

CITIZEN SURVEYS AND FOCUS GROUPS: AN EVALUATION OF
TWO CITIZEN INVOLVEMENT TECHNIQUES IN NATURAL
HAZARD MITIGATION PLANNING.



By

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ABSTRACT

The drastic rise in the cost of responding to and recovering from disasters in recent decades has promoted a movement towards planning for disasters before they occur. Mitigation planning, as this concept is known, has become increasingly important to local jurisdictions thanks to the passage of the Disaster Mitigation Act of 2000, which requires a jurisdiction to have an adopted mitigation plan in order to be eligible for certain hazard mitigation grant programs. An important component of the new regulation is the requirement of citizen involvement. Citizen involvement has long been successful in the fields of community, environmental, and transportation planning. There are a number of ways in which the public can become involved in natural hazard mitigation planning. This paper outlines two of them: citizen surveys and focus groups. This research focuses on the citizen involvement techniques implemented as part of the City of Beaverton, Oregon's development of a Natural Hazard Mitigation Action Plan. The research provides insight on the outcomes of both the citizen survey and focus groups that were implemented in Beaverton and provides recommendations for the key players involved in involving citizens in natural hazard mitigation planning processes.

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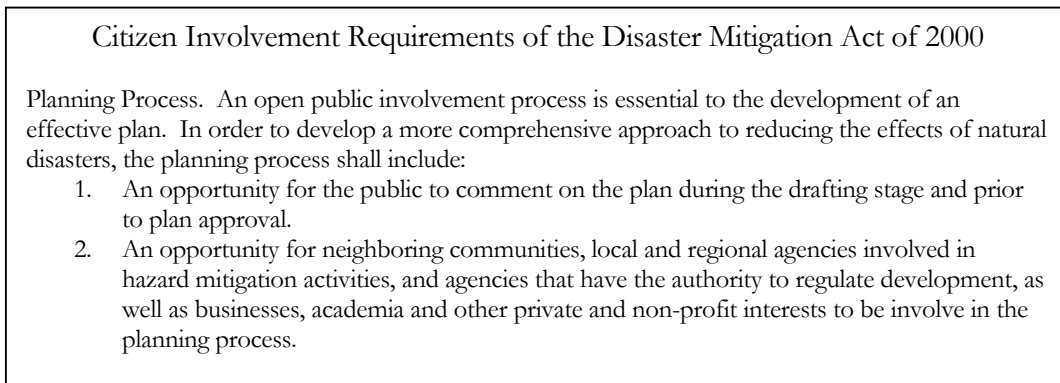
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CHAPTER I

INTRODUCTION

The ever-increasing time and cost associated with responding to and recovering from disasters has prompted a shift towards planning for disasters before they strike. This shift towards pre-disaster mitigation planning is evident in the Federal Emergency Management Agency's (FEMA) development of the Disaster Mitigation Act of 2000 (DMA). DMA requires that local jurisdictions have a natural hazard mitigation plan in place in order to be eligible for hazard mitigation grant funds as well as some post-disaster assistance programs. The development of DMA has created a number of new natural hazard planning responsibilities for both local and state jurisdictions, including responsibilities for identifying hazards, completing risk assessments, and involving citizens. With the focus of the requirements being on the process rather than the product, citizen involvement has become a vital component of the mitigation planning process.

FIGURE 1.1 – Language of the Disaster Mitigation Act of 2000



Source: National Archives and Records Administration. 2002. Federal Emergency Management Agency 44 CFR Parts 201 and 206 Hazard Mitigation Planning and Hazard Mitigation Grant Program; Interim Final Rule in Federal Register.

Creating successful citizen involvement programs in the hazard mitigation planning field is both vital and challenging. Citizen involvement is not only important because it is a requirement, it is also important because it promotes the idea of democratic government,

incorporates the needs of affected publics, allows competing groups to be heard and leads to better outcomes because of the diversity of viewpoints that are involved, (Shepard and Bowler 1997). Getting the public to participate in hazard mitigation is challenging because issues such as job security, environmental quality, and basic human needs tend to overshadow citizen concern for hazard mitigation in communities with minimal hazard histories. Because citizen involvement in hazard mitigation is only in the beginning stages, it is important to look to other planning fields for lessons in the successful use of citizen involvement techniques.

Citizen involvement has been a successful planning tool in fields such as community, transportation, and environmental planning because citizens have actively been involved when the vacant lot behind their home is rezoned as industrial use, or when a proposed highway is sited in their backyard, or when a nuclear plant is being planned upstream. In Oregon, Statewide Land Use Planning Goal One requires the provision of opportunities for citizens to be involved in community planning processes. Citizen involvement in environmental planning processes date back to 1979 when the Environmental Protection Agency established requirements for public involvement as part of the Resource Conservation and Recovery Act, the Clean Water Act and the Safe Drinking Water Act, (EPA 2000). The Intermodal Surface Transportation Efficiency Act (ISTEA) and the National Environmental Policy Act (NEPA) initiated the use of citizen involvement in transportation planning decisions, (USDOT 1996). The emergency management field has produced limited research on the use of citizen involvement in disaster planning. Because citizen involvement has been emphasized in the DMA, it is important for emergency managers to have access to information about the techniques that can be employed during their hazard mitigation planning process. There is a great deal of research on different citizen involvement techniques that can be used during a planning process. Different techniques include, but are not limited to: information, public education, surveys, focus groups, and consensus building. The focus of this research will be to compare and evaluate two citizen involvement techniques – surveys and focus groups, which will be implemented in conjunction with the development of a natural hazard mitigation plan for the city of Beaverton, Oregon (population 77,000), which will be referred to as the City in the rest of the documents.

Because natural hazards have the ability to cause loss of life, property and severely

disrupt the economy, public awareness of mitigation is crucial to the planning process. FEMA is currently producing a series of nine mitigation “How To” guides for local jurisdictions. The subjects of the guides range from getting the planning process underway to risk assessment to planning for man-made and technological hazards. While the guides encourage jurisdictions to involve the public in mitigation planning efforts, the focus remains on gaining the input of stakeholders rather than individual citizens. For the purpose of this research stakeholder will be considered a group or individual who represents a broader group. For example, the President of a local Chamber of Commerce or neighborhood association would be considered a stakeholder. A citizen is an individual who only represents themselves or their household.

While involvement techniques are just beginning to be applied to the hazard mitigation field, they have been implemented successfully in a number of planning fields for some time. This research attempts to bridge the citizen involvement gap between planning and emergency management. This research is significant to the City because the citizen involvement process used to develop the plan will not only give citizens the opportunity to share their thoughts and opinions on hazard mitigation, it will also inform the City on citizens preferences for community risk reduction, while also meeting the federal requirements for citizen involvement. Lessons on which techniques are effective should be shared with other jurisdictions so that they can employ the techniques when they develop or update the plan. This research also has implications for hazard mitigation statewide because of a mitigation planning initiative that is currently being implemented in a number of communities. The lessons gleaned from the research can be shared with other communities who are engaged in mitigation planning. The focus here is not on reinventing the wheel, but documenting what was successful in terms of when and how to involve the public. This research will also develop recommendations for local, state and federal government agencies that have mitigation planning responsibilities.

Summary of Relevant Literature

There are several apparent themes in the literature on citizen involvement. The themes can be broken into two categories: 1) citizen involvement theory and 2) citizen involvement techniques. Theory information includes literature on civic volunteerism; trust in government and citizen participation in planning. The key aspects of civic volunteerism that apply to this research are: what is civic volunteerism and how has it changed over the years. The literature points to three factors that influence involvement in public processes including motivation, capacity, and the need to be asked (Verba, Schlozman, Brady 1995). These three factors play a role in whether or not people will participate and the authors point to three reasons why people don't take part which include: 'I can't', 'I don't want to', and 'no one asked,' (Verba, Schlozman, Brady 1995). These factors must be considered when implementing a focus group or survey as part of a planning process for natural hazard mitigation. The second theme is the public's trust in government, which according to the literature has been declining since the 1960's. A key lesson from this literature is that public trust in local and state government is higher than public trust at the federal level (Pew Research Center 1998). This is important because mitigation planning takes place at the local level. The final background theme is citizen participation in various planning processes. This topic is important because it points to why citizen involvement is important and what has been successful in the past. Another aspect that is gained in this theme are the advantages and disadvantages of public participation as well as several sets of criteria for evaluating public involvement processes. There are important considerations when deciding on citizen involvement in general, but there are also specific considerations related to the individual techniques.

The literature on citizen involvement techniques includes the use of surveys and focus groups as well as methods for evaluating each of the techniques. The following is a brief summary of the literature on focus groups and surveys as citizen involvement techniques. The important steps in developing a focus group include: planning, recruitment, implementation and analysis. The key lesson gleaned from this theme is the magnitude of considerations when it comes to implementing a focus group. Some of those considerations include, whether or

not a focus group is the right medium, whom should be invited to participate, preventing and limiting bias in the study and the appropriate supplies necessary to carry out the session (Morgan 1998, Stewart and Shamdasani 1990, Jayanthi and Nelson 2002). There are a number of advantages of surveys including: spontaneity, subjectivity, stimulation, speed, simplicity, structure, specialization, selectivity, and secrecy, (Alreck and Settle 1995). Surveys can be an important planning tool because they can provide an abundance of information on citizen preferences, which helps inform decision-makers about policy choices that reflect the needs of the community, (Folz 1996). Surveys have the ability to answer questions about citizen attitudes, images, decisions, behaviors, affiliations and demographics (Alreck and Settle 1995).

Summary of Methods

The two citizen involvement techniques that were implemented in the City were evaluated in terms of their use in the hazard mitigation planning process. The two techniques are focus groups and citizen surveys, specifically mailed surveys. A survey of households in the City was implemented in an effort to better understand current preparedness and perception levels. The results of the survey were used to develop questions for further exploration in focus groups that were conducted in mid-April, 2003. A business survey was also implemented, but will not be included in this study. Three focus groups were conducted in the City in an effort to gauge citizen's perspectives on their hazard risks, their willingness to reduce their risks and their preferences on community risk reduction activities. The two methods that were used in the City will be described in terms of the outcomes, the strengths and weaknesses as well as how well the technique helped to achieve citizen involvement social goals.

Outline of Report

Chapter I provides an introduction to the topic this research aims to explore. This chapter includes project background as well as a summary of the literature and methods. Chapter II continues on to explore the relevant literature about the topic including citizen participation, civic volunteerism, public distrust in government, citizen surveys, and citizen focus groups. Chapter III details the methodology that was used in answering the research question and includes specifics on how the survey and focus groups were developed as well as how the data was analyzed. Chapter IV presents the findings from both the survey and the focus groups and also includes an analysis of each of the techniques. Chapter V presents a summary of the research along with key conclusions and recommendations. The recommendations are aimed at three specific audiences at the local, state and federal levels and also includes a general recommendations section.

CHAPTER II

REVIEW OF LITERATURE

Citizen Involvement

Citizen involvement has long been implemented successfully in a number of planning fields including environmental and transportation planning because it has been a component of federal regulations such as the National Environmental Policy Act (NEPA) and the Intermodal Surface Transportation Efficiency Act (ISTEA). With the development of the new federal rule, citizen involvement in mitigation planning has become more important. This literature review will explore the research in citizen involvement including the two selected techniques. Citizen involvement is not only important because it is a requirement, it is important for a number of other reasons as well. Studies have shown that elected officials tend not to be truly representative of the populations they represent; therefore involving citizens would help make decision-making more representative of the community (Verba, Schlozman and Brady 1995). Others suggest that citizen involvement is important because it reinforces democratic government, provides an opportunity to resolve conflict among competing groups, and it increases the acceptability of the final product or decision (Hunt and Haider 2001). Shepherd and Bowler support additional reasons including increased legitimacy in the project because affected publics are involved in the process, it ensures that plans meet citizen's needs, and that the final decisions are better because both local knowledge and technical expertise are paired in the decision-making process (Shepherd and Bowler 1997).

It is important to note the general history of citizen involvement in an effort to gain an understanding of citizen's changing role in decision-making processes over time. Before established programs and regulations for involving citizens in decision-making processes, citizens only means of participating in decision-making was to object to policies or programs after they had been implemented. Finding this approach ineffective, citizens found that more progress could be made by reacting to proposals that were near completion, but that had not yet been adopted. These first two stages of "involvement" proved ineffective and so citizens demanded to be involved in designing policy and programs. These complaints eventually led to the involvement of citizens in designing alternatives and visions for their communities (DeSario and Langton 1987).

As stated before, citizen involvement in the environmental and transportation fields on the federal level has been a component of the planning and decision-making process for some time. In the environmental planning field, the Environmental Protection Agency (EPA) has been one of the leaders in establishing citizen involvement in planning processes. The EPA identified a number of key lessons gleaned in its thirty plus years of stakeholder and public involvement. Those lessons include the ideas that:

- Public trust in government is crucial for effective planning and decision-making to be achieved;
- Sources of information must be credible; and
- Effective solutions must integrate environmental, economic and social concerns in order to achieve a desired quality of life (EPA 2001).

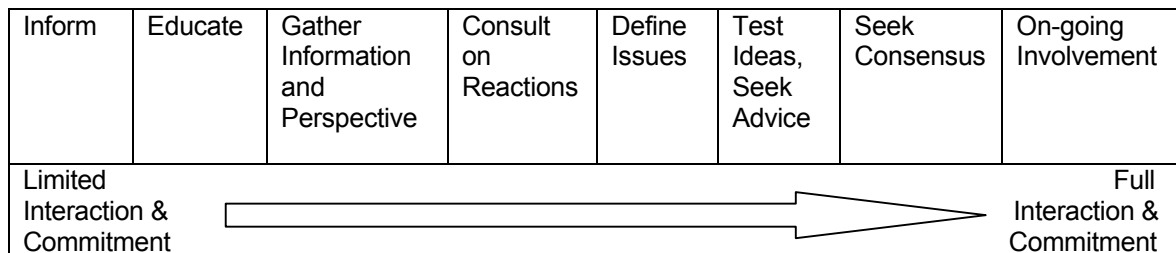
The EPA's experience in citizen involvement has also lead to key lessons in why people do not participate in planning and decision-making. These lessons are important for those engaged in citizen involvement to understand because they can save time and money by avoiding some of the pitfalls that keep citizens from participating. The barriers to participation that the EPA identified were an inadequate explanation of background and technical material, difficulty participating in technical discussions, inadequate meeting minutes, overwhelming amounts of reading, perceived inability to influence issues, lack of time to participate, historical reasons including previous failed experiences, social reasons including low expectations and cultural

reasons including God's will (EPA 2001). This last barrier is especially important in the mitigation planning field because many people view natural disasters as "Acts of God" meaning there is nothing that can be done to stop them from occurring. While mitigation planning will not stop a flood from occurring, it can significantly reduce the impacts and losses associated with the event. Currently, the media plays a large role in continuing this "Act of God" mindset. "Television thus has the ability to inform people about hazards or keep them in the dark, to tell great truths about natural catastrophes or to perpetuate myths, and to motivate public solidarity in the face of the suffering that disasters cause, or not stimulate it," (Alexander 2000). If the mind set of disasters being "Acts of God" continues to pervade the public view, citizen involvement in mitigation planning will prove difficult.

Determining which method of citizen involvement to implement in a planning process is important. There are a number of methods of involving the public ranging from mailings and flyers to citizen task forces and consensus building processes. Because the citizen involvement requirement of the DMA is somewhat ambiguous, jurisdictions have the ability to adapt their involvement process to fit the needs and characteristics of their community. In order to decide on which method(s) are appropriate, planners must determine the objectives of involving the public (what is it that they want to get out of the process) and which involvement method would best meet the given objective(s).

Deciding on the objectives of the public involvement process can help in making the decision on which involvement technique to use for certain situations. Citizen involvement objectives range from informing and educating the public to creating consensus and on-going involvement programs. Dorcey's spectrum of public involvement illustrates a number of involvement objectives each with differing levels of interaction and commitment. In the diagram below the commitment level of both the jurisdiction and the citizen is increased, as is the effort in terms of cost and time from left to right. The level of interaction between the two groups also increases as you move to the right in the diagram.

FIGURE 2.1 – DORCEY’S PUBLIC INVOLVEMENT SPECTRUM

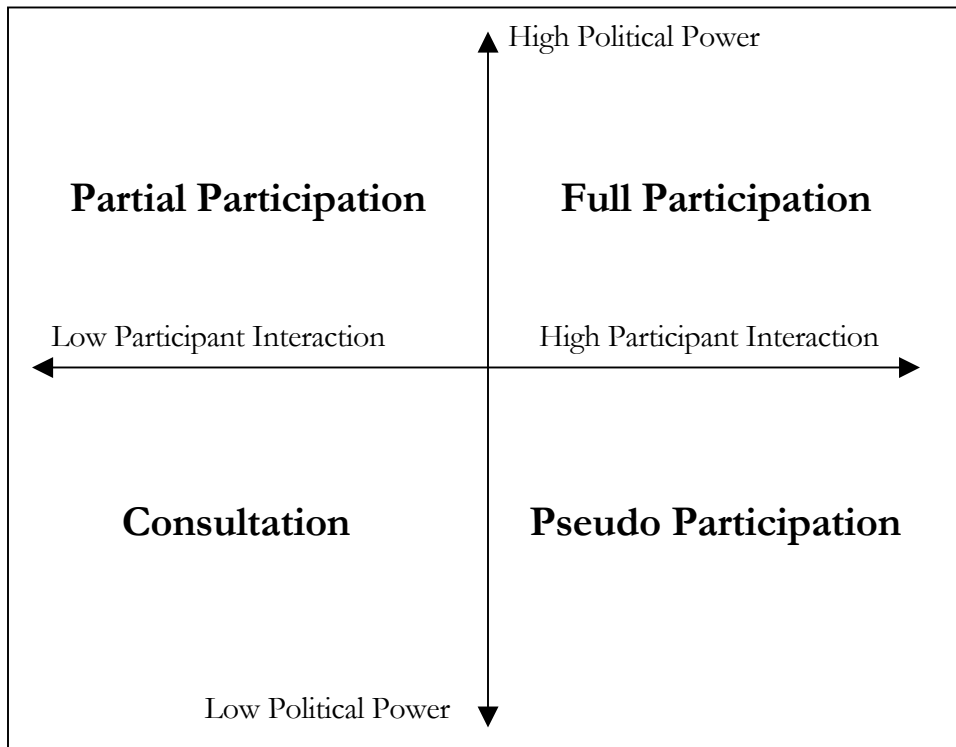


Source: Jackson, L. 2001. Contemporary Public Involvement: Toward a Strategic Approach. In *Local Environment*. 6(2) 135-147.

The following is an example of how this model helps determine the appropriate method for involving citizens. If the objective of the public involvement process were to inform the public of an issue, then creating a brochure with useful information would be an effective means of achieving the information objective. On the other hand, if the involvement objective were to build consensus, a brochure would not be an appropriate technique because consensus building requires both interaction and commitment on behalf of the citizen. The brochure would not provide for interaction and the citizen is not committed to reading the brochure if it comes in the mail. A citizen task force would be a better choice of involvement methods in this case because it is structured so that there is both a high level of commitment and interaction among the citizens and the jurisdiction. Citizen taskforces are permanent or semi-permanent groups of citizens that are brought together to direct the planning process, and have some authority over decision-making.

While Dorcey’s model focuses on the role of interaction and commitment in the citizen involvement process, Syme and Sadler offer a similar model that looks at both the level of citizen interaction and political power. This participation model goes one step further to look at the amount of power citizens are given in the decision making process. The model is a basic four-quadrant diagram that categorizes citizen involvement as being either: partial participation, full participation, pseudo-participation, or consultation. The categories are ranked based on high and low levels of political power and high and low levels of participant interaction. Acknowledging the levels of interaction, commitment and political power in citizen involvement will be important when it comes time to evaluate the involvement process.

FIGURE 2.2 - Public Participation Political Power Model



Source: Syme, G. and B. Sadler. 1994. *Evaluation of Public Involvement in Water Resources Planning* in *Evaluation Review* 18(5) 523-542.

There has been a multitude of research on methods for evaluating citizen involvement processes, unfortunately, most of the research focuses on evaluating on-going citizen involvement programs instead of single involvement techniques. Beierle's research on the use of social goals to evaluate public involvement processes can be used to evaluate the two techniques that were implemented in the City. The identified social goals include:

- (1) Educating and informing the public;
- (2) Incorporating public values into decision-making;
- (3) Improving substantive quality of decisions;
- (4) Increasing trust in institutions; and
- (5) Reducing conflict (Beierle 1999).

Each of these goals has certain considerations that must be taken into account. For the educating and informing goal, it is important that the process be easily understandable for participants, which means that communication should be in both methods and terms that people with non-technical backgrounds can understand. Incorporating public values into the decision-making process is important because officials and citizens most likely have different values. Incorporating all public values in a planning process is near impossible, but it is important that the opportunity to participate exists. Citizen involvement can improve the quality of the plan because citizens can bring innovative and creative ideas and alternatives to the table. Beierle suggests that involving citizens in decision-making can create greater public trust in the jurisdiction and it can help to empower citizens (Beierle 1999). Another consideration is that conflict is an innate characteristic of public decision-making, but bringing citizens together to solve problems can help identify common ground and reduce some of the existing conflict.

Citizen Involvement Factors

Besides the background information about citizen involvement, it is also important to look at some of the factors related to citizen participation in decision-making processes. The two factors that will be explored are civic volunteerism and distrust in government. First, general trends in citizen participation over the last three decades have shown a decline in participation across the United States. Civic participation, political participation, and religious participation have all experienced declines since the mid 1970's. Specifically, active organization involvement declined from 17% in the mid-seventies to 8% of the general public in the mid-nineties. Similarly, attendance at club meetings fell 7% during this same time period (Putnam 2000). Putnam also illustrated the fact that participation in political activities is declining as well. The number of citizens who have attended political rallies or speeches, worked for a political party, run for a political office, attended a public or town meeting, served as an officer for a club or organization, or served on a committee for a local organization have decreased significantly since the mid-seventies (Putnam 2000).

Participation in organized religion has been slowly declining since the mid-sixties as well. Acknowledging these declining trends in participation is important in that it helps to create the realistic mindset that citizen involvement is not as simple as the concept from the movie *Field of Dreams*, “If you built it, they will come.” It takes serious legwork to implement a successful citizen involvement process. It is also important to gain an understanding of why people choose not to participate in public decision-making processes. The International City/County Management Association developed the following list of reasons why people choose not to participate.

- Can’t attend on the specific date or location due to cost or level of difficulty in getting there
- They were not aware of the involvement process
- They could not get information on participation
- They did not understand the issue enough to participate
- They did not realize the local government process and their role within the process
- They are intimidated by the process
- The issue at hand is particularly sensitive
- They are reluctant to spend time on an issue if they feel the decision has been pre-determined
- They don’t participate if they feel that their contributions will not be valued or considered (ICCMA 1994).

Prominent research on why citizens participate in politics has reduced the list above to three reasons that citizens do not participate, including: lack of resources, limited interest or knowledge in the process, and they were not asked to participate which is related to a lack of recruiting networks (Verba, Schlozman and Brady 1995). All of these considerations can be overcome if proper planning and notice go into the public participation process and if the public is educated on the issue and the importance of their participation.

Planners and Emergency Managers can use the knowledge of what motivates people to participate to create incentives that will encourage participation in mitigation planning efforts. The first motivation type is called selective material benefits. People are motivated to participate in this situation because there is an opportunity to gain job or career advancement. This motivation is not very applicable in attempting to involve citizens in planning for hazard hazards however; it could be beneficial in recruiting stakeholder groups. The second motivation type is called selective social gratification and is characterized by a sense of working with others and excitement in participation. Emphasizing the social context of the citizen involvement event will elicit the participation of those who seek the selective social gratification motive. The third motivation type is selective civic gratification and is characterized as accomplishing a sense of civic duty and adding to community welfare. The fourth motivation type is called collective outcomes and is characterized by the gratification that comes from the successful implementation of a public policy (Verba, Schlozman, and Brady 1995). The key barrier that needs to be overcome in order to achieve this fourth motivation is the public perception that their involvement does not make a difference. This is similar to the idea that one's vote does not make a difference, when in fact it can. Citizen involvement can play a large role in creating change, it is important for citizens to see successful examples of this before they will engage. Involving citizens in mitigation planning can build upon the last three motivators because they are all focused on social and civic feelings of responsibility.

The second factor that influences citizen involvement is the current level of distrust in government. A survey conducted by the Pew Research Center in 1998 suggested that less than 40% of the population trusted the government in Washington, DC always or most of the time (Pew Research Center 1998). Declining levels of trust are evident in the responses to a question regarding trusting the government to do what is right. In the 1960's, 65 to 75% of the population felt that government did what was right "just about always" or "most of the time," while in the 1990's the percentage of respondents who answered the question the same way fell to 20 to 25%, illustrating a severe drop in public trust in government over the thirty-year period (Cooper 1999). The good news for local governments is that trust at the local and

state levels is much higher than that of the federal level. This is extremely important when you consider the idea that all mitigation is local. A 1995 survey uncovered the top four reasons that American's distrust government. The four reasons included: the ineffective or wasteful use of tax dollars, money being spent on the wrong things, the high level of influence that special interests hold, and a lack of politician integrity (Nye, Zelikow and King 1997). Public involvement can help to reduce these reasons for distrust because involvement can help to empower the public in the decision-making process, but that first barrier must be overcome. If the public sees involvement as being a waste of taxpayer dollars, then they need to be educated about the importance of involvement.

Citizen Involvement Techniques

Because two citizen involvement techniques will be implemented and evaluated in the development of the natural hazard mitigation plan for the City, it is important to provide some background information for each of the involvement techniques.

Citizen Surveys

There are several different survey methods including mail, telephone and face-to-face interviews. The following section will focus on mail surveys because that is the method that is being implemented in the City's citizen involvement process. Folz defined a citizen surveys as "using a systematic, scientific method for selecting a sample of citizens, collecting information from them, and making generalizations about a larger population that is usually too large to observe or interview directly" (Folz 1996). Surveys can generate information on opinions and attitudes, beliefs and perceptions, behaviors and facts and attributes related to any topic that might need to be assessed (Folz 1996). Surveys can be used at a number of different stages of

the planning process including issue identification, policy implementation, and policy evaluation.

Understanding why surveys are useful citizen involvement tools is important. Folz suggests that the data gained from surveys can “enable public administrators to make informed decisions and policy choices and to implement service improvements that respond to citizens needs and preferences.” Surveys are also important citizen involvement tools because they can gather input from those people who usually do not attend public meetings or workshops. Like citizen involvement in general, surveys that aim to represent the community as a whole also help to advance the idea of democratic processes (Folz 1996). Milbrath also supports the use of surveys as a means of citizen participation, but provides a different perspective of why that is. Milbrath suggests that surveys are a stronger method of citizen involvement than other methods because:

1. Participation in general can be easily manipulated by officials in order to serve a specific purpose;
2. Most participation methods are highly unrepresentative;
3. Those who participate are more likely to oppose the policy or issue than support it; and
4. Those affected by a proposed issue or policy but are uninterested do not participate (Milbrath 1981).

Surveys can help combat these deficiencies because the methodology used to develop the survey sample ensures that a representative sample of the population is selected to participate. The representative sample should produce a sample that includes both those who oppose and those who support the proposed policy or issue. The nature of mailed surveys allow those uninterested people to participate without having to go to a public meeting or workshop, they can fill out the survey in their own home and mail it in.

Although citizen surveys can be very useful in gauging citizen’s attitudes and perceptions, there are some criticisms of their use. The following table outlines a number of survey flaws related to the use of surveys in social research.

TABLE 2.1 – Survey Criticisms

1. Can not adequately establish causal connections between variables
2. Incapable of getting at the meaningful aspects of social action
3. Only look at particular aspects of people's beliefs and actions without looking at the context in which they occur
4. Assumption that human action is determined by external forces and neglect the role of human consciousness, goals, intentions and values as important sources of action
5. Equated with sterile, ritualistic and rigid model of science centered around hypothesis testing and significant tests, which involve no imagination or creative thinking.
6. Empiricist
5. Some variables are not measurable
6. Too restricted because rely on highly structured questionnaire that is limited
7. Too statistical and limit interesting questions to incomprehensible numbers
8. Intrinsically manipulative because of scientific and technistic nature

Source: deVaus, D. 1986. Surveys in Social Research. London: George Allen and Unum. Pp 254.

Despite these criticisms, surveys can provide “an abundance of useful information on a variety of topics and issues of interest to decision-makers in public service,” (Folz 1996). Because the purpose of the survey implemented in the City was to gain information on perceptions and served as snapshot in time, some of these criticisms are not relevant.

Different data collection techniques have differing advantages and disadvantages as well as differing characteristics. When making the decision about which type of survey will work best for the given project objectives, certain considerations need to be addressed. Considerations include time, cost, quality of data, and bias. The following table compares telephone surveys, mail surveys, and face-to-face interviews in terms of these considerations.

TABLE 2.2 – Comparison of Data Collection Methods

Consideration	Face-to-face Interview	Telephone Survey	Mail Survey
Cost	High	Medium	Low
Time	Medium	Low	High
Sample Size	Small	Medium	Large
Data Quantity per Respondent	High	Medium	Low
Widely Dispersed Sample	No	Maybe	Yes
Interaction with Respondent	Yes	Yes	No
Degree of Interviewer Bias	High	Medium	-
Severity of Non-response Bias	Low	Low	High
Presentation of Visual Stimuli	Yes	No	Maybe
Field Work Training Required	Yes	Yes	No

Source: Alreck, P. and R. Settle. 1995. The Survey Research Handbook. Guidelines and Strategies for Conducting a Survey. NY, NY: Irwin Professional Publishing. Pp 470.

The advantages of using mail surveys over the other methods include being low in cost, including a large sample size, the sample is widely dispersed, there is no interviewer bias (but biased questions can exist), and there is no training needed for field workers because field work is not necessary when using mailed surveys.

Finally, it might be helpful to look at some examples of communities that have used citizen surveys in conjunction with a public decision-making process. The City of Springfield, Oregon initiated a program entitled “Direction 88” to gather public input on an on-going budget process. The City developed a representative community opinion survey to assess public opinion about the budget and the budgeting process. Surveys were mailed to 1,500 households and were followed up by public meetings to discuss the outcomes of the survey. The City of Tempe, Arizona also used a citizen survey as a means of measuring satisfaction, usage and spending priorities on City services (Simonsen and Robbins 2000). The outcomes of these surveys may not have directly led to the final decision, but it was a first step in assessing the level of public support in each of the cases.

Citizen Focus Groups

Focus groups are a group interview process where 6-10 people are brought together to discuss a certain topic for an hour or two. The goal of a focus group is to explore the attitudes and feelings about a particular topic in order to understand the “why” behind individual behavior (Greenbaum 2000). Barbour and Kitzinger suggest that focus groups are “ideal for exploring people’s experiences, opinions, wishes and concerns. The method is particularly useful for allowing participants to generate their own questions, frames and concepts, and to pursue their own priorities on their own terms and in their own vocabulary” (Barbour and Kitzinger 1999). There are a number of situations in which the use of focus groups would be beneficial; they are listed below:

1. To obtain general background information;
2. To generate a research hypothesis for further research,
3. To stimulate new ideas and creative concepts;
4. To diagnose potential problems;
5. To generate impressions of products, programs, or policies;
6. To learn how respondents talk about a certain phenomenon of interest; and
7. To interpret previous quantitative data (Stewart and Shamdasani 1990).

To simplify this idea into more general categories, focus groups can be used in problem identification, the planning stage, the implementation stage, and in assessing a program or policy (Morgan 1998).

The advantages of using focus groups over other methods of citizen involvement are numerous. Focus groups can be a quicker and cheaper means of getting group data than individual interviews because you can get data from multiple people in one setting using only one facilitator or moderator. Focus groups also allow for direct interaction between the respondents and the facilitator, a survey would not allow for this interaction. The responses

are open ended in focus groups so a large amount of rich data is gained. Respondents are allowed to build upon the ideas of others in the focus group, which is not a possibility if mailed surveys or individual interviews were used to gather the data. Focus groups are very flexible; there is room for the respondents to move the process in the direction that they want to take it. Finally, the results of focus groups are fairly easy to understand (Stewart and Shamdasani 1990).

Despite the many uses of focus groups, they do have limitations and they are important to point out. Focus group data is limited in that it cannot be generalized to the larger population due to the small number of participants. The ability of participants to interact with one another may actually generate bias or inhibit some participants from fully participating in the process. The instant and interactive nature of focus groups can lead facilitators to place greater trust in the findings than what is warranted. The open-ended qualitative data gathered in the focus group can prove difficult to summarize. And finally, the presence of the facilitator can lead to bias in questions and responses (Stewart and Shamdasani 1990). These limitations can be overcome with proper planning ahead of time.

Focus groups are very flexible in terms of who can be involved. The average citizen, children, community group representatives and stakeholder groups can all participate in the focus group process since there is no expertise needed to come to the table. The time commitment is very limited; the respondents are only asked to participate once for a very short period of time, which allows more people to be involved because of the minimum time commitment.

Greenbaum has identified certain elements that are required for a good focus group. The elements are identified in the table on the following page.

TABLE 2.3 – Elements of a Good Focus Group

1. Authority of Moderator
2. Ability to Use Verbal and Non-verbal Inputs
3. Group Dynamics
4. Concentrated Attention of Participants
5. Ability of the Client Personnel to be Directly Involved in the Research Process
6. Safety in Numbers
7. Control Over Security
8. Dynamic Nature of the Process
9. Speed of the Process
10. The Absolute Cost of Research

Source: Greenbaum, T. 2000. *Moderating Focus Groups*. London: SAGE Publications, Inc. pp248.

If any of these essential elements are missing from the focus group, reductions in the quality of data are produced. Safety in numbers is an especially important element because if the group is too small, people might not feel comfortable speaking about the issue. In order to combat this issue, it is important to have enough people attend the focus group. There are three methods that can help bolster the focus group recruitment process. The first is to over recruit. Other commitments are bound to come up and participants might not be able to attend even though they said they could, by inviting more people than you really need, you have a better chance of actually achieving the desired number of participants. Another method to assure attendance is to keep continual contact with the participants as the date draws near. The last method that can be used to gain attendance is to increase the incentives for people to participate (Greenbaum 2000).

In the beginning, focus groups were used solely as a means of gathering consumer behavior data. They were used to find out what consumers thought of certain products on the

market. For example, in the fifties, certain boxed cake mixes were not selling well so the manufacturer decided to run a focus group to find out how they could better their product. They found out that housewives felt that baking a cake was special and too little effort went into baking a boxed cake. When asked about what would make them buy the cake mixes, housewives suggested that some ingredients be left out of the mix. The focus group resulted in boxed cake mixes that required an egg to be added and with this change; sales for boxed cake mixes took off (Morgan 1998).

In the seventies, focus groups were introduced to the field of social research. Social research focus groups covered topics such as gang violence, teenage drinking, and public impressions of politics and political leaders. The use of focus groups is fairly new to the planning field, but it has been successful in a number of cases including a recent Community Planning Workshop project with the Department of Land Conservation and Development. The goal of the project was to gain an understanding of planning staff, planning commissioners and Council of Government staff preferences for the format and content of technical assistance as well as their preferred method of receiving technical assistance. The team conducted an Internet survey and followed that up with focus groups in order to get more qualitative data on technical assistance preferences. Because focus groups are so flexible, they can easily be adapted to any component of the planning process from identifying the problem to developing solutions to the problems.

CHAPTER III

METHODOLOGY

The previous chapter explored current literature and research about surveys and focus groups. In that review it was apparent that surveys and focus groups create very different datasets, one being quantitative and one being qualitative. Another key lesson from the literature review is that both techniques are subject to bias, which can be overcome with certain precautions. Both surveys and focus groups have differing strengths and weaknesses and can be used at varying stages of the planning process. The surveys can answer the question of “what” have you done, while the focus groups answer the “why” have you done that question. As the literature review showed, these techniques can be used at multiple stages of the planning process. For the purpose of this research, the techniques were implemented during the issue and action identification phase. This research aims to compare and evaluate the use of citizen surveys and focus groups in their implementation in the development of a natural hazard mitigation action plan for the City, Oregon. The implementation of the two techniques took the lessons from the literature into account and in the case of the focus group, broke the rules and the mold because of the current state of citizen participation in natural hazard mitigation planning. This chapter describes the steps that were taken to implement both the survey and the focus group.

Both techniques were implemented in six communities around the state of Oregon as part of the Partners for Disaster Resistance and Resilience program managed by the Oregon Natural Hazards Workgroup (ONHW). The communities involved include: the City of Beaverton, the City of Hillsboro, Clackamas County, Douglas County, Tillamook County, and a four county cooperative including Grant, Baker, Union, and Wallowa

Counties. For the purpose of this research, the methods and outcomes described in this methodology chapter deal with the implementation of both the survey and focus groups in the City. The process used to inform the development of the City’s Natural Hazard Mitigation Action Plan included input from a project steering committee, stakeholder interviews, hazard specific research as well as the citizen survey and focus group. The following figure illustrates the resources used to develop the plan.

Figure 3.1 City of Beaverton Natural Hazard Mitigation Action Plan Input



ONHW, a service learning based organization, based at the Community Service Center at the University of Oregon, was the lead organization in implementing both the survey and the focus groups in the City. Another key player involved in the surveys and focus groups is the project steering committee. This group is composed of various stakeholders from the community and has the responsibility of guiding the planning process, which includes making decisions on goals and action items.

Citizen Survey

The steps involved in developing the household survey included: (1) determining the objectives of the survey, (2) developing the survey instrument, (3) developing a sampling methodology, (4) implementing the survey, (5) tracking and coding returned surveys, (6) analyzing the data, and (7) reporting the results of the survey. The household survey was adapted from a statewide risk perception survey that was implemented in 2001.

Survey Objectives

This survey served as an information tool rather than a decision-making tool because it provides a snapshot in time on natural hazard risk perception. The objective of the household survey was to gain an understanding of citizen perception of risk about natural hazards from both an individual and community perspective. The household survey measured household levels of risk perception as well as gauged their willingness to prepare for and reduce risks in their home and their willingness to support community wide risk reduction activities. The surveys focus on answering the question of “what” had been done. Specifically, the household survey asked questions regarding the level of concern for hazards, whether or not they had done anything to prepare for hazards, whether or not they have flood or earthquake insurance and asked them to prioritize community wide mitigation activities. The household survey is included in this report in Appendix A.

Survey Methodology

Before the surveys were mailed out, the survey was put through a field test with five individuals to get feedback on the understandability of instructions and questions. Once the

field test was complete, the surveys were revised and printed and then the process to develop a mailing list began. The actual mailing sample consisted of a random sample of 1,500 households and was created from a list of household addresses purchased from a local phonebook provider. This method of selection was used because random sampling helps ensure a sample that is representative of the population.

The surveys were mailed to households in the City and included a cover letter from the City's Mayor and a business reply envelope. Recipients of the household survey also received a one-page informational flyer with risk reduction web resources and a focus group participation form. A focus group form was included in order to generate a list of potential participants for the focus groups that followed the survey. The surveys were mailed on January 13th, 2003 and were followed by a reminder/thank you postcard on January 23rd and a second mailing was given to those who had not yet responded to the survey on February 3rd. Completed and returned surveys were recorded in order to establish the response rate. In order to be analyzed, the open-ended responses were transcribed and coded. The results of the survey were entered into a statistical software package for ease of analysis.

Data Analysis

The results of the survey were analyzed using a standard statistical software program. Frequencies and totals were run for each question. The results of the household survey were interpreted to provide an assessment of the current level of citizen awareness and preparation for natural disasters in the City. The survey provides the City with an overview of citizen perception of risk, how prepared citizens are, what citizens are willing to do to reduce their own risks and what risk reduction implementation strategies they would support. The results of the survey are important in the actual development of the plan because they helped to identify community issues as well as possible action items for reducing risk. For instance, if the survey results showed that residents and businesses rate their risk from an earthquake as being low, then a possible action item revolving around public education about the City's vulnerability and risk to earthquakes could be identified. An example of how the results of the

survey help influence decisions about goals and action items follows. The steering committee can use the results of the questions about community wide risk reduction strategies to inform the development and prioritization of action items. For instance, if the respondents of the survey indicate that they would not support the use of acquisition as a means of reducing the flood risk, then the steering committee should take this into consideration before they prioritize acquisition action items highly.

Focus Groups

The steps involved in developing the focus group process included: (1) determining the objectives of the focus group, (2) determining what questions or activities should be explored, (3) determining the recruitment strategy, and (4) determining the process for analyzing the focus group data.

Focus Group Objectives

Focus groups were chosen because (1) they could be used to further gather data related to the household risk perception survey, (2) they are flexible and allow communities to gain direct feedback from citizens on hazard mitigation issues and priorities, (3) it allows stakeholders to interact with one another and build concepts and ideas based on comments and suggestions made by other participants, (4) it provides an opportunity for citizens to prioritize community-level goals and implementation strategies, and (5) allows for participants to become educated as well.

ONHW reviewed the household preparedness survey instrument along with preliminary results in order to determine what kind of information would be gathered through a focus group process. Several key themes came out of the survey and include:

household risk perception, household preparedness, willingness to reduce risk, and citizen priorities for community-level risk reduction. These themes were explored further in the focus group process. The household survey provided a snapshot in time on these natural hazard mitigation themes, but the focus group process allowed more qualitative data to be collected. A total of three focus group sessions were held in the City between the weeks of April 14 and April 21, 2003.

Focus Group Technique

The next step was to determine what questions or activities would be used to gain the desired data. In order to collect data on all four of the identified themes, the 90-minute focus group session was broken up into two sections. The first component included a discussion to get at why people attended, whether or not they are concerned about natural hazards and the associated risks, whether or not they are aware of the activities that can be implemented to reduce risk and finally, whether or not they have done anything to reduce their home's risk to natural hazards. An overview of the discussion questions can be found in Appendix B. The second component included an activity that asked participants to prioritize both implementation strategies and goals on a community-wide level.

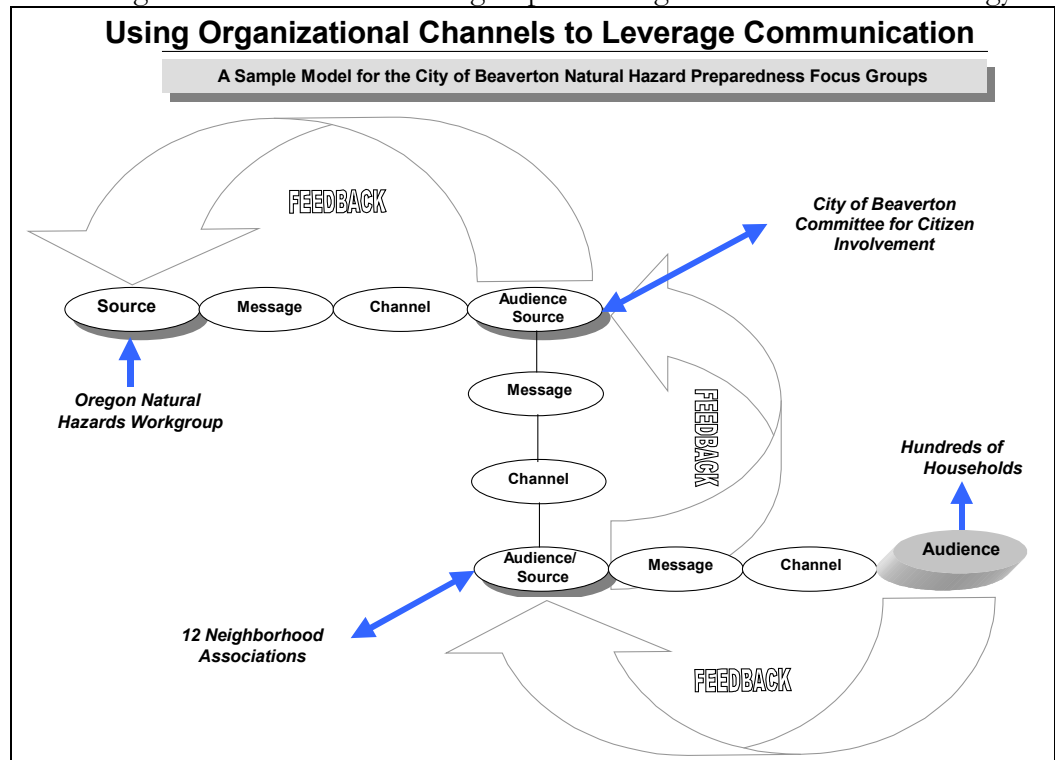
Participant Recruitment

Determining how participants will be recruited is an important step in the focus group planning process. Participants for the focus group were selected through two different methods. The first method invited respondents of the household risk perception survey and the second recruited participants through existing Neighborhood Association Committees (NAC). All survey recipients received a focus group interest form in the survey mailing. Recipients had the choice to fill out the interest form and return it with their survey, indicating their willingness to participate in a future focus group. It is important, here, to point out that the relevant literature on focus group planning suggests that relying

on self-selection can be an unreliable form of participant recruitment because those who self-select tend to be more aware of the issues either because they are strongly in support or oppose the issue. Despite what the literature suggested, self-selection was chosen because of the unique nature of citizen involvement in hazard mitigation planning. Natural hazards are not a high public priority (especially if there has not been a significant event in the community in recent history) and attendance at public workshops focusing on natural hazards planning in the past has had little to no participation. For instance, in 2002, local newspaper and radio stations heavily advertised a public workshop regarding natural hazard planning in Newport, Oregon - only two citizens attended the event. There is an opportunity to use focus groups as a means to link citizens to public policy decisions. This linkage has been established with the survey technique but is new for focus groups. This research is a test in how strong that link could be.

In an effort to help combat the problems inherent in citizen involvement in mitigation and self-selection, a second means of recruitment was used as well. The second method used the ONHW Leveraged Communication Strategy (LCS) to encourage participation. The leveraged strategy involved the use of already existing channels of communication to pass messages along to broader audiences. For example, for the 2002 spring earthquake awareness campaign, ONHW sent earthquake preparedness information to all school principals in the state; the principals in turn gave the information to the students, who took the information home to their parents. This method allowed a large audience to be reached with a limited budget and limited staff time. In this case, invitations to participate in the household focus groups were channeled from ONHW to the City's Committee on Citizen Involvement to twelve independent neighborhood association committees to individual households. The following diagram illustrates how the ONHW LCS works.

FIGURE 3.2 Oregon Natural Hazards Workgroup’s Leveraged Communication Strategy



Source: Oregon Natural Hazards Workgroup. Partners for Disaster Resistance 5 Year Strategic Plan. 2002.

This second method was chosen because it is an effective and inexpensive way to get information to a large number of people without having to contact a large number of individuals directly. This strategy is especially important in today’s economic environment, when advertising and staff resources are limited.

An over-recruitment strategy was used to invite participants to the focus groups. One or two groups of six to eight people are needed to run the focus groups effectively. In order to get six to eight people, twelve to fifteen were invited. The actual means used to recruit the participants through the two methods differed. For those who participated in the survey and returned a focus group interest form, initial letters were sent to inform them of the purpose of the focus group, explain why their participation is important, and to inform them of when and where the focus group were held. The letter was followed by a telephone call to clarify any questions they may had and to ask for their participation. For those who agreed to participate, a reminder call was made the day before the focus group was held.

For those recruited through the ONHW LCS, a slightly different invitation process was used. Information packets were sent to all twelve NACs in the middle of March. The packets included fliers about the focus group, maps to the focus group location, and a letter asking the NAC chair to share the information at their next meeting and to recruit volunteers. The NAC chairs were then asked to bring the names of volunteers to the City's Committee on Citizen Involvement on March 25, 2003. The Committee on Citizen Involvement is a monthly meeting of all twelve of the NACs and seemed to be a good opportunity to promote the focus groups. Those recruited through this method then received the same invitation letter that was sent to the survey respondents. Follow-up calls were used to answer any questions and ask for their participation. Again, reminder calls were made to participants a few days before the actual focus group.

Focus Group Implementation

Three focus groups were run in the City as part of the development of a Natural Hazard Mitigation Plan. Each of the three focus group's participants were recruited using differing strategies. One group was run only with those who responded to the household survey, one was run only with those recruited through the OHNW leveraged communication strategy, and the third was run with half survey respondents and half leveraged communication strategy invitees. The 90-minute focus group included the following components:

1. Pre-focus group evaluation (5 minutes);
2. Introduction poster session aimed at answering the following questions: what are natural hazards and which ones impact the City, what is a mitigation plan, who are the key players in mitigation planning;
3. Discussion section (45 minutes);
4. Implementation and prioritization activity (35 minutes); and
5. Post-focus group evaluation (5 minutes).

The discussion and activity components are explained in more detail below.

Discussion: The group facilitator explained the instructions for the discussion process and set the ground rules. A note taker/timekeeper was responsible for keeping notes as well as making sure that the discussion does not extend beyond the scheduled time. The discussion was recorded to ensure that correct notes were collected. The discussion began with introductions and an explanation of why the participants chose to participate. The next question asked for participant's personal perceptions of risk by asking whether they are concerned about natural hazards or not. Next, participants were asked if they were aware of activities that can reduce risks from natural hazards. Asking if they have actually implemented any of those activities at their home will be the follow-up question. This set of questions got as their willingness to prepare for natural disasters. Participants were also asked what steps they thought the City should take to reduce risk.

During the discussion section, the facilitator provided initial questions to provoke discussion but the participants guided the direction of the discussion. It was the facilitator's role to keep the group on track. Input collected from this component of the focus group was transcribed and categorized into key themes and lessons. The key themes and lessons will be presented to the steering committee and taken into consideration when action items are developed and prioritized.

Activity: The facilitator provided instruction for the activity. The activity involved asking participants to play the role of a City Councilor in order to make two determinations: (1) priorities for implementation strategies and (2) priorities on plan goals. In the first

scenario, the participants are each given a set amount of play money, which they could use to reduce risks from natural hazards using any combination of four implementation strategies, which included: education, regulation, acquisition, and incentives. Each plan goal was displayed on a poster and the participants were able to move back and forth between each of the posters in order to place their money on the strategies they would prefer. Participants could place all the money on one strategy or split up the bills in any other combination for each of the goals. The poster method was chosen because it would help to eliminate the pressure on participants to make a decision in front of all the others in their group.

In the second scenario, there was a budget cut and so there is only enough money to address three of the plan goals. Participants had to rank their top three plan goals. This activity is unique in that it places participants in the kind of real world decision-making situations that take place everyday within the jurisdiction. An anonymous voting system was used to rank the goals in this portion of the activity. Each participant was given a ballot on which they chose their top three goals. The activity produced two data sets, one revealing preferences for implementation strategies and one revealing goal priorities. This data is quantitative in nature because it is in dollar totals and number ranking and thus making the focus group different than most.

Data Analysis

There are two main types of data that were generated from the focus groups. That data generated from the discussion portion is qualitative and was analyzed by categorizing comments into key themes or lessons. The data generated in the activity portion of the focus group is quantitative, but is not generalizable to the public because the sample size is so small. The themes and lessons along with the data about implementation and goal priorities can be used to identify issues and actions as well as inform the decision-making process in prioritizing action items.

Survey and Focus Group Evaluation

The following is a description of the methodology that was used to evaluate the use of surveys and focus groups in the City's hazard mitigation planning process. For the purpose of this evaluation, there are three components, the first being an overview of the actual findings of the survey and focus group, the second a description of the strengths and weaknesses of the techniques and finally an assessment how well the techniques help meet social goals of citizen involvement.

The first step in completing the evaluation of the techniques was to interpret their results. For the survey, frequencies of each of the questions were run in SPSS to gain an understanding of how the respondents responded to each of the questions on the survey. Once the frequencies were complete, tables and figures were created so that the results could be visually analyzed. The tables and figures were included in this report along with a written description of the findings. Unlike the survey, the focus group had many different components that needed to be analyzed separately. Notes from the discussion were compiled, calculations of the activity scenarios were completed, and responses to the pre and post-evaluations were tabulated. Tables were created from the information in the pre and post-evaluations and were including in the written description of the findings.

The second step in the evaluation process was to evaluate each technique in terms of their strengths and weaknesses. This process built off the literature review in that it looked at the strengths and weaknesses of the techniques in terms of its implementation in the City rather than generic strengths and weaknesses associated with all surveys or all focus groups. The observed strengths and weaknesses were based on the recorded results of the survey and focus group as well as from observations made while developing, implementing and interpreting the results of the techniques. Immediately following the survey and the focus groups, notes were recorded on what went well and what did not go as well.

The third step in evaluating the techniques was to analyze each technique in terms of five identified social goals of citizen involvement as identified by Beierle. The social goals include: (1) educating and informing the public, (2) incorporating public values into decision-

making, (3) improving the substantive quality of decisions, (4) improving trust in institutions, and (5) reducing conflict (Beierle 1999).

CHAPTER IV

FINDINGS AND ANALYSIS

The purpose of this chapter is three-fold. First, it provides an analysis of the key findings and conclusions from the household survey and the focus group. Second, it provides a strength/ weakness analysis of the use of each of the techniques, specific to their use in the City. And finally, it provides an analysis of how well each of the techniques helped to meet the Beierle's social goals of citizen involvement. The analysis from the surveys will be provided first, followed by the analysis from the focus groups.

Citizen Surveys

Because this survey is an informational tool rather than a decision-making tool, the project steering committee used the results of the survey to identify and understand issues and problems in the City related to natural hazards. The Household Risk Preparedness Survey covered four main themes: (1) Demographics, (2) Natural Hazard Preparedness, (3) Risk Reduction Activities, and (4) Community Wide Natural Hazard Goals and Implementation Strategies. Questions regarding natural hazard preparedness focused on whether or not citizens had planned for what their families should do in the event of a disaster. Questions regarding risk reduction activities focused on whether or not respondents had taken specific steps aimed at lessening the impact of disasters on their home. The key different between preparedness and risk reduction is that preparedness is motivated by probability and potential. In other words, people plan for IF the event occurs. Risk reduction on the other hand, is motivated by reality meaning that they take action to reduce risk WHEN the event occurs. The questions regarding community-wide goals and implementation strategies asked respondents to prioritize natural mitigation planning goals

such as protecting private property and encouraging inter-agency cooperation as well as implementation strategies, including regulatory versus non-regulatory means of preparing for and reducing the risks posed by natural disasters.

Survey Results Overview

A total of 320 surveys were completed and returned for an overall response rate of 24%. It is important to note that this response rate does not allow the results to be generalized to the population as a whole, but provides a snapshot of current perceptions. The average respondent was 51 years old, had at least some college education, owned their home, lived in single-family residential homes, and has lived in Oregon for more than 20 years. The sample was split evenly between both male and female respondents. The majority of the respondents, 66.4% had not experienced a disaster within the last five years. Of those who had experienced a disaster recently, the most common occurrence were earthquakes, windstorms, and floods. The following table illustrates the overall level of concern for each of the hazards facing Oregon.

TABLE 4.1 Levels of Concern, Beaverton, Oregon 2003

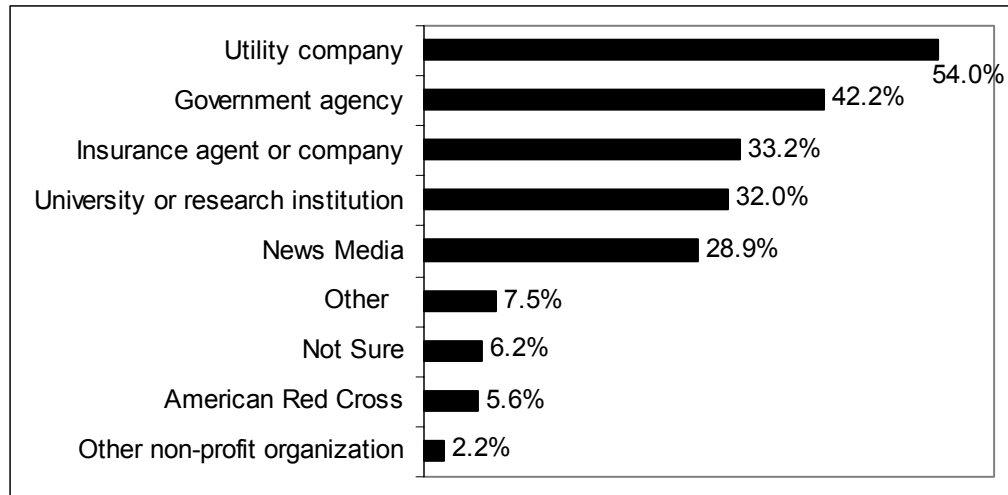
	Extremely Concerned	Very Concerned	Concerned	Somewhat Concerned	Not Concerned
Drought	3.5%	9.0%	20.4%	28.7%	38.4%
Dust Storm	0.7%	1.1%	2.5%	7.8%	88.0%
Earthquake	12.4%	18.6%	34.2%	28.0%	6.8%
Flood	5.1%	9.9%	20.1%	31.6%	33.3%
Landslide/Debris Flow	2.7%	5.8%	10.3%	22.7%	58.4%
Wildfire	3.1%	4.9%	17.8%	18.8%	55.4%
Household Fire	1.0%	14.3%	38.5%	29.2%	8.0%
Tsunami	0.1%	1.4%	3.8%	14.0%	79.7%
Volcanic Eruption	5.1%	5.1%	15.7%	29.0%	45.1%
Wind Storm	4.3%	9.7%	30.1%	34.8%	21.1%
Coastal Erosion	4.9%	4.5%	9.7%	18.4%	62.5%
Severe Winter Storm	5.6%	8.9%	22.8%	40.7%	21.9%

Source: Oregon Natural Hazards Workgroup. Household Risk Perception Survey. 2003.

Respondents tended to be more concerned about earthquakes, household fire, and severe winter storms than the other hazards. Respondents indicated that they most trusted utility companies (54.0%), the American Red Cross (45.3%), and government agencies

(42.2%) to provide them with information about how to prepare for and reduce the risks posed by natural hazards. The following figure illustrates the responses to which organizations respondents most trusted to receive information.

FIGURE 4.1 Trust in Information Sources



Source: Oregon Natural Hazards Workgroup. Household Risk Perception Survey. 2003.

When asked about what households have done to prepare for natural hazards, about half of the respondents had talked to their family about what to do in the event of a disaster and had prepared a 72-hour kit. Few respondents, 26% had developed household emergency plans, but 26% said they were planning on developing one. The following table illustrates the preparedness activities respondents had or had not done.

TABLE 4.2 Household Preparedness, Beaverton, Oregon 2003

In your household, have you or someone in your household:	Have Done	Plan To Do	Not Done	Unable To Do
Attended meetings or received written information on natural disasters or emergency preparedness	37.0%	4.5%	56.5%	1.9%
Talked with members in your household about what to do in case of a natural disaster or emergency	46.3%	19.8%	29.4%	4.5%
Developed a "Household/Family Plan" in order to decide what everyone would do in the event of a disaster	26.3%	26.0%	43.9%	3.8%
Prepared a "Disaster Supply Kit" (Stored extra food, water, batteries, or other emergency supplies)	39.1%	23.0%	37.2%	0.6%
In the last year, has anyone in your household been trained in First Aid or Cardio-Pulmonary Resuscitation (CPR)	29.7%	5.4%	63.1%	1.9%

Source: Oregon Natural Hazards Workgroup. Household Risk Perception Survey. 2003.

The survey asked respondents what specific steps they have taken to prepare for an event. The top three steps that respondents have taken were: (1) smoke detectors on each level of the house (90.4%), (2) stored flashlights (83.2%), and (3) stored batteries (73.6%). A majority of the respondents, 72.3% did not have flood insurance because either their home is not located in the floodplain or the insurance is not necessary. Approximately half of the respondents did have earthquake insurance. For those who did not have insurance, cost was a major prohibitive factor. The following tables illustrate the breakdown of flood and earthquake insurance responses.

FIGURE 4.2 Flood Insurance

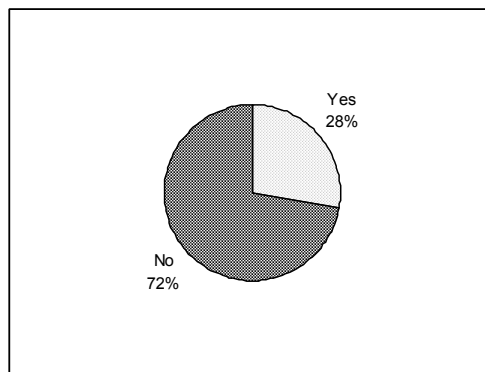
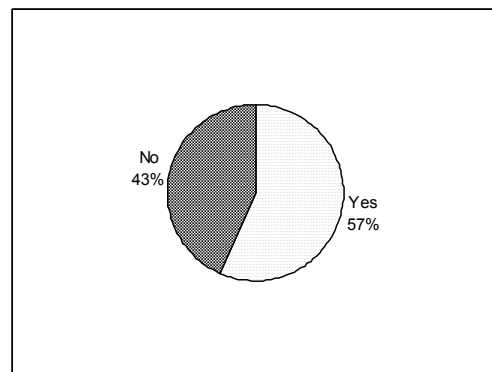


FIGURE 4.3 Earthquake Insurance



Source: Oregon Natural Hazards Workgroup. Household Risk Perception Survey. 2003.

While many of the respondents of the survey had taken steps to prepare for

disasters, very few have taken steps to reduce their risk. Approximately one-third of the respondents have completed neither structural or non-structural retrofits at their home to reduce the risks posed by earthquakes. Four-seven percent, however, had strapped their water heater to the wall. The majority of respondents, 62.5% did not consider the possible occurrence of natural disasters when purchasing their home. Despite the fact that most respondents have done nothing to their home or did not consider the impact of disasters when purchasing a home, 71.8% would be willing to make their home more resistant to natural hazards. Insurance discounts (72.0%) and tax breaks or incentives (71.4%) were the most popular incentives for motivating citizens to implement risk-reducing activities at their home. This is an interesting point because the actual savings for insurance discounts would not constitute a large savings, but citizen perceive it to be so.

When asked about mitigation planning goals, the goals with the highest combined scores for “very important” and “somewhat important” were: (1) protecting critical facilities (92%), (2) strengthening emergency services (90%), and (3) protecting and reducing damage to utilities (88%). The following figures illustrate the responses on the importance of a selection of the generic planning goals.

FIGURE 4.4 Critical Facilities

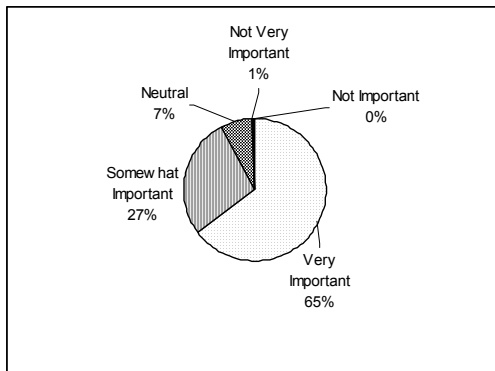


FIGURE 4.5 Emergency Services

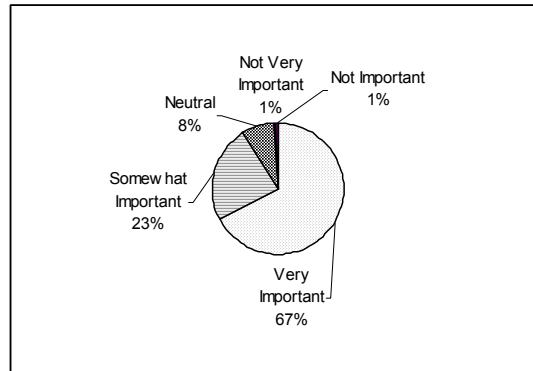
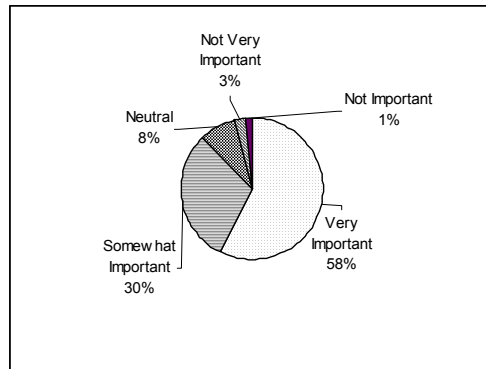


FIGURE 4.6 Utilities



Source: Oregon Natural Hazards Workgroup. Household Risk Perception Survey. 2003.

The three preparedness and risk reduction strategies with the highest combined scores for “strongly agree” and “agree” were: (1) I support improving the disaster preparedness of local schools (84%), (2) I support steps to safeguard the local economy following a disaster event (61%) and (3) I would be willing to make my home more disaster-resistant (58%). The following table lists the percentage of respondents who either agreed or strongly agreed with the provided implementation strategies.

TABLE 4.3 Community Implementation Strategies

Implementation Statement	% of Strongly Agree and Agree
I support improving the disaster preparedness of local schools	85.0%
I support steps to safeguard the local economy following a disaster event	77.9%
I support policies to prohibit development in areas subject to natural hazards	74.6%
I would be willing to make my home more disaster-resistant	71.6%
I support a local inventory of at-risk buildings and infrastructure	69.8%
I support a mix of both regulatory and non-regulatory approaches to reducing risk	64.3%
I support the use of local tax dollars to reduce risks and losses from natural disasters	57.9%
I support a non-regulatory approach to reducing risk	56.5%
I support a regulatory approach to reducing risk	52.4%
I support protecting historical and cultural structures	48.9%
I support the use of tax dollars to compensate land owners for not developing in areas subject to natural hazards	24.6%

Source: Oregon Natural Hazards Workgroup. Household Risk Perception Survey. 2003.

Strength / Weakness Analysis

The following section presents an analysis of the strengths and weaknesses of the survey as it was implemented in the City. This analysis is specific only to this risk perception survey and not to citizen surveys in general.

The benefits derived from the implementation of this risk perception survey in the City are numerous. A description of each benefit follows:

1. *Citizen Contacts.* The implementation of this survey in the City allowed the

320 contacts to be generated. The survey allowed the City to gather more information in a shorter amount of time than other techniques such as face-to-face interviews.

2. *Starting Point for Focus Groups.* The questions and responses from the survey were used to generate the agenda and materials for the focus groups that went one step further in collecting information about citizen's ideas and opinions on preparing for and reducing the risks posed by natural hazards.
3. *Increased City Staff Knowledge of Household Preparedness.* All the City staff members of the project steering committee were introduced to the survey and the results. As a result, representatives from Operations, Community Development, Capital Improvements, Building Codes, Engineering as well as Emergency Management are now aware of the general levels of preparedness among households. Without the survey being part of the planning process, these other department might not have had access to this knowledge.
4. *State Comparison.* ONHW implemented this survey statewide in 2001, so the City has the opportunity to compare its resident's level of preparedness with the general level of preparedness in the state. Finding areas where the City is deficient compared to the state might become good places to start mitigation activities and programs.

The following is a description of the survey weaknesses in the City's process follows:

1. *Technical Aspect of the Questions.* The concepts of preparing for, reducing risk, and mitigation natural hazards can be a very technical, therefore the goal of some of the questions may not have clear to respondents. In order to combat this problem in the survey, jargon and technical terms were avoided when possible.
2. *Response Rate.* As seen in the research, natural hazards are not a big priority for citizens in general; therefore participating in an eight page survey about something you are not interested in might not be an appealing idea. The response rate for the survey was approximately 23%.

3. *Beaverton's Hazard History.* As some disaster research has pointed out, people are best motivated to do something about hazards when, as they say, “the smoke is still in the air.” The goal of mitigation, however, is to get people thinking about protecting themselves and their homes from disasters on clear sunny days. Since the City has not experienced a major disaster event since 1996 when several flooding events severely impacted the region, the collective “conscious” has forgotten the devastating impacts of that flood event.
4. *Current Economic Environment.* In 2003, the State of Oregon and many of its jurisdictions began to feel the impact of a significant economic slowdown. This survey hit residents’ mailboxes at the height of this economic downturn and as a result, dozens of surveys were returned uncompleted with notes about wasting taxpayer dollars.

Social Goals

The social goals of citizen involvement that Thomas Beierle espouses include: (1) educating and informing the public, (2) incorporating public values into decision-making, (3) improving the substantive quality of decisions, (4) increasing trust in decision-making institutions, and (5) reducing conflict among groups. The following section briefly describes how the implementation of the citizen survey has impacted these social goals.

1. *Educate and Inform the Public.* The survey helped to educate and inform Residents about natural hazards through a one-page informational flier that was included in the survey mailing. Even if the household did not complete the survey, they still received the flier with resources on where to get information about making their home safer from floods, earthquakes, and wildfires. The survey not only provided the City with information about

household level of preparedness, it also indirectly provided respondents with information about what can be done to prepare for and reduce the risk posed by natural hazards. For example, respondents may not have been aware that one way to prepare for disasters is to prepare a disaster supply kit. By asking them if they have prepared one, they gained access to the knowledge that having a disaster kit may help them cope better during a disaster event.

2. *Incorporate Public Values into Decision-Making.* This survey helped to incorporate public values into the decision-making process because of the questions regarding community-wide goals and implementation strategies. The survey asked respondents to prioritize certain generic mitigation planning goals. Respondents prioritized protecting critical facilities, utilities, and strengthening emergency services as the most important goals. The steering committee can then use this information when they make decisions on prioritizing plan goals. The committee can also gain valuable information about the public's preference for implementation strategies through this survey as well. For instance, nearly 50% of respondents disagreed or strongly disagreed with the use of public funds to compensate landowners for not developing in areas subject to natural hazards. This piece of information becomes important for the committee when determining how best to implement preparedness and risk reduction activities and programs. Since a majority of respondents oppose the use of compensating landowners, another method of discouraging development in hazardous areas should be sought.
3. *Improve the Substantive Quality of Decisions.* This survey helps to improve the quality of decisions because of the number of citizens who are allowed to participate through the survey process. The traditional public involvement technique has been public workshops, which when focusing on natural hazards have tended to have very poor attendance. Instead of only have 10-20 citizen's comments on the plan and the planning process, the survey has

allowed 320 households to participate without having to leave their homes. As the old adage states, two heads are better than one, the same is true for the survey, 320 heads completing a survey are better than 20 heads at a workshop.

4. *Improving Trust in Decision Making Institutions.* Evaluating the survey in terms of this goal is a bit more difficult because there was no measurement of the level of trust in the City before the survey. How well this goal was achieved might become more apparent as the plan is adopted and mitigation strategies are implemented. Improving trust has much to do with ownership. The more that citizens are involved in the process, the more they will feel that they are a part of the process and the better the citizen-government relationship should become. The survey is only the beginning step in creating an environment of public trust in mitigation decision-making. Citizens must remain a part of the process into the implementation, monitoring and evaluation stages of the planning process.
5. *Reducing Conflict.* The survey is helpful in reducing conflict because it allows citizens the opportunity to voice their opinions about natural hazards in their community. An open-ended question about other issues related to natural hazards allowed respondents to “vent” openly about hazard related issues that the survey may not have asked them about. A key lesson in reducing conflict is to listen to and note the opposing group’s views. Just giving citizens an opportunity to talk or write about their concerns helps to reduce conflict.

In conclusion, the survey played a vital role in helping to meet four of the five social goals of citizen involvement outlined by Beierle. It will be increasingly important for those responsible for mitigation planning to be aware of the importance to these goals in the

planning process. Knowing them ahead of time and addressing them up front will help create a productive planning environment.

Citizen Focus Groups

Citizen focus groups were included in the planning process as a means of better understanding current levels of citizen preparedness, identifying planning goals and implementation strategies as well as providing citizens with resources on how to prepare for and reduce the risks posed by natural hazards. The focus groups aimed to delve deeper into the issues addressed in the survey. The purpose of linking the surveys and focus groups was to collect a richer dataset with both quantitative and qualitative data. A series of three focus groups were held on the evenings of April 16 and April 22, 2003. The session was held at a centrally located community center in the City. The night of April 16, nineteen survey respondents were invited to participate in the focus group - three attended. On the night of April 22, during the first session, twelve survey respondents and representatives from local NACs were invited to participate - ten participated. The pool of participants for the second session on the night of the 22nd came from the local NAC - only one attended. The lack of attendance from the local NACs might be attributed to the limited timeframe for developing the NAC recruitment strategy and the lack of buy-in on the part of the NAC leaders. During the discussion portion of the focus group, citizens were asked whether they have taken steps to reduce their risk or prepare for natural hazards at their home. Participants were also asked which hazard they thought posed the biggest threat in the City. Another set of questions asked what the citizens thought the City could do to limit the impacts of natural hazards in the future. A detailed agenda of the focus group, including the script, discussion questions, and scenario is located in Appendix B. The following is a description of the general themes that came out of the focus groups in the City.

Focus Group Results Overview

When asked why participants chose to attend the focus groups, responses ranged from interest in becoming prepared, to the type of work that they do, to past experience with disasters, to wanting to find out more about what the City is doing to limit the impact of disasters. The next question asked the participants to identify whether they had been affected by disasters in the past. Flooding and windstorms in the City had affected the majority of participants. Several lived in the area during the eruption of Mount St. Helens and had been affected as well. Next, participants were asked to identify the hazard(s) that the City is most at risk to. Earthquake, windstorm, and flooding were identified as the top hazards facing the City.

The next portion of the discussion focused on what specific steps participants had taken to prepare for or reduce the risks posed by natural hazards at their home. Some of the activities mentioned included: storing food and water, switching from electric heat to gas, and family communication plans. A number of differing responses were received when participants were asked whether they would be willing to make their home more resistant to natural hazards. Most were unwilling to do any structural mitigation, but would be willing to do small non-structural mitigation and preparedness activities such as strapping their water heater and storing needed items such as food and water. An interesting point came up several times came from those who rent their homes. Renters felt that the responsibility to implement household mitigation lay with their landlords and apartment managers. This question was followed with a question asking whether they would consider the impacts of natural hazards when buying or renting a new home. The overwhelming majority said that they would, citing concerns over steep slopes and floodplains. The next question dealt with family emergency planning. Participants were asked if they had developed a plan with their family in the event of an emergency. Most of the participants spoke about having a plan of who to call or communicate with during an emergency. Respondents also spoke of the importance of having an established contact outside of the immediate area so that they would be able to get through to them in the event of a disaster.

The final portion of the discussion section focused on asking participants to identify steps that the City could take to reduce the risks posed by natural hazards in the community. The following is a list of all suggestions made by citizens during the discussion:

- Address water contamination issues
- Develop and inform citizens of evacuation routes
- Identify vulnerable structures
- Educate the public on natural hazards that can affect the area
- Develop a Citizen Emergency Response Team in the City
- Work with Amateur Radio groups
- Home inspection programs
- Get neighborhoods to work together
- Need more education on what to do

The final question of the discussion asked the participants to determine who should have the responsibility for reducing the impacts from natural hazards in their community. A common response to this question was that it was everyone's responsibility to reduce impacts. Participants suggested that the City's responsibility lay mainly in communication and coordination related activities. Also identified was the idea that the City should provide the risk assessment information to the citizens so that they can make decisions about whether to participate in the risk reduction activities. An interesting point that materialized during this question was the idea that the City should work with existing groups in order to get information out to the community. This is the same idea that was implemented in recruiting participants for this particular focus group. These final questions will be important in the mitigation planning process because the results can be turned into recommended actions that can be presented to the project steering committee. Another component of the focus group that has direct ties to the actual planning process was the scenario activity.

During the first half of the scenario activity, participants played the role of City Councilors and were asked to determine which methods they preferred for implementing planning goals. The goals included: strengthening citizen action, enhancing emergency services, protecting natural resources, protecting property, and protecting life. The methods of

implementing the goals included: education, incentives, regulation and acquisition. Participants used money to vote on which methods they preferred for each of the five plan goals. Participants were given thousand dollar bills to spend towards their preferred implementation methods. For each goal, they were given one more bill than the number of available implementation strategies. For instance, for the goal of strengthening citizen action, there are only two applicable methods, so the participants were given 3 bills. This required the participants to prioritize the methods rather than split the money equally among all the available methods. A total of thirteen citizens participated in this activity. The total number of dollars spend on each implementation strategy was calculated and then normalized by the number of bills individuals were given to spend in order to compare among the goals. Table 4.4 displays the outcome of the scenario spending.

TABLE 4.4 - Focus Group Scenario #1 Results

Goal	Implementation Methods			
	Education	Incentives	Acquisition	Regulation
Strengthening Citizen Action	\$7,000	\$5,666	N/A	N/A
Enhancing Emergency Services	\$4,500	\$3,250	N/A	\$4,250
Protecting Natural Resources	\$4,000	\$2,800	\$3,400	\$2,800
Protecting Property	\$5,000	\$2,800	\$800	\$4,400
Protecting Life	\$5,750	\$3,500	N/A	\$3,750

Source: Oregon Natural Hazards Workgroup. Citizen Focus Groups. 2003.

For all five of the general planning goals, education was the implementation strategy that received the most dollar votes. The results of this portion of the activity can be compared to similar questions that were asked in the household survey to see if any differences can be seen.

In the second scenario, the participants are faced with a budget cut and were asked to

prioritize the goals as if they could only pursue three of the five. Participants were given ballots and were asked to place a number one next to the goal that they thought was most important, number two next to the goal that they thought was second most important and a number three next to the goal that they thought was third most important. A total of twelve participants took part in this vote. Table 4.5 displays the results of the goal prioritization vote.

TABLE 4.5 – Focus Group Scenario #2 Results

Goal	Total Votes	Highest Priority	2nd Highest Priority	3rd Highest Priority
Strengthening Citizen Action	7	2	2	3
Enhancing Emergency Services	10	2	5	3
Protecting Natural Resources	5	0	1	4
Protecting Property	5	1	2	2
Protecting Life	11	7	3	1

Source: Oregon Natural Hazards Workgroup. Citizen Focus Group. 2003.

In terms of overall votes, the goal of protecting life received the most votes overall, followed by enhancing emergency services and strengthening citizen action. The goal with the greatest number of highest priority votes was protecting life followed by a tie with strengthening citizen action and enhancing emergency services. The goal with the most 2nd highest priority votes was enhancing emergency services followed by protecting life. The goal with the most 3rd highest priority votes was protecting natural resources, and strengthening citizen action and enhancing emergency services tied for second. This scenario creates a dataset that is somewhat different than the comparable question in the household survey because the scenario is asking participants to rank the goals against one another while the survey asked them to either agree or disagree with each goal alone.

Pre/Post Evaluation Overview

The focus groups were not only a way to inform the City of citizens needs and perceptions when it comes to natural hazards, but it was also a way for citizens to learn from one another. In an effort to gauge any changes in participant knowledge, a pre-evaluation was distributed before the session and a post evaluation was distributed after the session. The pre and post-evaluation can be found in Appendix B. In the pre-evaluation, participants were asked to respond to statements regarding the importance of citizen involvement in planning for natural hazards as well as whether or not they were aware of steps that could take to reduce their risks. Participants were also asked whether they have taken any steps at their home and if not, why. Respondents were asked to identify what type of information regarding natural hazards they would like to receive in the future. The post-evaluation was identical to the pre-evaluation, except that it also asked a few questions regarding the process in an effort to understand how the participants liked or disliked the process. Responses to these questions can be used to better the process in future mitigation planning processes. A total of thirteen participated in the pre and post-evaluations.

On the pre-evaluation, participants were asked whether they received the household preparedness survey, eight had, three had not and two were not sure. This question was included in order to assess which recruitment strategy brought the individual to the focus group. If they did not receive the survey, it is assumed that they were recruited through the NACs. In general, most participants either strongly agreed or agreed with each of the statements provided in either the pre or post-evaluation form. No respondent selected strongly disagree for any of the statements. The post-evaluation was used to see if there had been any change in participant's feelings about the general citizen involvement statements. In order to find a change, the total number of pre-evaluation responses for each option (i.e. "strongly agree" or "neutral") were calculated and compared to the total number of post-evaluation responses for the same statements. A positive value indicates that the total number

of responses in the post-evaluation was higher than the total number of responses to that statement in the pre-evaluation. A negative value indicates that the total number of responses in the post-evaluation was lower than the total number of responses to that statement in the pre-evaluation. For example, the first statement about informing citizens about risk indicates a positive two for the “strongly agree” and a negative two for the “agree”. What this means is that two individuals changed their responses from “agree” to “strongly agree” between the pre and post-evaluations. Table 4.6 illustrates the change in responses from the pre-evaluation to the post-evaluation for each of the statements.

TABLE 4.6 – Focus Group Pre/Post-Evaluation Change

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is important for citizens to be informed about their risks	+2	-2	--	--	--
It is important for citizens to be involved in planning for natural hazards	-1	+1	+1	-1	--
It is important for citizens to assist in developing community priorities*	-2	+1	--	--	--
It is important for citizens to actively reduce their risks	-2	--	+2	--	--
It is important to plan for hazards at my home	+3	-3	--	--	--
It is important to plan for hazards in my community	+1	-1	--	--	--
I would be more supportive of a plan that I helped to develop	+1	--	-1	--	--

Source: Oregon Natural Hazards Workgroup. Citizen Focus Group. 2003.

* The change does not balance out for this statement because one respondent did not respond to this statement in the post-evaluation.

The statement with the most positive change is the statement regarding the importance of planning for hazards at home. The statement about citizens being informed about their risks also had a positive change between the pre and post-evaluations. The statement about citizens actively reducing their risks experienced a negative change between the pre and post-evaluations. While this analysis was conducted based on the total number of responses, it is also interesting to look at individual changes in responses. On the individual level, three participants have one positive change in their responses; one participant had two positive

changes; and three participants had three positive changes. On the other hand, three participants had one negative change; two participants had two negative changes; and one participant had three negative changes. Nine out of thirteen participants changed their responses to at least one of the statements during the course of the evening.

During both the pre and post-evaluations, participants were asked whether or not they were aware of steps they could take to make their home safer from natural hazards. In the pre-evaluation, three individuals indicated that they were not aware of any steps, while ten individuals indicated that they were aware. In the post-evaluation, the number of individuals still unaware of mitigation steps had reduced to one. A follow-up question to this first one asked whether they had taken any steps at their home. Eight individuals indicated that they had not taken any steps to make their home more resistant to natural hazards while five individuals had. When asked why they had not taken any steps, common responses included not having enough time, it was not a priority, they had not thought to do anything and they lacked the information they needed in order to be persuaded to take action. This “why not” question is important in the mitigation planning process because it provides insights on what might motivate people to take action. For instance, if residents understood their risk and also understood that they could take steps to reduce the risk, more homes in the community could become more disaster resistant. No one mentioned that money was the factor stopping him or her from taking action.

A final general preparedness question asked what type of information or resources would they be interested in receiving in the future. The number one response was information about steps that households can take to reduce risk, followed by information about steps that the City is taking to reduce risks community wide.

The post-evaluations also included questions regarding the actual focus group process. Participants were asked to rank the components and quality of the focus groups session. This information is helpful in providing recommendations on how to better the process in the future. The following table displays the number of responses for each of the ranking of the

various focus group components.

TABLE 4.7 – Focus Group Component Evaluation Results

Component	Just Right	Neutral	Needs Improvement
Length	13	0	0
Discussion	11	1	0
Facilitators	11	2	0
Location	10	3	0
Time	9	3	1
Introduction	9	3	0
Activity	8	4	1
Education/Resources	7	4	1

Source: Oregon Natural Hazards Workgroup. Citizen Focus Group. 2003.

As the above table illustrates, the length of the session was the highest ranked feature, followed by both the discussion section and the facilitators. The low “just right” ranking of the education/resource section is understandable because time constraints prohibited the full presentation of the planned education materials during the focus group on both evenings. This was compensated for by presenting each of the participants with a packet of information on household preparedness steps, preparedness resources and web links, as well as information on mitigation planning concepts. Another interesting result from this question was the lower ranking of the activity session of the focus group. This is particularly interesting because the activity component can provide important information to the planning steering committee on citizen preferences for both goals and implementation strategies. This result might be explained by the lack of a clear link between what the participants were doing in the activity and how the steering committee could use the information. Had this connection been effectively communicated to the participants, the response to this question might have been different.

Participants were also given an opportunity to share what they saw as the strengths and weaknesses of both the discussion and activity section. The following tables list all the comments provided by participants

TABLE 4.8 – Focus Group Discussion Section Open-ended Results

Discussion Section	
Strengths	Weaknesses
Very well presented	Not going deep enough into responses
Lots of talent	More follow-up questions
Good communication skills	Would have liked more citizen participation
Good thought provoking questions	Seems more questions should be asked, maybe yes/no questions
Group size was conducive to participation	What next?
Good cookies	
Small group allowed everyone to be involved	
Kept a good discussion going	
Good follow-up to responses	
Open discussion for everyone to share their thoughts and experiences	
Discussion are better	
Good – nice to hear other’s experience and preparation for disasters	
Enjoyed frankness of discussion	
Asked important questions	

Source: Oregon Natural Hazards Workgroup. Citizen Focus Groups. 2003

TABLE 4.9 – Focus Group Activity Section Open-ended Comments

Activity Section	
Strengths	Weaknesses
Makes one think about those things	Not enough direct discussion regarding specific preparedness for individual homes and communities
Well organized	Results were not made clear
Effective communication tool	Need to receive the responses
Unique activity	Less scripted
Good – it sure make you think about issues, the cost and what will motivate people to take action	More questions posed to the group so they are sure they understand
A lot of points to think about	Took a while to figure out what to do
Like the activity – made me think	Forget the monopoly money exercise
Good thought provoking goals	Seems remote
	Take more time to go through the example

Source: Oregon Natural Hazards Workgroup. Citizen Focus Groups. 2003

For the most part, the comments tended to be fairly positive. Many open-ended comments about the activity section concur with the findings of the previous question that the activity section was not overwhelmingly effective from the participant’s perspective. Based on the evaluation of the activity section, it seems that the activity might be better suited for stakeholder groups or the steering committee rather than citizens.

Strength / Weakness Analysis

The following section presents an analysis of the strengths and weaknesses of the focus group as it was implemented in the City. This analysis is specific only to this particular focus groups and not to focus groups in general.

The benefits derived from the implementation of this focus group in the City are

numerous. A description of each benefit follows:

1. *Citizen Contacts.* The implementation of the focus groups allowed the City to generate contacts with 14 individual residents. This number might not seem significant at first glance, but when it is compared to other public participation processes in the hazard mitigation field, it fares well. For instance, the public workshops held in conjunction with the development of the Washington County Natural Hazard Mitigation Action Plan, had only two citizens in attendance. This number is also important when you consider that there has been no major disaster in the community since 1996, so citizen perception of the importance of preparing for natural hazards has probably diminished. When the floodwaters are lapping at resident's backdoors, they are more willing to come out to a meeting to talk about flooding issues in their community; they tend not to be so enthusiastic when the weather is calm.
2. *Qualitative Data.* The focus groups differ significantly from the survey because the type of data that is collected is mainly qualitative. Instead of focusing on numbers like the survey, the focus group focuses more on the stories and experiences that the participants share. These stories and experiences can be an effective tool to use when communicating with elected officials. A constituent's personal story about the impact of a recent flood on their home and family can be just as effective as a dataset of numbers and percentages. Participants in the focus group were also given the opportunity to talk candidly about what they think the City should do to reduce the impact of natural hazards in the community. Unlike the survey respondents, focus group participants are not constrained with pre-defined answers; they are encouraged to elaborate on answers further than they were able to do in the survey.

3. *Unique Process.* This particular focus group is a unique process because it does not fit into the traditional focus group mold. In this process, discussion and question and answer are only part of the process. The activity portion of the focus group allowed participants to express their opinions in a manner other than discussion. The activity was a quick and easy way to assess citizen priorities of goals and implementation strategies. The activity allowed for more information to be collected in a shorter time frame than if the ideas in the activity were covered in a discussion format. The activity also allowed for anonymity during the voting process so that the facilitator and the other participants would not influence the individual participants. The posters created for this process are unique and were easy to understand, which is an important factor when dealing with participants with varying backgrounds in education and experience.
4. *Direct Citizen Action.* Participation in the focus group process allowed citizens the opportunity to share their ideas about what the City could do to reduce the impacts of natural hazards community-wide. In the discussion section, there was a question specifically asking participants to identify potential actions. The survey did not afford respondents this same opportunity, they were asked to prioritize both goals and implementation strategies instead. The actions that were provided during the focus group will be included in the draft action items presented to the steering committee as long as that action addresses an issue that was identified either by the steering committee or the citizens in the focus groups.
5. *Availability of Beaverton Emergency Manager.* In this case, the City's Emergency Manager, Mike Mumaw, attended all three of the sessions. Mumaw began the session with a formal introduction from the City explaining the mitigation planning process and also explaining the importance of their participation in the planning process. At the end of the session, he was available to answer any questions the citizens had regarding what the City

had done and what they are currently doing to reduce risks. His presence at the sessions illustrated the City's commitment to reducing the risk in the community.

6. *Opportunity for Instant Evaluation.* Because of the face-to-face interaction associated with focus groups, there was an opportunity to receive immediate feedback on the session. The pre and post-evaluation forms offered insight on what people might have learned from the session as well as suggestions on how to improve the process in the future. This is a vital component considering that this focus group is also being used in six other communities around the state. The evaluations from the first sessions proved helpful in making adjustments to the process so that the next time ran smoothly.
7. *Facilitator/Participant Interaction.* Using a focus group process allowed for a certain amount of interaction between both the facilitator and participant. This is especially important because it affords the facilitator the opportunity to clarify ideas that may be unclear. In the survey, there was no interaction between the respondents and the survey administrator so returned surveys with unclear responses remained unclear. In one of the groups, for instance, a participant brought up the issue of education and outreach and the facilitator was able to ask further questions about the most effective methods of receiving information for the group. Bias resulting from this interaction was mitigated with the use of trained facilitators and a script, which kept the facilitator on track.

The following is a description of the focus group weaknesses in the City's process follows:

1. *Difficulty in Recruitment.* Getting people to take time from their daily life to come out to a focus group proved to be a challenging task. For the first session on April 16, sixteen citizens were invited to participate and only three attended. For the sessions on the April 22, fifteen survey respondents were invited and eight attendees indicated that they received the survey. Another five who attended were recruited through the NACs. Recruitment through the NACs proved to be less effective than the self-selection method used in the surveys.
2. *Self Selection Recruitment Strategy.* As the literature indicated, a self-selection recruitment strategy for focus groups results in attendance of those who have previous interest in what you are discussing. This proved true during the focus groups in the City. Those who self-selected to attend through the household survey, tended to be aware of natural hazard risk preparedness issues and risk reduction measures. Despite this awareness, few had actually taken those steps. This strategy may have left out those who lack knowledge or interest in basic preparedness steps. While the information gained from these focus groups is valuable, the dataset would be that much richer if this missing group was also involved. Despite these issues, the self-selection strategy in the City was successful because participation at the focus group was high compared to similar events in the past. Had the self-selection method not been used, attendance at the focus group would not have been as high as it was.
3. *Developing the Focus Group was Time Intensive.* While this process was successful in recruiting and soliciting information from the audience, much time and effort went into its development. The entire process took around three months from start to finish. Developing and implementing a successful focus group is not something that can be thrown together at the last minute.

Pre-planning the session is extremely important because of all the administrative tasks that must be accomplished before the session can be implemented. Creating and enhancing the recruitment strategy early on is important because if your recruitment strategy fails, you may be left with no people to talk to. In the case of this project, the cost and the time involved in traveling back and forth between Eugene and Beaverton would have been wasted had the recruitment strategy yielded no participants.

4. *Activity Section Evaluations.* Despite the uniqueness of the activity section of the focus group, participants seemed to not have evaluated it highly. This was a surprising result because the hypothesis had been that this unique process would be well received by citizens as a break from the 40-minute discussion section. Evaluations were not all negative, some participants enjoyed the process, but with some changes to the instructions and a better introduction to the activity, I think it will become more understandable and accepted. As mentioned earlier, the evaluation of the activity might suggest that the activity would be better suited for stakeholder groups or the steering committee because these groups tend to have a better understanding of broad-based community issues than individual citizens do.

Social Goals

The social goals of citizen involvement that Thomas Beierle espouses include: (1) educating and informing the public, (2) incorporating public values into decision-making, (3) improving the substantive quality of decisions, (4) increasing trust in decision-making institutions, and (5) reducing conflict among groups (Beierle 1999). The following section briefly describes how the implementation of the citizen has impacted these social goals.

1. *Educate and Inform the Public.* The fifth objective of the focus group was to educate the participants on the steps that they can take to reduce the impact of natural hazards at their homes. By participating in a group discussion, participants had the opportunity to hear what their neighbors had done to reduce their risks. If, in the discussion, the participant did not learn anything from their fellow participants, the information packets and displays on hand would certainly inform them on steps they can take to reduce their risk. The information packets included fliers and brochures on simple, inexpensive steps that can be taken by homeowners to limit the impact of disasters. If the packets did not include the information that the participant was specifically looking for, it provided contact information for both the City Emergency Management program as well as the ONHW. By participating in the focus group process, residents also learned of the City's development of a natural hazard mitigation action plan. The introductory posters presented basic information on what hazards Oregon is at risk to, what a natural hazard is, what mitigation planning is and who should be involved in mitigation planning. A specific example of a participant who proves this case follows. One woman during one of the focus groups sat down at the table after looking at the non-structural mitigation display and said that she had never thought of strapping her water heater before, but that after seeing the display, she was going to go home and do it. This is an example of how the selected citizen involvement technique used in this process helped to achieve this goal.
2. *Incorporate Public Values into Decision-Making.* The focus groups helped to incorporate public values into the decision-making process because residents were asked to provide potential actions the City could take to reduce the impacts of hazards on the community. The list of actions will be weighed against identified community natural hazard issues and will be presented as potential actions to the steering committee if they help to address the

identified issues. The focus groups also allowed citizens to be involved fairly early in the planning process as opposed to the very end when the plan has already been completed. In the past, most participation took the form of a comment period on a completed plan (DeSario and Langton 1987). Allowing citizens to have input on goals, action items, and implementation strategies during the draft stages of the planning process is component of the public participation requirements of DMA.

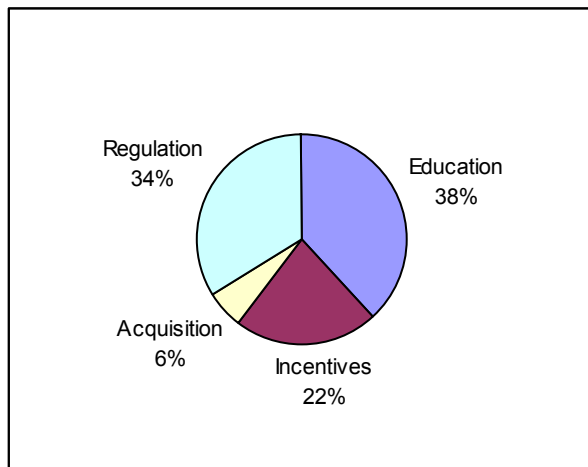
3. *Improve the Substantive Quality of Decisions.* The focus group process assisted in improving the substantive quality of decisions because it provided the process with qualitative data on resident's perceptions of natural hazards in the City. This qualitative data is useful in that it helps provide insight on how people really feel about natural hazards in their community without being constrained. Participants were given an opportunity to share their ideas about what the City could do to reduce risks. Some of the participants came up with innovative suggestions that might not have been identified by the project steering committee. An example of some of an idea generated included involving existing community organizations in mitigation activities. The implementation of the focus groups allowed fourteen more people to provide input on what the City can do to reduce its risks.
4. *Improving Trust in Decision Making Institutions.* The focus group was helpful in improving trust because of the presence of the Emergency Manager in the session. The Emergency Manager was there to thank them for their participation and explain why the process was important. This was an important component of the process because it shows that the City is actively taking steps in hazard mitigation and that they are interested in hearing what the citizens have to say. At the end of the process there will be a plan that included their suggestions and comments from the focus group process. The

education component of the focus group also played a key role in increasing trust. By informing the participants of where they can find further information about how to make their homes safer from natural hazards, the City is giving back to those who participated. The goals of the process allowed the City to educate the participants as well as receive information from them.

5. *Reducing Conflict.* The focus group is helpful in reducing conflict because it allows citizens to voice their opinions about natural hazards in their community. The entire discussion format was open-ended so that the

participants were able to freely discuss their perceptions of natural hazards in their community. For the City, gaining the perception of residents also helps to reduce conflict that might arise in the future as the plan is finalized and implemented. For

FIGURE 4.7 Protecting Property: Preferred Implementation Strategies



example, during the activity section of the focus groups, participants were asked to vote on the implementation strategies that they would be supportive of. The graph at left represents the percentage of dollars that were spent on each of the implementation strategies for the goal of protecting property. Based on this information, actions focusing on acquisition may not receive the same levels of public support that regulatory or education based approaches might. Having this information prior to developing the final action items will help to limit conflict related to public opposition of certain

implementation strategies or actions. Just giving citizens an opportunity to talk or write about their concerns helps to reduce conflict.

The use of the focus group technique in the development of this natural hazard mitigation plan helped to achieve all five of the social goals developed by Beierle. The focus groups were especially important in helping to meet the third goal of improving the substantive quality of decisions. How well the goal of increased trust was met is difficult to accurately measure, but the basis for increased trust in the future has been set.

Overall, the combination of the survey and the focus group techniques proved to be an effective method of involving the public in this mitigation planning process. The inclusion of both of these techniques was undertaken because of the availability of both time and money. In the next chapter, the conclusions and recommendations gleaned from this research will be presented.

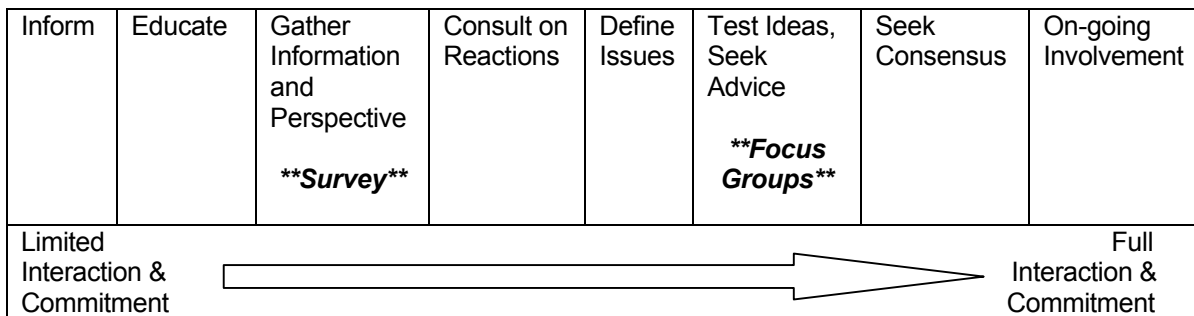
CHAPTER IV

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

As stated in the Introduction of this report, the purpose of this research was to compare and evaluate the use of citizen surveys and focus groups - specifically in their implementation in the development of a natural hazard mitigation action plan for the City. Both the survey and focus groups were successful in terms of the number of people involved and the type of data that they each produced. The survey captured the ideas, opinions, and perceptions of 320 citizens and created a set of data about current perception of risk as well as the level of preparedness among residents. The focus group on the other hand, took a small group of residents through a dialogue and process that resulted in in-depth information about what citizens have done to prepare, a list of potential action items that the City can consider, stated preferences for planning goals and implementation strategies, as well as educated residents on what they could further do to reduce their risks.

It is important to look back to the key literature at this point, specifically Dorsey's Political Involvement Spectrum as well as the Public Participation Political Power Model to determine where in these models the two techniques fit. In Dorsey's Political Involvement Spectrum, seen below, the citizen survey could be categorized somewhere in the "gather information and perspective" arena while the focus groups could be categorized in the "test ideas, seek advice" category.

FIGURE 5.1 Dorcey’s Public Involvement Spectrum



Source: Jackson, L. 2001. Contemporary Public Involvement: Toward a Strategic Approach. In *Local Environment*. 6(2) 135-147.

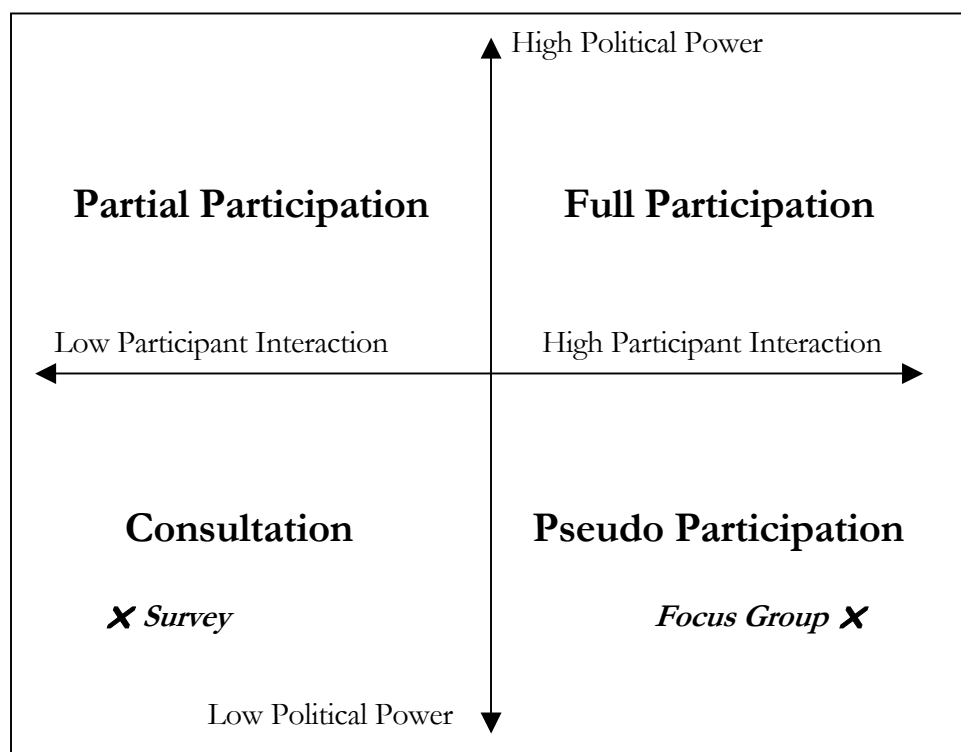
Using the survey technique in the City: (1) informed residents that the City was undertaking the mitigation plan, (2) educated them on steps they could take to make their home safer, and (3) gathered information about their preparedness level and their perspective on what their risk are. The survey stopped short of the “consulting on reactions” category because the questions were only used to understand currently levels of preparedness and whether or not citizens had taken steps to reduce their risk rather than asking them to give advice or opinions on certain scenarios as the “consult on reactions” category implies. The survey, however, has the opportunity to become part of on-going involvement because the City can use the survey again to reassess risk perception. The City regularly sends out mini-surveys to residents and has experienced very high response rates, with some surveys receiving response rates around 80%. The City could use this mini-survey format to resurvey the population on certain topics.

The use of focus groups informed and educated the participants as well as gathered information and perspectives from the participants. The focus group sessions was able to “consult on reactions” because participants were asked to assume the role of a City Councilor and provide their input on which implementation strategies and plan goals they prefer. At its highest level on this spectrum, the focus groups were able to achieve “test ideas/seek advice” because participants were asked to provide advice on what steps the City should take to reduce risk within the community.

While Dorcey’s Spectrum provides insight on the actual levels of political involvement, Syme’s Public Participation Political Power Model also sheds light on the level of political

power that citizens received when they participated in two involvement techniques. The figure on the following page illustrates where the two techniques fall on this model. In terms of the level of interaction, the survey was ranked very low because it was a one-time activity that respondents completed in their homes. The survey can also be characterized as having a low level of political power as well because its main focus is on perceptions and because this survey will not serve as a means to make policy decisions. Survey respondents are providing the City with information about how well prepared they are in the event of a major disaster and are also providing information on their opinions on certain planning goals as well as implementation strategies. Having both a low level of interaction and political power places the survey in the “consultation” quadrant.

FIGURE 5.2 Public Participation Political Power Model



Source: Syme, G. and B. Sadler. 1994. *Evaluation of Public Involvement in Water Resources Planning* in *Evaluation Review* 18(5) 523-542.

In this model, the focus group also fairs a bit differently than the survey. Because of the nature of focus groups, the level of interaction is characterized as being high. Participants have the opportunity to interact with other participants, the facilitator and the City's Emergency Management representative. As far as political power is concerned, it remains low in the focus groups for the same reasons as in the survey. The perceptions drawn from the focus group session cannot be used to make policy decisions, but can be used to inform decision makers about citizen's wants and needs. A high level of interaction and a low level of political power, places focus groups in the "pseudo-participation" quadrant.

Because both techniques ranked fairly low on both the political involvement and political power scales, does not mean that they should be avoided. The reality is quite the contrary because citizen involvement in hazard mitigation planning processes is still in its beginning stages. Further improvement and testing of these models in mitigation planning processes will only better the opportunities for involvement and political power to grow over time.

In this case, the use of surveys and focus groups together produced a dataset that included both quantitative and qualitative data that was both wide and narrow, as well as shallow and deep. It was the pairing of those two techniques that allowed for this unique dataset to be created. Here, the two techniques were complimentary because one technique could achieve what the other was not able to.

Recommendations

The following section outlines recommendations based on the research as well as general observations. The recommendations are aimed at three specific audiences, which include:

1. Local jurisdictions and Emergency Managers, who are in the process of developing a mitigation plan;
2. States, who can provide technical assistance to local jurisdictions during the natural hazard mitigation planning process; and

3. The Federal Emergency Management Agency, which has responsibility for evaluating mitigation plans and who is also a major provider of mitigation planning resources, including resources on citizen involvement processes.

It is important to note that while these recommendations have been aimed at one or another of the different levels of government, there are many overlapping responsibilities. This point is illustrated by Peter May's research on shared governance in natural hazard policy.

Shared governance in its most general form has to do with the way in which common or overlapping responsibilities are apportioned among layers of government. Federal shared governance creates an intergovernmental partnership for which noteworthy decision-making power about program or regulatory design and/or operations is exercised by both those in the federal government and those in subnational governments. The mark of the post-World War II era has been federal provision of funding to subnational governments for program or regulatory areas that had previously either been the province of state and local governments or had not attracted governmental funding at all (May 1986).

This leads to the idea of creating capacity at the lower levels of government where the responsibility of mitigation is located. The overlapping responsibilities create a need for effective communication networks and information sharing.

Local Jurisdictions

The following recommendations are specified for local jurisdictions that are developing or going to develop a natural hazard mitigation plan. There are a number of options when designing a public involvement process, this research successfully implemented surveys and focus groups. The techniques were not perfect and there are a number of suggestions that should be addressed in order to improve the techniques for further use in the

future.

The findings of this research should encourage the use of one or both of the techniques described in this report. The data gathered from these techniques is valuable in developing action items and implementation strategies, but it is also valuable because it provides you, the community, with a dataset about how prepared the community will be when an event actually happens. There are significant costs associated with implementing each of the techniques in terms of both time and money. A rough average of the cost per survey mailed is around \$2.16. This price includes printing, mailing, analysis, and distribution list costs and is based on a sample size of 1,500. In terms of a cost per returned survey, the average is around \$13 and is also based on a sample size of 1,500 with an average return of 250 surveys. Implementing this survey was less time intensive because the instrument had already been developed so ONHW had only to make revisions and field test the new instrument. The draft and approval process of the survey was the most time consuming portion of this process. A student intern from a local college or university could manage the logistics and implementation of a survey if current staff time is limited. The cost associated with the survey is fairly low overall, but considering the typical response rates for these types of surveys; the cost per response is quite high. As a side note, the household survey will be implemented in communities in 2004 via the Internet. The total cost for the Internet version of the survey is around \$600, a reasonable price for many jurisdictions.

Compared to the survey, focus groups are much cheaper, but are very time intensive. A focus group can be implemented for less than \$500 if done in-house, meaning that no outside facilitator was hired and the jurisdiction provides the meeting location at no cost. The main consideration here is that as the literature implied, the facilitator is key to keeping the process on track and an in-house facilitator may introduce bias into the process. The total price of the focus groups is based on the following costs: refreshments, incentives, supplies, contractors, mailings, and Xeroxing. Despite being inexpensive, developing focus groups that will meet the needs of a community can take time. For these focus groups, three part-time staff took the lead on developing the process over a period of three months. Developing a recruitment strategy, discussion questions, and the agenda can take time. The recruitment

strategy is especially important and is where the most time should be devoted because a focus group is of no use to the community if no citizens participate.

In a perfect world, where time and money are no object, mitigation planning would greatly benefit from both surveys and a focus groups. Unfortunately, we do not live in a perfect world. Each jurisdiction must decide whether these techniques are within their means or if they are important enough to seek additional funding. When deciding on a citizen involvement process, it is important to keep the goals of the process in mind because each of the two techniques offer varied types of data. A survey generates quantitative data, whose scope is wide but shallow, and the focus group generates qualitative data, whose scope is narrow but deep. Once the goals of the involvement have been established, the jurisdiction should assess its current and potential resources. The following are some considerations involving community resources. If the community has the staff time to devote to citizen involvement, but not the money, then focus groups might be the best technique to use. If your community has funds available and not as much staff time, a survey might be a better choice. There is a significant caution for using community resources as the sole deciding factor in choosing between surveys and focus groups. By choosing one technique over the other, the opportunity for citizen involvement is lessened. The cheap and easy technique will most likely not yield the expected outcomes and might limit the number of citizens who can be involved in the decision making process.

The following set of comments deals directly with recommendations on how to improve upon the methodology that was implemented in the City. First of all, there is no need to reinvent the wheel. A number of surveys currently exist that could be easily adapted to fit your community's needs. The following recommendations are specific to the survey that was implemented in the City. The first suggestion deals with the issue of non-response bias and the low response rate. Despite the fact that the response rate for this survey was around average for similar surveys, a higher rate of return would allow for higher confidence levels in the responses to the survey. A suggestion for improving the response rate of the survey would be

to tell residents that the survey will be coming soon and that it is important to get their input. This could be achieved through a number of means: notice with local media outlets including radio, television and print; announcements on the community's website or in newsletters; work directly with neighborhood associations to increase awareness of the survey; pre-survey postcards sent to residents to let them know that the survey is on its way, using proven survey methodologies such as those posed by Dillman, or using a different survey method such as a telephone survey. Along these same lines, it might help if more community members were aware that the community was in the process of developing a natural hazard mitigation plan and that the survey is an integral part of that process.

There are also a few changes that could be made to the survey instrument itself to better the dataset that it produces. It might be interesting to include a follow-up question for those who answered "yes" when asked if they have experienced a natural disaster. It would be helpful to know if their home was affected, or their place of work, or maybe the transportation system they use to travel between home and work was affected. As was found in the focus group, some residents had interesting stories about how they had been affected by disasters in the past, for example, having had a home underwater during a flood, or being stuck in Hawaii during the Mt. St. Helens eruption because the Portland Airport was closed. The survey currently does not ask respondents to indicate how they were affected.

In the survey, respondents were asked whether or not they had talked to their family about what to do during an emergency. The following conversation with a colleague prompted the idea for a follow-up for the question above. This person had talked with her small children about what to do in case of an emergency at night. Her plan was to exit the bedroom window holding her youngest child. This had been the plan for a long time until she actually tried it. During the trial, she found that this plan would not work because she could not get out the window while holding the baby at the same time. In this trial process, she realized that the plan, which had seemed logical, would not have worked in a real emergency. Stories like this one can help educate the public on the importance of preparing for emergencies including natural hazards. In the survey 46% of respondents indicated that they had talked to their family about what to do in case of an emergency, but the survey did not ask

whether or not they had actually practiced what the family plan says to do. Adding this question would give a more realistic view of how prepared residents would be during the actual event.

A question that did not perform as well as it could is the question about how much respondents would be willing to spend to protect their home from natural hazards. Thirty-four percent of respondents indicated that they did not know how much they would spend. This is most likely a function of not having examples of how much certain mitigation activities would cost. Perhaps a way to generate a better data set here would be to provide examples of the cost of mitigation strategies ranging from the very inexpensive to the most expensive. An additional question needs to be added to the demographic section in order to have a better understanding of this question about willingness to spend. The survey did not ask respondents to indicate their household income. Had the income question been asked, it could be taken into account when analyzing the question of willingness to spend since in most cases, the amount a household can spend depends on its income.

One issue that does arise when considering adding questions to the survey is the layout and design factor. The survey is currently eight pages, quite long for surveys, and does not have much extra white space to add more information. An option to avoid such a long survey would be to break it up into shorter surveys that are topic specific. For instance, have a small survey with just a few questions on earthquake preparedness instead of a full version of the survey. Respondents might be more willing to participate if the survey only took a few minutes.

As far as improving the focus group process is concerned, there are a number of suggestions. To start, the recruitment process needs to be strengthened. Survey respondents were given focus groups participation forms in their surveys. These slips were very small, approximately two inches by eight inch, and might have gotten lost in the survey mailing that they received. One simple suggestion would be to address the focus groups in the survey cover letter, that way, when or if the survey respondent read the cover letter; they are also

formally invited to participate in the focus groups. This would be an important step because as the literature about involvement pointed out, a key motivator in getting citizens to participate is simply to ask them to (Verba, Schlozman and Brady 1995). The other method used to gain participants for the focus groups in the City was through the local NACs. The hypothesis had been that working with pre-existing and active groups in the community would be an effective method of advertising and recruiting participants for the focus groups. The NAC approach was not as successful as it could have been and there are a number of reasons for this. Number one, there was not a lot of buy in from the NACs from the beginning and the correspondence came a project manager at an organization that they had not previously worked with - ONHW. One way that might have increased the NACs engagement might have been to bring the process to the NACs rather than asking them to be the recruiting mechanism. This method would limit the responsibilities on the NACs for recruiting but would ask them to participate themselves in the focus group process during their regularly scheduled meetings. A big consideration with focus groups or any involvement technique is the amount of time it takes. If the focus groups process took place during a time that was already scheduled, attendance might be bolstered.

As in the survey, focus group participants also had trouble with the question asking how much time and money they would be willing to spend to make their home more resistant to disasters. The phrasing of the question was very specific; participants were asked how much they would be willing to spend. In order to fully answer this question, participants need to have the knowledge of what their risk is as well as what mitigation activities exist and how much time and money would go into each one. A revision to this question that may have been better received would to ask if their annual household spending on preparedness and risk reduction is either too much, too little, or about right. In most cases, participants were split, with some indicating they could spend the money, but not the time and others indicating that they could spend the time and not the money.

One particular weakness of the focus groups that could easily be addressed in the future was the lack of a clear explanation of how the information provided during the session was going to be used by the City. This weakness is being compensated for by sending follow-

up postcards to participants with a brief explanation of how the information will be used. The mailing also provides them with contact information in case they have further questions or comments about the mitigation plan or the public process.

A final suggestion for local jurisdictions is to ensure communication among different divisions during the citizen involvement and planning processes. As this research showed, putting together a successful citizen involvement program can be time and resource intensive. It may be the case that another department already has the information sought or they have the means to collect the information. Communicating and planning on an interdisciplinary level early on in the process will help to reduce duplication of work within the community and will allow more time to be devoted to developing a strong citizen involvement process.

States

A state's main role in hazard mitigation planning is to build capacity at the local level so that jurisdictions are able to develop mitigation plans that meet the needs of their community. This gets back to the idea that was brought up in the literature review about all mitigation being local. The following are some general recommendations for states to help improve the state of the art in citizen involvement in hazard mitigation planning efforts.

1. Help local communities define the citizen involvement requirements outlined in the Disaster Mitigation Act of 2000.
2. Help local communities find funding for developing citizen involvement programs that meet the requirements of the Disaster Mitigation Act of 2000.
3. Work with local colleges and universities to develop partnerships supporting research on effective means of involving citizens in mitigation planning.
4. Provide "train the trainer" programs regionally to improve local capacity to facilitate focus groups or develop survey tools.
5. Create a repository for state-specific mitigation survey questions and for citizen

involvement success stories. For instance, in Oregon, state-specific questions might deal state planning goals, which are unique to Oregon.

Federal Emergency Management Agency

With the DMA deadline for mitigation plans fast approaching, it will be important for jurisdictions to have access to information and resources for mitigation planning. This has begun in the form of the mitigation “How To” series, but needs to be expanded. The new requirements have placed an emphasis on the process rather than the plan itself and thus have added importance to involving citizens in natural hazard mitigation planning. As stated in the Introduction of this report, citizen involvement in natural hazard mitigation planning is new to many jurisdictions. Because of this, it is important that jurisdictions have access to information about how to involve citizens in mitigation planning. This report is a tiny step in that direction in that it documents the use of surveys and focus groups as successful involvement tools, but there are many more. The following is a list of specific recommendations for incorporating citizen involvement into natural hazard mitigation planning:

1. Create a catalog of involvement techniques which include descriptions of how to implement, the costs and time needed to implement, their strengths and weaknesses, average participation, recommendations on how the data be incorporated into the process and the plan, and finally stories of successful implementation.
2. Develop mechanisms to stabilize funding of hazard mitigation planning activities such as citizen involvement programs.
3. If not already planned, devote a “How To” guide to citizen involvement in mitigation planning. There is good information out there about involvement in transportation, community and environmental planning, many of which have important implications for citizen involvement in mitigation planning. The first “How To” provides an overview of involvement, but is focused on

the stakeholder level rather than the citizen level.

4. Promote the importance of citizen involvement in mitigation planning in publications, the How To series, the FEMA website and workshops.
5. Create a repository for potential hazard mitigation involvement materials that communities can use in their citizen involvement processes.
6. Develop a generic natural hazards survey that jurisdictions can implement in their community, no matter where they are located or what hazards they face. If jurisdictions had the opportunity to modify this generic survey to meet their needs and they could use any method of delivering it, (i.e. telephone, mail, internet, etc), more citizens would have the opportunity to get involved in planning for natural hazards in their community.
7. Conduct “train the trainer” programs with regions and or states focusing on the importance of involvement as well as how to implement citizen involvement. Focus on what barriers to citizen involvement exist in jurisdictions as well as possible solutions.
8. Promote the importance of planning for natural hazards in general. One reason citizen involvement in the past has been weak, especially in Oregon, is because in general, citizens don’t know the full extent of the hazards that they face. This is partly due to the fact that Oregon does not experience large-scale disasters frequently. If citizen involvement programs were implemented prior to the involvement, interest and participation in hazard mitigation planning might increase.
9. Support and work with colleges, universities, and research institutions to tap into research and local projects focusing on citizen involvement in mitigation planning.

Because citizen involvement in mitigation planning is still in its infancy, there is still time to research and craft successful strategies for involving the community. In the end it

comes down to the need for two things in order to solidify the role of citizen involvement in mitigation planning: research and education. The role of citizens in planning for natural hazards is changing and it will be important for all three levels of government: locals, states and federal agencies such as FEMA to be actively involved in shaping that change.

General Observations

The following are general observations developed from implementing the surveys and focus groups in the City. The most important consideration in involving the public in mitigation planning is to know the audience. This is important because of the communication aspect of citizen involvement. The message needs to be conveyed in a manner that is understandable to the audience. If the message is aimed at the citizens in general, it needs to be catered to their knowledge level of the subject. On the other hand, if the message is aimed at getting businesses involved, a different approach should be taken because what motivates businesses to take action differs greatly from what motivates a citizen to get involved. This leads to the second observation: motivation is key in citizen involvement. In order to get citizens, businesses or stakeholders to become involved in mitigation planning, their motivating factors must be understood. The difficulty here is achieving involvement in a community, like Beaverton, that does not perceive themselves as being at risk. The question becomes: how to you motivate a latent audience to become involved?

The answer might be in the third observation that the key in involving the public in mitigation planning is to take the message directly to the audience rather than expecting them to come to you. Working with the NACs in the City might have been more effective if we had taken the focus group process to their meetings rather than having them assist in recruiting participants. Taking the message to the audience in this case would limit the recruitment process because NAC members already have that meeting time scheduled into their week. Many community organizations are active within communities including neighborhood associations, school groups, chambers of commerce, etc. Taking the message of mitigation planning directly to these groups within a community would be an effective means of

providing the opportunity for them to be involved in the planning process.

In this process, education played an important role. Education was a major component of each of the techniques that were implemented in Beaverton. If one lesson can be drawn from this research it is that education is a vital component to involving citizens in planning for natural hazard mitigation. If a community as a whole is unaware of their risks or unaware of the steps they can take to reduce their risk, they will remain unmotivated to participate. Involving citizens in hazard mitigation planning is in its infancy. The key to successful involvement in the future lies in educating the public first and foremost.

Before concluding, it is important to look at the big picture of mitigation planning in terms of needed future developments. Success in the environmental planning field can be attributed to the public's role as an advocate in developing policy for cleaner air and water. Key individuals in history such as John Muir and Rachel Carson helped bring the issues of environmentalism into mainstream American culture. It was the merging of science and popular culture that allowed the environmental movement to develop into what it is today. This has yet to be accomplished for the field of natural hazard mitigation planning and the key to making mitigation a higher priority for citizens is to meld mitigation and culture. One method of achieving this relates to the literature on the public perceiving disasters as "Acts of God." Dennis Mileti put forth several proposed shifts in thinking in the hazard mitigation field. One such shift called for the acceptance of responsibility for hazards and disasters. In this proposal, "human beings, not nature, are the cause of disaster losses. The choices that are made about where and how human development will proceed actually determine the losses that will be suffered in future disasters," (Mileti 1999). Current public perceptions of natural hazards are a barrier to effective citizen involvement in natural hazard mitigation planning. When citizens can see their role in both creating and reducing the impacts of disasters, involving citizens in planning for hazards will become easier.

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~APPENDIX A~

HOUSEHOLD NATURAL HAZARDS PREPAREDNESS
QUESTIONNAIRE RESULTS

Household Natural Hazards Preparedness Questionnaire

This questionnaire is designed to help gauge household preparedness for disasters, and knowledge of tools and techniques that assist in reducing risk and loss from natural hazards. The questionnaire should be completed by an adult, preferably the homeowner or head of household. The information you provide about your needs for disaster preparedness could help improve public/private coordination of preparedness and risk reduction activities within your community. We ask that you please take a few minutes to complete this questionnaire.

Your returned survey indicates your willingness to take part in the study. Your participation in this study is voluntary. If you have questions regarding your rights as a research participant, please contact the Office of Human Subjects Compliance, Riverfront Research Park, Suite 106, University of Oregon, Eugene, OR 97403-5219, or call (541) 346-2510. All individual survey responses are strictly confidential, and are for research purposes only.

NATURAL HAZARD INFORMATION

1. In the past five years, or since you have lived in the community you currently reside in, have you or someone in your household experienced a natural disaster such as an earthquake, severe windstorm, flood, wildfire, or other type of natural disaster?

33.3% Yes
 66.4% No (*IF NO Skip to Question 2*)

- 1.1. If ("YES") which of these natural disasters have you or someone in your household experienced?

(Please check all that apply)

2.5%	Drought	1.9%	Household Fire
--	Dust Storm	11.8%	Windstorm
23.9%	Earthquake	3.1%	Volcanic Eruption
10.6%	Flood	6.5%	Severe Winter Storm
0.6%	Landslide / Debris Flow	0.3%	Other (specify):
--	Wildfire		

2. How concerned are you about the following natural disasters affecting your community?

(Check the corresponding box for each hazard)

Natural Disaster	Extremely Concerned	Very Concerned	Concerned	Somewhat Concerned	Not Concerned
Drought	3.5%	9.0%	20.4%	28.7%	38.4%
Dust Storm	0.7%	1.1%	2.5%	7.8%	88.0%
Earthquake	12.4%	18.6%	34.2%	28.0%	6.8%
Flood	5.1%	9.9%	20.1%	31.6%	33.3%
Landslide / Debris Flow	2.7%	5.8%	10.3%	22.7%	58.4%
Wildfire	3.1%	4.9%	17.8%	18.8%	55.4%
Household Fire	10.0%	14.3%	38.5%	29.2%	8.0%
Tsunami	1.0%	1.4%	3.8%	14.0%	79.7%
Volcanic Eruption	5.1%	5.1%	15.7%	29.0%	45.1%
Wind Storm	4.3%	9.7%	30.1%	34.8%	21.1%
Coastal Erosion	4.9%	4.5%	9.7%	18.4%	62.5%
Severe Winter Storm	5.6%	8.9%	22.8%	40.7%	21.9%

3. Have you ever received information about how to make your household and home safer from natural disasters?

- 53.4% Yes
- 44.4% No (*IF NO Skip to Question 4*)

3.1. If "YES", how recently?

- | | | | |
|-------|--------------------------|-------|-----------------------|
| 27.0% | Within the last 6 months | 17.8% | Between 2 and 5 years |
| 22.1% | Between 6 and 12 months | 6.1% | 5 years or more |
| 27.0% | Between 1 and 2 years | | |

3.2. From whom did you **last** receive information about how to make your household and home safer from natural disasters? (*Please check only one*)

- | | | | |
|-------|------------------------------------|------|-------------------------------|
| 16.1% | News media | 5.6% | American Red Cross |
| 4.7% | Government agency | 2.2% | Other non-profit organization |
| 11.2% | Insurance agent or company | 6.2% | Not sure |
| 24.5% | Utility company | 7.5% | Other: _____ |
| 0.3% | University or research institution | | |

4. Who would you most trust to provide you with information about how to make your household and home safer from natural disasters? (*Please check all that apply*)

- | | | | |
|-------|------------------------------------|-------|-------------------------------|
| 28.9% | News media | 45.3% | American Red Cross |
| 42.2% | Government agency | 15.2% | Other non-profit organization |
| 33.2% | Insurance agent or company | 9.3% | Not sure |
| 54.0% | Utility company | 6.5% | Other: _____ |
| 32.0% | University or research institution | | |

5. What is the most effective way for you to receive information about how to make your household and home safer from natural disasters? (*Please check all that apply*)

Newspapers:

- 43.5% Newspaper stories
- 8.7% Newspaper ads

Television:

- 53.4% Television news
- 13.4% Television ads

Radio:

- 29.2% Radio news
- 9.3% Radio ads

Other methods:

- 13.0% Schools
- 7.1% Outdoor advertisements (billboards, etc.)
- 11.2% Books
- 52.5% Mail
- 29.2% Fire Department/Rescue
- 29.5% Internet
- 42.2% Fact sheet/brochure
- 4.7% Chamber of Commerce
- 12.7% Public workshops/meetings
- 9.6% Magazine
- 11.8% University or research institution
- 3.7% Other (please explain):

PREPAREDNESS ACTIVITIES IN YOUR HOUSEHOLD

Households can do many things to prepare for a natural disaster or emergency. What you have on hand or are trained to do when a disaster strikes can make a big difference in your comfort and safety in the hours and days following a natural disaster or emergency. Basic services, such as electricity, gas, water and telephones, may be cut off, or you may have to evacuate at a moment's notice. The following questions focus on your household's preparedness for disaster events.

6. In the following list, please check those activities that you have done in your household, plan to do in the near future, have not done, or are unable to do. (*Please check one answer for each preparedness activity*)

In your household, have you or someone in your household:	Have Done	Plan To Do	Not Done	Unabl e To Do
A. Attended meetings or received written information on natural disasters or emergency preparedness?	37.0%	4.5%	56.5%	1.9%
B. Talked with members in your household about what to do in case of a natural disaster or emergency?	46.3%	19.8%	29.4%	4.5%
C. Developed a "Household/Family Emergency Plan" in order to decide what everyone would do in the in event of a disaster?	26.3%	26.0%	43.9%	3.8%
D. Prepared a "Disaster Supply Kit" (Stored extra food, water, batteries, or other emergency supplies)?	39.1%	23.0%	37.2%	0.6%
E. In the last year, has anyone in your household been trained in First Aid or Cardio-Pulmonary Resuscitation (CPR)?	29.7%	5.4%	63.1%	1.9%

7. Building a disaster supply kit, receiving First Aid training and developing a household/family emergency plan are all inexpensive activities that require a personal time commitment. How much time (per year) are you willing to spend on preparing yourself/household for a natural disaster or emergency event?

(Check only one)

17.9%	0-1 hour	13.0%	8-15 hours
35.7%	2-3 hours	11.0%	16+ hours
17.5%	4-7 hours	4.9%	Other, please specify: __

8. What steps, if any, have you or someone in your household taken to prepare for a natural disaster?

(Check all that apply)

Have stored:		
54.3%	Food	20.8%
48.8%	Water	37.9%
83.2%	Flashlight(s)	33.2%
73.6%	Batteries	21.1%
56.5%	Battery-powered radio	21.1%
63.0%	Medical supplies (First aid kit)	28.3%
68.6%	Fire extinguisher	3.1%
90.4%	Smoke detector on each level of the house	
		Prepared a Disaster Supply Kit
		Received First Aid/CPR Training
		Made a fire escape plan
		Developed a reconnection plan: Where to go and who to call
		Discussed utility shutoffs
		Other (please explain)

9. Does your household have insurance coverage for flood events?
 27.7% Yes (*If you answered YES skip to Question 10*)
 72.3% No

- 9.1. **If “NO”,** what is the main reason your household does not have insurance for flood events?
(Please check only one)
- | | | | |
|-------|-------------------------------|------|--|
| 58.7% | Not located in the floodplain | 2.3% | Deductibles too high/not worth it |
| 7.0% | Too expensive | 4.7% | Not familiar with it/don't know about it |
| 14.1% | Not necessary | 2.8% | Other: _____ |
| 10.3% | Never considered it | | |

10. Does your household have insurance coverage for earthquake events?
 56.6% Yes (*If you answered YES skip to Question 11*)
 43.4% No

- 10.1. **If “NO”,** what is the main reason your household does not have earthquake insurance?
(Please check only one)
- | | | | |
|-------|---------------------|-------|---|
| 26.8% | Too expensive | 7.9% | Deductibles too high/not worth it |
| 6.3% | Not available | 14.2% | Not familiar with it/ don't know about it |
| 9.4% | Not necessary | 3.9% | Other: _____ |
| 31.5% | Never considered it | | |

NATURAL HAZARD RISK REDUCTION

Risk reduction activities are those actions you can take to protect your home from natural hazard events, such as earthquakes, floods or wildfires. You can do nonstructural modifications or retrofits to protect your home's contents against damage, often at minimal cost. You can also conduct structural retrofits to strengthen your home's structure or skeleton, although modifications to a structure tend to be quite involved and generally require the expertise of a registered design professional (engineer, architect or building contractor).

11. Did you consider the possible occurrence of a natural hazard when you bought/moved into your current home?
 37.5% Yes
 62.5% No

12. Would you be willing to spend more money on a home that had features that made it more disaster resistant?
 41.9% Yes
 15.2% No
 42.9% Don't Know

13. Would you be willing to make your home more resistant to natural disasters?
 71.8% Yes
 28.2% No (*If you answered No skip to Question 14*)

- 13.1. How much are you willing to spend to better protect your home from natural disasters?
(Check only one)
- | | | | |
|-------|-----------------|-------|-----------------------|
| 4.8% | Less than \$100 | 4.3% | \$5000 and above |
| 15.7% | \$100 - \$499 | 2.2% | Nothing |
| 11.3% | \$500 - \$999 | 33.9% | Don't know |
| 12.2% | \$1000 - \$2499 | 10.0% | What ever it takes |
| 2.6% | \$2500 - \$4999 | 3.0% | Other, please explain |

Question 14 includes nonstructural and structural modifications that make your home more resistant to earthquakes. There are many measures that can be taken for other natural hazards, such as wildfires and floods.

14. What nonstructural or structural modifications for earthquakes have you made to your home?
(Please check all that apply)

14a. Nonstructural

- 17.1% Anchor bookcases, cabinets to wall
- 46.9% Secure water heater to wall
- 7.5% Install latches on drawers/cabinets
- 28.3% Fit gas appliances with flexible connections
- 1.9% Others (please explain):
- 34.8% None

14b. Structural:

- 14.3% Secure home to foundation
- 4.3% Brace inside of cripple wall with sheathing
- 3.4% Brace unreinforced chimney
- 2.5% Brace unreinforced masonry & concrete walls and foundations
- 1.6% Others (please explain):
- 44.4% None

15. Which of the following incentives, if any, would motivate you to take additional steps to better protect your home from a natural disaster? *(Check all that apply.)*

- 72.0% Insurance discount
- 26.1% Low interest rate loan
- 19.9% Lower new home construction costs
- 37.3% Mortgage discount

- 71.4% Tax break or incentive
- 8.7% None
- 2.2% Other (please explain)

COMMUNITY NATURAL HAZARD PREPAREDNESS

16. Natural hazards can have a significant impact on a community, but planning for these events can help lessen the impacts. The following statements will help determine citizen priorities for planning for natural hazards. Please tell us how important each one is to you.

Statements	Very Important	Somewhat Important	Neutral	Not Very Important	Not Important
A. Protecting private property	57.5%	30.4%	8.3%	2.6%	1.3%
B. Protecting critical facilities (e.g. transportation networks, hospitals, fire stations)	85.6%	11.6%	1.9%	0.6%	0.3%
C. Preventing development in hazard areas	44.9%	35.1%	16.5%	2.2%	1.3%
D. Enhancing the function of natural features (e.g. streams, wetlands)	35.0%	32.5%	25.2%	5.7%	1.6%
E. Protecting historical and cultural landmarks	22.5%	38.1%	27.6%	8.9%	2.9%
F. Promoting cooperation among public agencies, citizens, non-profit organizations, and businesses	42.0%	37.9%	16.4%	2.2%	1.6%
G. Protecting and reducing damage to utilities	65.0%	27.1%	6.9%	0.6%	0.3%
H. Strengthening emergency services (e.g.- police, fire, ambulance)	67.5%	23.4%	7.8%	0.6%	0.6%

17. Are there any other issues regarding the reduction of risk and loss associated with natural disasters that you feel are important?

18. A number of activities can reduce your community’s risk from natural hazards. These activities can be both regulatory and non-regulatory. An example of a regulatory activity would be a policy that limits or prohibits development in a known hazard area such as a floodplain. An example of a non-regulatory activity would be to develop a public education program to demonstrate steps citizens can take to make their homes safer from natural hazards. **Please check the box that best represents your opinion of the following strategies to reduce the risk and loss associated with natural disasters.**

Community-wide Strategies	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Sure
A. I support a regulatory approach to reducing risk	14.8%	37.6%	24.4%	12.5%	5.1%	5.5%
B. I support a non-regulatory approach to reducing risk	18.37%	37.8%	26.4%	9.7%	1.0%	6.4%
C. I support a mix of both regulatory and non-regulatory approaches to reducing risk	21.9%	42.4%	20.5%	7.3%	3.0%	5.0%
D. I support policies to prohibit development in areas subject to natural hazards	31.7%	42.9%	17.5%	4.4%	1.6%	1.9%
E. I support the use of tax dollars (federal and/or local) to compensate land owners for not developing in areas subject to natural hazards	6.3%	18.3%	25.2%	30.3%	17.0%	2.8%
F. I support the use of local tax dollars to reduce risks and losses from natural disasters	6.8%	51.1%	27.0%	9.3%	3.5%	2.3%
G. I support protecting historical and cultural structures	10.0%	38.9%	38.6%	8.4%	3.9%	0.3%
H. I would be willing to make my home more disaster-resistant	12.7%	58.9%	23.2%	1.3%	1.0%	2.9%
I. I support steps to safeguard the local economy following a disaster event	16.3%	61.6%	18.6%	1.6%	0.7%	1.3%
J. I support improving the disaster preparedness of local schools	33.1%	51.9%	12.1%	2.5%	0.3%	--
K. I support a local inventory of at-risk buildings and infrastructure.	16.6%	53.2%	22.9%	3.5%	1.6%	2.2%

GENERAL HOUSEHOLD INFORMATION

19. Please indicate your age: 51

20. Gender:

49.2% Male
50.8% Female

21. Please indicate your level of education:

0.6%	Grade school/no schooling	39.1%	College degree
1.3%	Some high school	17.2%	Postgraduate degree
9.4%	High school graduate/GED	0.3%	Other, please specify: _____
32.2%	Some college/trade school		

22. Zip code: _____

23. County: _____

24. How long have you lived in Oregon?

0.9%	Less than one year	17.9%	10-19 years
13.2%	1-5 years	58.6%	20 years or more
9.4%	5-9 years		

25. If you have lived in Oregon for less than 20 years, in what state did you live before you moved to Oregon?

24.4% Not Applicable
26.9% California
3.2% Idaho
12.2% Washington
33.3% Other _____

26. Do you have access to the Internet?

86.8% Yes
13.2% No

27. Do you own or rent your home?

83.6% Own
16.4% Rent

28. Do you rent/own a:

74.8% Single-family home
2.6% Duplex
3.2% Apartment (3-4 units in structure)
8.4% Apartment (5 or more units in structure)
8.4% Condominium / townhouse
1.9% Manufactured home
0.3% Other _____

Please feel free to provide any additional comments in the space provided:

THANK YOU VERY MUCH FOR PROVIDING THIS INFORMATION

The Oregon Natural Hazards Workgroup at the University of Oregon's Community Service Center prepared this survey. Implementation of this survey is made possible by funding from Oregon Emergency Management and the Public Entity Risk Institute.

For more information, please contact Oregon Natural Hazards Workgroup at 1209 University of Oregon, Eugene, OR 97403-1209, call (541) 346-3653, or visit www.OregonShowcase.org

~APPENDIX B~
FOCUS GROUP DOCUMENTS

FOCUS GROUP ON NATURAL HAZARDS
PRE-EVALUATION

We will be conducting both a pre- and post- evaluation during tonight's focus group session. The information you provide may help Beaverton assess community needs in preparing for and responding to natural disasters. Your name will not be associated with your responses on this evaluation form. Thank you.

1. Did you receive a household risk perception survey in the mail?
 - Yes
 - No

2. Please provide your responses to the following statements about planning for natural hazards. Please check one box for each statement.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is important for citizens to be informed about their risks to natural hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for citizens to be involved in planning for natural hazards in their community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for citizens to assist in developing the community's priorities in planning for natural hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for citizens to actively reduce risk from natural hazards in their community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to plan for natural disasters at my home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to plan for natural disasters in my community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would be more supportive of a plan that I helped to develop.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Are you aware of steps you can take to make your home safer from natural disasters?
 - No
 - Yes

4. Have you taken steps to make your home safer from natural disasters?
 - Yes (If Yes, skip to 5)
 - No (If No, answer 4.1)

4.1 Why haven't you taken steps to make your home safer from natural disasters?

- Too expensive
- Too time consuming
- Don't care
- Not a priority
- Not my responsibility
- Hadn't thought about it
- Other: Please explain _____

5. Which of the following would you like more information about in the future? (Check all that apply)

- Steps households can take to reduce risk
- Steps businesses and employers can take to reduce risk
- Emergency preparedness kits (i.e. flashlight, food, water, etc...)
- Availability of preparedness classes and training
- Family emergency plans
- Steps the city is taking to reduce community-wide risks
- Other, Please list: _____
- None of the above

FOCUS GROUP ON NATURAL HAZARDS
POST-EVALUATION

The information you provide may help Beaverton assess community needs in preparing for and responding to natural disasters. Your name will not be associated with your responses on this evaluation form. Thank you.

1. Please provide your responses to the following statements about planning for natural hazards. Please check one box for each statement.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is important for citizens to be informed about their risks to natural hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for citizens to be involved in planning for natural hazards in their community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for citizens to assist in developing the community's priorities in planning for natural hazards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for citizens to actively reduce risk from natural hazards in their community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to plan for natural disasters at my home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important to plan for natural disasters in my community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would be more supportive of a plan that I helped to develop.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Are you aware of steps you can take to make your home safer from natural disasters?

- No
 Yes

3. Have you taken steps to make your home safer from natural disasters?

- Yes (If Yes, skip to 1)
 No (If No, answer 3.1)

- 3.1 Why haven't you taken steps to make your home safer from natural disasters?

- Too expensive
 Too time consuming
 Don't care
 Not a priority
 Not my responsibility
 Hadn't thought about it
 Other: Please explain _____

The Oregon Natural Hazards Workgroup is continually working to improve our community outreach and facilitation efforts. To that end, we are interested in your feedback on tonight's focus group session. Please provide us with your candid feedback on the following questions and return it to one of the facilitators before you leave.

1. Please rate the following elements of tonight's focus group session. Check only one box per element.

Focus Group Elements	Just Right	Neutral	Needs Improvement
Length of Session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Location of Session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time of Session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Introductory Sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Discussion Section	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Activity Section	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education and Resource Section	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilitators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Please share with us some of the strengths and weaknesses of the focus group **discussion** section.

☺Strengths☺

☹Weaknesses☹

3. Please share with us some of the strengths and weaknesses of the focus group **activity** section.

☺Strengths☺

☹Weaknesses☹

4. Which of the following would you like more information about in the future? (Check all that apply)

- Steps households can take to reduce risk
- Steps businesses and employers can take to reduce risk
- Emergency preparedness kits
- Availability of preparedness classes and training
- Family emergency plans
- Steps the city is taking to reduce risks
- Other, Please list: _____
- None of the above

Why plan for Natural Disasters?

Natural hazard plans seek to make the communities less vulnerable to the effects of natural hazards.

Planning for natural hazards can:

- Reduce losses of life and injuries
- Protect both public and private property
- Help maintain economic stability
- Protect natural resources
- Minimize recovery costs and time



What are Natural Disasters?

A **Natural Hazard** is a naturally occurring process, such as an earthquake, flood or volcano.

A **Natural Disaster** results when human activity takes place in the path of hazard events.

Oregon is prone to:

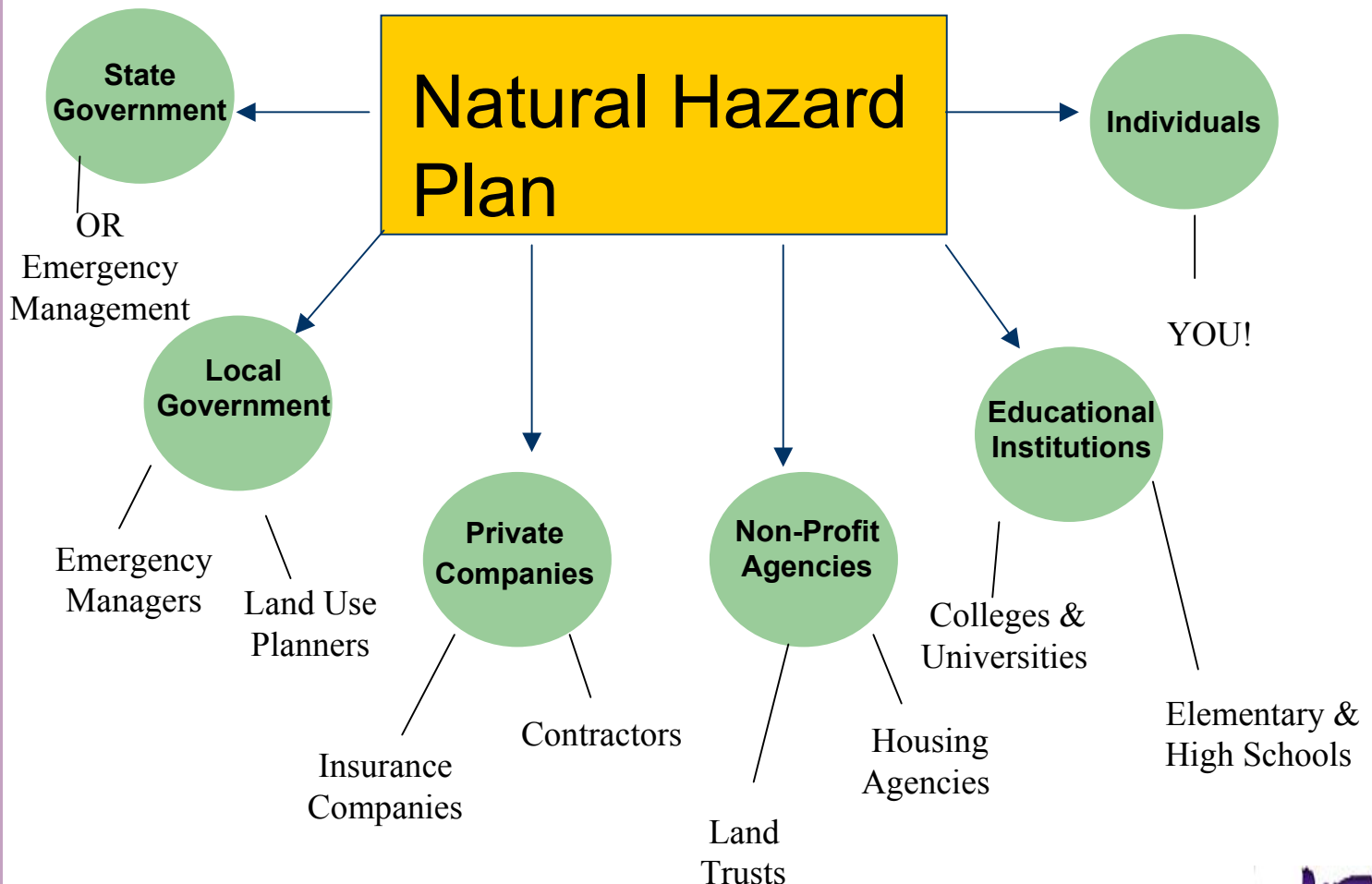
- Flooding
- Windstorms
- Severe winter storms
- Volcanic activity
- Earthquakes
- Wildfire
- Tsunami
- Coastal erosion
- Drought



Who should be involved in natural hazard planning?

The entire community needs to be involved in natural hazard planning to ensure a comprehensive and responsive plan.

Who can be involved?



What is a Natural Hazard Plan?

The purpose of natural hazard plans is to prepare for and reduce the risk posed by natural hazards in a community.

The plan should:

- ✓ Identify natural hazards
- ✓ Identify community risks
- ✓ Identify potential and past impacts
- ✓ Identify current activities and resources to reduce risks to natural hazards
- ✓ Suggest risk reduction activities
- ✓ Prioritize community risk reduction actions
- ✓ Establish community partnerships



FOCUS GROUP QUESTIONS

I have a series of questions I will ask you to guide the discussion. For those questions that can be answered with yes or no, a raise of hands can be used to answer. [Note to note taker: count number of hands in response.]

Introduction - 3 minutes

- 1.) Ask each person to introduce him/her self and say why he/she was interested in attending today's focus group. Limit each person to 30 seconds. Give an example yourself: "*I am Krista, I am here because I am concerned about earthquakes.*"

Concern about Natural Hazards - 10 minutes

- 2.) Have you been affected in the past by natural hazards that have occurred in community? Please raise a hand if you have been.

A. If yes: How have you been affected?

- 3.) Which natural hazard(s) do you think your community is most at risk to?

A. What kinds of concerns do you have about these hazards?

Preparedness and Risk Reduction - 17 minutes

- 4.) Have you taken any steps to prepare for natural disasters? Describe the steps.

A. Would anything encourage you to do more?

- 5.) Would you be willing to make your home more resistant to natural disasters? *{We want to spend some time with this set of questions - really get at what they are willing to do and how much they are willing to spend (time & money)}*

A. How much time and/or money would you be willing to spend per year to better protect your home from natural disasters? You could spend a few hours per year doing things such as preparing a 72-hour kit or attaching bookcases to the walls. Other activities such as making your home more seismically sound or maintaining an area free of dead or dry vegetation around your house take more time.

B. If you were in the process of buying or renting a new home, would you consider the impacts of natural hazards on the home?

Alternate question if time allows

- 6.) Do you have any sort of plan with your family in the event of a natural disaster? (i.e. meeting place, phone tree, etc.) Describe the plan.

I would now like to get you thinking about your community's role in preparing for and reducing its risk from natural hazards.

What steps do you think your city could take to prepare for and reduce the risk from natural disasters?

8.) Is planning for natural hazards the responsibility of the entire community? [what we mean by this is it the responsibility of citizens, businesses, community organizations, municipalities, etc together to plan for natural hazards? Or does the responsibility fall solely on one organization.]

This concludes the discussion portion of the session. I would like to thank you for providing us with your thoughts and opinions about natural hazards at your home and in your community. We will now begin the activity portion of the session. Please help yourself to refreshments as we get the activity prepared.

Scenario #1

The purpose of the next activity is to determine your preferred method of achieving natural hazard planning goals. The following is a description of the scenario that you are being placed in.

Your community is in the process of developing a plan to reduce the community's risks from natural hazards. The planning team has identified a number of plan goals that will help reduce the community's risk from natural disasters. They are: protecting life, protecting property, protecting natural resources, enhancing emergency services, and strengthening citizen action.

Congratulations! You have just been elected to the [City Council/County Board of Commissioners]. At tonight's council/board meeting, you and your fellow Councilors/Commissioners have been asked to decide how the community can meet the plan goals that were previously identified. There are 4 methods for achieving the goals: education, regulation, acquisition, and incentives. For each of the plan goals, you will be given a stack of money. Your job is to spend the money on the method of achieving the goals that you prefer. You should place the money in the envelope(s) that matches the method(s) that you prefer. For instance, you may place all your money on one method or distribute the money among the methods in any combination that matches your preferences for each of the goals. It is important to note that all 4 methods may not be applicable to all 5 goals. Each goal is presented on an individual poster and includes a definition of the goal as well as some examples for each of the methods. I will now give you a brief demonstration.

[Walk to board and give a quick demonstration] This board is for the goal of strengthening citizen action. The color of the board and the color of the money match, so on the purple board, I would use my purple money. Here is the definition of the goal [point to definition]. Here are the examples for each of the methods [point to the examples]. If I only supported using incentives as a means to strengthen citizen action, I would put all the money in the incentives envelope. If I support both but prefer one over the other, I would distribute my dollars in both envelopes with more money in the one that I preferred over the other.

At this time, please double check your envelopes, you should have a stack of red, orange, green, blue, and purple money. Also note that each color set has a different number of bills. You will have 12 minutes to make your decision and place your money on the boards for all 5 goals. Feel free to ask questions at any time if you have them.

Pass out ballots]
[12 minutes for spending]

Time is up, we are now going to move onto the next portion of the activity. We would now like you to prioritize the goals that you just worked with. I will now share with you the scenario.

Changes in the state and local economy have lead to budget cuts and now the council/commission has decided that the local budget can only support 3 of the 5 plan goals. In tonight's Council/Board meeting you have been asked to decide which three plan goals are the most important to you. If the cost of implementing each of the goals is equal, which are the most important? You will be using this ballot to vote for the 3 goals that you think are most important. Place a 1 next to the goal with the highest priority, a 2 next to the goal with second highest priority and a 3 next to the goal with the third highest priority. You will have 5 minutes to cast your vote and return it to the ballot box right here. Feel free to browse the posters again to make your decision.

Time is up, we have about 20 minutes left in our session tonight. We would like to close with a brief presentation on some activities you can take at your home to prepare for and reduce risks posed by natural hazards. We would also like to follow up with a post evaluation.

Strengthen Citizen Goal: Action

Definition: Encourage citizens to prepare for and reduce their risk from natural disasters.

Methods to strengthen citizen action include:

Education

Examples

- Produce public service announcements about activities homeowners and renters can easily do to reduce their risks from natural hazards
- Develop school programs to involve students in reducing risks

Incentives

Examples

- Partner with local hardware stores to provide education and discounts on hardware used to make homes more disaster resistant
- Offer bonuses to developers avoiding development in known hazards areas

Enhance Goal: Emergency Services

Definition: Increase the response capability of emergency services during disaster events (e.g. fire, police, hospitals).

Methods for enhancing emergency services include:

Education

Examples

- Inform citizens on actions they can take to prepare for natural disaster events

Regulation

Examples

- Develop policies prohibiting critical facilities (hospitals, shelters, etc) in known hazard areas
- Require cooperative agreements among emergency service providers to ensure adequate service during an event

Incentives

Examples

- Provide or seek funding incentives to organizations that form partnerships in order to enhance emergency services

Goal: Protect Life

Definition: Reduce natural disaster-caused injuries and deaths.

Methods for protecting life include:

Education

Examples

- Provide CPR (Cardiopulmonary Resuscitation) Training
- Produce television and newspaper stories on how to reduce disaster-caused injuries and deaths
- Offer neighborhood workshops on risk reduction activities (e.g. earthquake retrofit)

Regulation

Examples

- Enhance and enforce building codes to ensure the safety of those inside the building during an event

Incentives

Examples

- Develop tax incentives for citizens who prepare their homes for natural hazards

Protect Natural Resources

Goal:

Definition: Maintaining the natural function of resources such as wetlands, streams, and vegetation.

Methods for protecting natural resources include:

Education

Examples

- Develop school and public education programs aimed at educating students and citizens about connections between natural resources and hazards

Acquisition

Examples

- Develop or work with land trusts by partnering with community organizations to purchase land with significant natural resources

Regulation

Examples

- Create ordinances to protect natural resources

Incentives

Examples

- Seek and support low interest rate loans for developments that protect natural resources

Goal: Protect Property

Definition: Reduce damage to public and private property, including buildings and homes.

Methods to protect property include:

Education

Examples

- Distribute brochures featuring tips on how to make homes and buildings safer
- Hold neighborhood-based workshops on risk reduction activities (e.g. earthquake safety)

Acquisition

Examples

- Purchase properties that are within known hazard areas

Regulation

Examples

- Develop ordinance prohibiting/regulating development in areas subject to natural hazards

Incentives

Examples

- Provide bonuses for developers who surpass minimum required building codes