respondents between the ages of 44-63. The average age of citizen respondents from all group types was 54. The average of citizen respondents was 55 in the citizen-based groups, 58 in the mixed groups, and 49 in the government-based groups.





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

A majority of citizen respondents were male, ranging from 65% in the citizen-based groups, 55% in the mixed groups, to 57% in the government-based groups. Across all of the citizen respondents, 59% were male.

### *What is the level of education of respondents?*

Respondents were asked to indicate the highest level of their formal education. Across all three group types, 43% of citizen respondents have received a bachelor's or higher degree. In the citizen-based groups, 42% of citizen respondents have received a bachelor's or higher degree. In the mixed groups, 38% of citizen respondents have received a bachelor's or higher degree. In the government-based groups, 49% of citizen respondents have received a bachelor's or higher degree.

### *What is the employment status of respondents?*

Respondents were asked to report their current employment status. Across the three group types, 54% of citizen respondents are employed full-time and 29% are retired. In the citizen-based groups, 56% of citizen respondents are employed full-time while 26% are retired. Looking at the mixed groups, 43% of citizen respondents are employed full-time and 37% are retired. Sixty percent of citizen respondents from government-based groups are employed full-time while 26% are retired.

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

Respondents were asked to choose the ethnicity category that best describes them. Across the three group types, 98% of citizen respondents indicated white/Caucasian, 1% indicated Hispanic/Latin, and 1% indicated Native American/American Indian. Similar trends appear when looking individually at the group types. In the citizen-based and mixed groups, 100% of citizen respondents are white/Caucasian. In the government-based groups, 96% of citizen respondents are white/Caucasian, 2% are Hispanic/Latin, and 2% are Native American/American Indian.

## **Stakeholder Participation in Watershed Groups**

### *What proportion of interested stakeholders is participating?*

From survey data, it appears that a significant proportion of stakeholders are not actively participating with watershed groups. Approximately 60% of citizen respondents indicated that they had participated, on average, some number of hours above zero per month with the group in the past year (labeled as active participants), while the remaining 40% had not (labeled as non-active members). Looking across group types, 69% of citizen respondents were active in government-based groups, compared to 61% of those in mixed groups and 51% of those in citizen-based groups (see Figure 1). After adjusting for non-respondents (by examining the last 20% of survey responders as a rough proxy for those who never returned their surveys), the following figures are probably closer to the participation rates across all group members: 63%



for government-based groups, 55% for mixed groups, 45% for citizen-based groups, and 55 % across all groups.

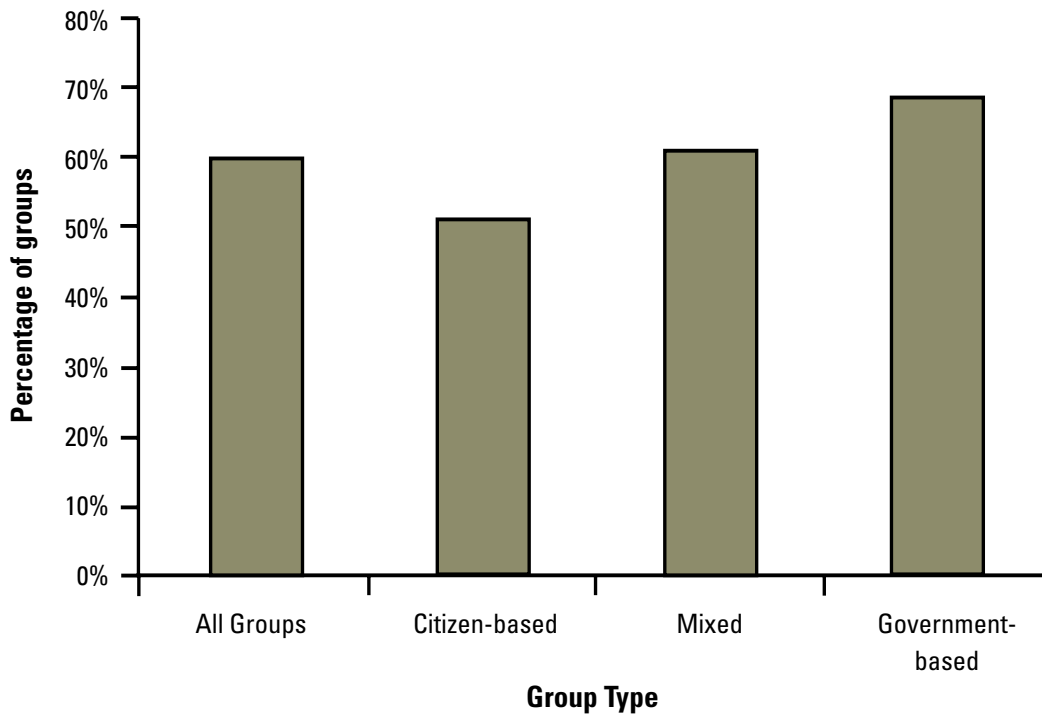


Figure 1: Proportion of active members by group type (unadjusted)

*What are stakeholders' primary interests in watershed groups?*

Respondents were asked to indicate their primary interest in their watershed groups. Environmental preservation was the primary interest for 75% of citizen respondents. Recreation, including bird watching, canoeing, and fishing, was the primary interest for 11% of citizen respondents. Two percent of citizen respondents indicated that their primary interest was in economic development. Twelve percent of citizen respondents chose the “other” category. Respondents were asked to specify their primary interest if they selected the “other” category. Interests included environmental conservation, watershed restoration, and the prevention of specific problems such as flooding and the installation of landfills.

*Which types of activities do stakeholders most often engage in?*

Active citizen respondents indicated that they had engaged in a variety of watershed group activities. The most commonly reported activity during the previous year, across all citizen respondents, was general group meetings, followed by attending education/outreach events. The percentage of citizen respondents who reported these activities varied among the group



types. The top three most commonly participated activities are the same across the three group types. Moreover, the top six most common activities are the same between citizen-based and mixed groups. The most notable differences are in the relative frequency of monitoring/ environmental assessment, which rank as the seventh-most common activity in citizen-based groups and the seventh- most common activity in mixed groups but the fourth-most common activity in government-based groups; and in fundraising, which ranks as the ninth-most common activity in government-based groups but the sixth-most common activity in citizen-based groups and the sixth-most common activity in mixed groups. Proportions of active citizen respondents who reported each activity by group type can be found in Table 3.

Activity	Proportion of Active Participants		
	Citizen-based groups	Mixed groups	Government-based groups
Attending general group meetings	45%	39%	49%
Attending education/ outreach events	31%	29%	28%
Participating in a restoration project	25%	25%	26%
Communicating/working with government officials	22%	20%	23%
Working with another group	17%	20%	19%
Planning a restoration project	17%	14%	12%
Monitoring/doing environmental assessments	9%	12%	25%
Fundraising	15%	13%	12%
Implementing best management practices	9%	6%	16%
Member recruitment/ membership drives	8%	8%	16%
Providing information/ opinion pieces to the media	9%	6%	14%
Planning education/ outreach events	11%	6%	7%
Publication of newsletters/ brochures	9%	0%	11%
Writing/updating watershed action plan	3%	2%	2%

Table 3: Proportion of active respondents who reported each activity, by group type



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### *Which things most encourage and discourage stakeholder participation in watershed groups?*

Respondents were asked to describe the things that most encourage and discourage their participation in their watershed group. They reported that a variety of things encouraged their participation, such as the potential for improvement of water quality and watershed health (49 responses), interacting with like-minded people (22 responses), being recruited by a friend or family member (18 responses), effective group leadership (14 responses), a local focus led by local landowners (13 responses), and receiving federal funding (11 responses).

Things that most discouraged citizen respondents' participation included lack of time/over-commitment (33 responses), lack of local landowner participation/trust/support (20 responses), lack of government support/involvement/funding (17 responses), lack of organization and progress (16 responses), lack of variety in group projects and activities (14 responses), control of group by government officials (13 responses), advanced age or poor health (11 responses), other participants' personal agendas (10 responses), and a perception that the means used to reach goals are not successful (8 responses).

### *How important are different reasons for participating to stakeholders?*

Respondents were asked to indicate the levels of importance they place on various reasons for participating in a watershed group. Each reason was rated on a scale from 1 to 4, with 1 = not at all important, 2 = a little important, 3 = moderately important, and 4 = very important.

Respondents considered six of the listed reasons to be at least moderately important, with the average ratings greater than the midpoint of the scale (3). Across all of the groups, "Acting accordingly to personal environmental ethics" ranked as the most important reason for citizen respondents (see Table 4). There was no significant difference between the way citizen respondents from citizen-based, mixed, and government-based groups felt except for two reasons. The "expressing my environmental concerns" reason was more important to those in government-based groups (mean 3.33) than in citizen-based (mean 3.20) and mixed groups (mean 2.95). Also, the "capability of the group to produce tangible results" reason was more important to those in mixed groups (mean 3.44) than in citizen-based (mean 3.31) and government-based groups (mean 3.05).



Reason	Mean <sup>a</sup>	Standard Deviation
Acting accordingly to my environmental ethics	3.49	.725
Bringing benefits to my community	3.42	.702
Valuing the goals this group seeks to achieve	3.36	.738
Capability of the group to produce tangible results	3.26	.815
Learning new things	3.18	.833
Expressing my environmental concerns	3.15	.838
Addressing watershed problems without much delay	2.97	.866
Making a contribution to this group	2.90	.815
Clarity of members' roles and responsibilities	2.40	1.000
Protecting my personal interests	2.38	1.049
Impacting the group's final decisions	2.37	.900
Having positive social interactions	2.21	.947
Expressing my professional interests	1.94	1.027
Being appreciated by other members	1.93	.971

<sup>a</sup>Scale from 1 (not at all important) to 4 (very important)

Table 4: Respondents' ranking of the importance of group characteristics (n=178).

## Discussion

Demographic characteristics of citizen respondents indicate that, in the 12 study watershed groups, 44- to 63-year old males with education beyond high school, employed full-time, and of white/Caucasian ethnicity are most likely to actively participate with watershed groups in Ohio.

Citizen participation in watershed groups is sometimes measured by group membership, specifically the number of members belonging to the group. But our results suggest this may not be the best method of measurement. Many listed group members had not participated in any group activities over the previous year. For the citizen-based groups, only 51% of citizen respondents indicated that they volunteered some number of hours above zero, on average, per month during the past year. For the mixed groups, 61% of citizen respondents indicated that they volunteered some number of hours above zero, on average, per month during the past year. For the government-based groups, 69% of citizen respondents indicated that they volunteered greater than zero hours, on average, per month during the past year. The actual numbers are probably closer to 45%, 55%, and 63%, respectively (55% overall), based on late respondent analysis. Interestingly, the finding is in the opposite direction of that suggested by some prior research, where greater participation was expected to be found in citizen-based groups.

With regard to the types of activities most frequently reported, citizen respondents from all group types were more likely to participate in general group meetings than any other activity.



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Citizen respondents from all group types were also likely to attend education/outreach events. Additional similarities were found across group type and the remaining 12 activities appearing on the survey. Despite a few differences (in monitoring/environmental assessments and fundraising), these results indicate that group type may not influence the types of activities in which active participants engage most commonly.

Many similarities arose among citizen respondents' descriptions of factors that encourage and discourage their participation with watershed groups. Citizen respondents want groups to have a locally-led initiative with support and involvement from local officials such as county commissioners and township trustees. They want the group to have an effective leader/coordinator who strives to achieve the group's goal of improving water quality and watershed health. What they do not want is an effort led by government officials, without meaningful stakeholder input. The most commonly cited factor that discourages citizen participation is outside commitments and lack of time.

From the survey data, it appears that a combination of reasons is important to group members. Citizen respondents considered six of the reasons to be at least "moderately important" (mean values greater than three), and six reasons fell between "moderately important" and "a little important" (mean values between two and three). Only two reasons fell below "a little important" (mean values less than two). There was little significant difference in how the respondents from citizen-based, mixed, and government-based groups felt.

## Conclusions

Even though respondents' demographic characteristics were similar across the three group types, watershed group coordinators/leaders should keep in mind that a variety of citizens live within watershed boundaries and the recruitment of diverse stakeholders may be beneficial to the group.

From the survey data, it appears that a significant proportion of stakeholders are not actively participating with watershed groups. In contrast to expectations, citizen respondents from government-based groups reported the highest number of total hours and had a higher percentage of active participants. This seems inconsistent with previous studies that suggest citizens shy away from participating with government-based groups because of a history of distrust.

Survey data indicate that active citizen participants, regardless of group type, are more likely to take part in general group meetings than any other activity, followed by attending education/outreach events. Further, it does not seem that group type influences the types of activities that citizen members most often engage in, as numerous similarities arose among activities across the group types.

Watershed group coordinators should be aware of the factors that encourage and discourage members' participation. Knowing what draws members to the group and what discourages



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them can lead to modifications within the group to increase member involvement. Although coordinators cannot provide members with the free time necessary for participation, they can work to instill in members a sense that the group's actions are generating tangible results (such as improved water quality and bringing benefits to the community), fostering interactions among like-minded people, and emphasizing links between participation and psychological benefits such as supporting environmental ethics, learning new things, and expressing environmental concerns.

It is hoped that watershed group coordinators will use the results and conclusions of this research to gain insight as to how they can increase levels of participation within their group and enlarge the selection of projects and activities to allow all participants to engage in meaningful and effective participation.

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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:

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- 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
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