

# **Appendix E: Mid-Columbia Region Natural Hazard Mitigation Public Opinion Survey**

## **Survey Purpose and Use**

The purpose of this survey was to gauge the overall perception of natural disasters, determine a baseline level of loss reduction activity for residents in the community, and assess citizen's support for different types of individual and community risk reduction activities.

Data from this survey directly informs the natural hazard planning process. Counties in the Mid-Columbia region can use this survey data to enhance action item rationale and ideas for implementation. Other community organizations can also use survey results to inform their own outreach efforts. Data from the survey provides the counties with a better understanding of desired outreach strategies (sources and formats), a baseline understanding of what people have done to prepare for natural hazards, and desired individual and community strategies for risk reduction.

## **Background**

In addition to establishing a comprehensive community-level mitigation strategy, the Disaster Mitigation Act of 2000 (DMA2K) and the regulations contained in 44 CFR 201 require that jurisdictions maintain an approved NHMP in order to receive federal funds for mitigation projects. Development of the Natural Hazards Mitigation Plan update process for eight counties in the Mid-Columbia Gorge and surrounding regions was pursued in compliance with subsections from 44 CFR 201.6 guidelines.

Citizen involvement is a key component in the natural hazard mitigation planning process. Citizens should have the opportunity to voice their ideas, interests and concerns about the impact of natural disasters on their communities. To that end, the DMA2K requires citizen involvement in the natural hazard mitigation planning process. It states: "An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

1. An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval
2. An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate

development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.”

According to Bierle<sup>1</sup>, the benefits of citizen involvement include the following: (1) educate and inform public; (2) incorporate public values into decision making; (3) substantially improve the quality of decisions; (4) increase trust in institutions; (5) reduce conflict; and (6) ensure cost effectiveness.

## Methodology

In the fall of 2011, the Oregon Partnership for Disaster Resilience (OPDR) distributed a mailed survey to 7,500 random households throughout an eight county region in Northern Oregon. The counties surveyed included: Clackamas, Hood River, Gilliam, Morrow, Sherman, Umatilla, Wasco, and Wheeler. OPDR developed and distributed the survey in partnership with three members of the University of Oregon’s Resource Assistance for Rural Environments (RARE) program.

Given the geographic extent of the survey area and significant county population differences in the region, OPDR stratified the survey sample across three distinct sub-regions (see Table E-1 below). To ensure a minimum number of returns in each of the counties in sub-region three, OPDR leveled the sample at 400 surveys per county (excepting Umatilla). Once OPDR determined the sample size for each county, they contracted with the Oregon Secretary of State Elections Division (OED) to randomly select names and addresses from state voter rolls. Table E-1 shows the survey sample size by sub-region.

---

<sup>1</sup> Bierle, T. 1999. “Using social goals to evaluate public participation in environmental decisions.” *Policy Studies Review*. 16(3/4), 75-103.

**Table E-1: Survey Sample Size**

County	Population '09	Pop as percent of subregion	Survey sample size by county
<b>Subregion 1 - West</b>			
Clackamas	379,845	100%	<b>2,500</b>
<b>Subregion 2 - Gorge</b>			
Hood River	21,725	47%	1,200
Wasco	24,230	53%	1,300
<b>Subtotal</b>	<b>45,955</b>	<b>100%</b>	<b>2,500</b>
<b>Subregion 3 - East</b>			
Sherman*	1,830	2%	400
Gilliam*	1,885	2%	400
Wheeler*	1,585	2%	400
Morrow	12,540	14%	400
Umatilla	72,430	80%	900
<b>Subtotal</b>	<b>90,270</b>	<b>100%</b>	<b>2,500</b>
<b>Combined Total</b>	<b>516,070</b>		<b>7,500</b>

Source: 2011 NHMP Public Opinion Survey

\*Indicates that OPDR modified the sample size in these counties in an attempt to ensure a minimum number of survey returns.

Each mailed survey packet contained: (1) a cover letter that explained the purpose of the survey and described the survey incentives; (2) a copy of the survey; (3) a survey participation card; and (4) a postage-paid envelope in which to return the completed survey and participation card.

The survey consisted of 24 questions divided into four sections: natural hazard information; community vulnerabilities and hazard mitigation strategies; mitigation and preparedness activities in your household; and general household information. OPDR and RARE designed the survey to determine public perceptions and opinions regarding natural hazards. Questions also focused on the methods and techniques survey respondents prefer to use in reducing the risks and losses associated with natural hazards.

The survey participation card asked survey recipients to enter the amount of time it took them to complete the survey. It also functioned as a voluntary entry form into a drawing for an assortment of household preparedness items. The drawing provided participants an incentive for completing the survey and expressed that it was not required, but rather encouraged, that they complete it. One winner from each of the eight participating counties was chosen at random by the OPDR office.

Ten days before the survey deadline, OPDR sent a reminder postcard to each household urging them to complete the survey and return it as soon as possible. Of the 7,500 surveys sent, 733 were returned undeliverable for a final sample size of 6,767. OPDR received 951 completed surveys for a 14-percent overall survey response rate.

A key concern of organizations that conduct surveys is statistical validity. If one were to assume that the sample was perfectly random *and* that there was no response bias, then the survey would have a margin of error of  $\pm 5$ -percent at the 95-percent confidence level. In simple terms, this means that if a survey were conducted 100 times, the results would end up within  $\pm 5$ -percent of those presented in this report.

One limitation of the study's methodology is potential non-response bias from the mailed survey. The survey results represent only those households where residents are registered to vote. There could also be a bias of answers based on which residents are renters compared to owners. Despite these areas of potential response bias, the intent of this survey was not to be statistically valid but instead to gain the perspective and opinions of resident's regarding natural hazards in the region. Our assessment is that the results reflect a range attitudes and opinions of residents throughout the eight surveyed counties

## Survey Results

This section presents the compiled data and analysis for the 2011 Mid-Columbia Region Natural Hazard Mitigation Public Opinion Survey. We provide a copy of the survey instrument as Attachment A of this report; raw data is provided in Attachment B.

### Natural Hazard Information

This section reports the experiences of survey respondents involving natural hazards, and their exposure to preparedness information.

The survey results indicate that about 28-percent of the respondents or someone in their household has personally experienced natural disasters in the past five years, or since they have lived in the community in which they currently reside (see Table E-2 below).

**Table E-2: Direct Experience with Natural Disasters in Respondent County**

Answer	Percent	Number
Yes	28%	249
No	72%	656
Q-1 total	100%	905

Source: 2011 NHMP Public Opinion Survey

Of those respondents who have experienced a natural disaster in the last five years, 51-percent experienced windstorms, 49-percent experienced wildfire, 38-percent experienced severe winter storms, and 19-percent experienced flood. Table E-3 illustrates the disasters experienced in the past five years in the Mid-Columbia region.

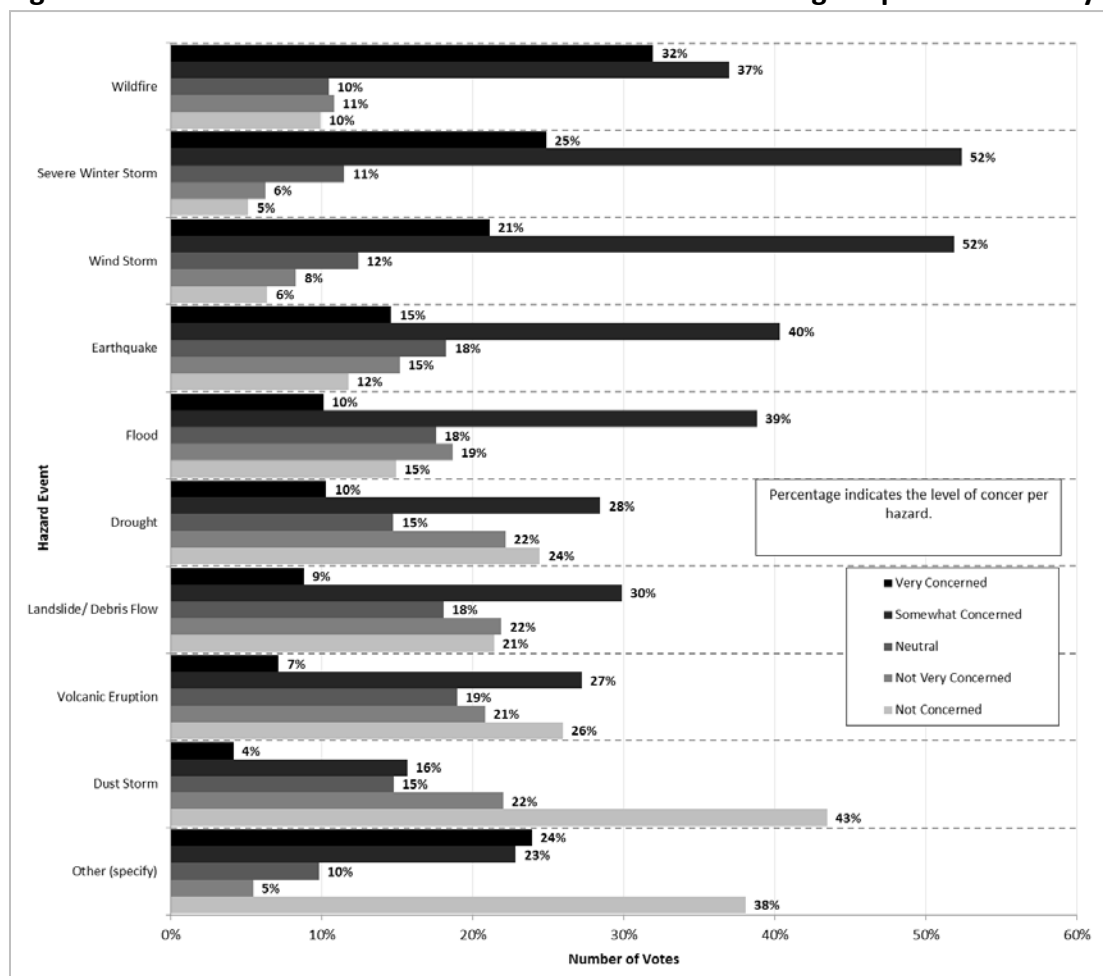
**Table E-3: Type of Natural Disaster Experienced in Past Five Years**

Hazard	Percent	Number
Windstorm	51%	126
Wildfire	49%	121
Severe Winter Storm	38%	94
Flood	19%	48
Drought	11%	27
Dust Storm	7%	17
Landslide/Debris Flow	7%	17
Earthquake	5%	13
Other	4%	10
Volcanic Eruption	1%	3
Q-1 "yes" answers	100%	249

Source: 2011 NHMP Public Opinion Survey

The survey also asked respondents to rank their personal level of concern for specific natural disasters affecting their community. Figure E-4 shows that more than 70-percent of respondents indicated that they are concerned or very concerned about windstorms and winter storms with nearly 60-percent indicating a high level of concern related to wildfires. A majority of respondents also demonstrated concern over earthquake and flood hazards with 55-percent and 49-percent of respondents marking “concerned” or “very concerned” for those two hazards respectively. Of lesser concern were the landslide, drought and volcano hazards with 47-, 46- and 43-percent of respondents marking “not very concerned” or “not concerned” for those hazards respectively. Dust storm is the hazard respondents are least concerned about with roughly 65-percent of respondents marking the “not very concerned” or “not concerned” choices. Figure E-1 summarizes respondent answers by hazard.

**Figure E-1: Level of Concern About Natural Disasters Affecting Respondent County**



Source: 2011 NHMP Public Opinion Survey

Next, the survey asked if survey recipients had received information about how to increase the safety of their households and homes from natural hazards. Table E-4 shows that over half (53-percent) of respondents indicated that they have received information regarding home and family safety from natural disasters at some time in the past.

**Table E-4: Respondents Who Have Received Information Concerning Natural Disaster Home Safety**

Answer	Percent	Number
Yes	53%	489
No	47%	438
Q-3 total	100%	927

Source: 2011 NHMP Public Opinion Survey

Of respondents who had received information, 27-percent received the information within the last six months and 20-percent received information six months to one year ago (see Table E-5). This suggests that, while outreach is occurring, it is reaching fewer than half of

the households in the Mid-Columbia region and surrounding areas, and that many of the households have not received any information in over a year.

**Table E-5: Most Recent Date of Contact for Information Concerning Natural Disaster Home Safety**

Answer	Percent	Number
Within last 6 months	27%	131
Between 6-12 months	20%	99
Between 1-2 years	22%	107
Between 2-5 years	15%	75
5 years or more	11%	55
Q-3 "yes" answers	100%	489

Source: 2011 NHMP Public Opinion Survey

Of the respondents who received information on natural hazard preparedness, the news media (36-percent) and government agencies (18-percent) were cited most often as being the source of the information. Table E-6 shows the sources most respondents last received information from. Note that while the question directed respondents to check only one answer, a number of respondents selected more than one choice. Therefore, readers should use some caution when interpreting these results.

**Table E-6: Most Recent Provider of Natural Disaster Home Safety Information**

Answer	Percent	Number
News Media	36%	174
Government Agency	18%	86
Other	15%	74
Not Sure	14%	68
Utility Company	8%	38
American Red Cross	6%	29
Neighbor/friend/family	5%	25
Insurance Agent/Company	5%	24
Other non-profit org.	4%	17
Social media (e.g. Facebook)	1%	4
Univ./research facility	0%	2
Elected official	0%	0
Q-4 total	111%	489

Source: 2011 NHMP Public Opinion Survey

Note: Total percentage exceeds 100% because some respondents chose more than one category.

Survey respondents provided an interesting contrast between the sources that they had recently received information from, and those that they perceived to be the most trustworthy. While only six-percent of respondents said they last received information from the American Red Cross, more respondents chose the American Red Cross as the most

trusted source of information than any other option. The second and third most trusted sources cited by respondents were “utility company” and “government agency”. “Elected Official” and “Social Media” received the lowest number of responses. Table E-7 shows the sources respondents trust the most for providing this information.

**Table E-7: Most Trusted Providers of Information for Natural Disaster Home Safety**

<b>Answer</b>	<b>Number</b>
American Red Cross	359
Utility Company	313
Government Agency	312
Univ./research facility	242
News Media	221
Insurance Agent/Company	186
Neighbor/friend/family	166
Not Sure	97
Other non-profit org.	93
Other	78
Elected official	14
Social media (e.g. Facebook)	9
Q-5 total	2,090

Source: 2011 NHMP Public Opinion Survey

Note: Respondents could check up to three information providers

When asked what the most effective way was to receive information, respondents indicated that television news (440 responses), newspaper stories (331 responses), and mail (315 responses) were the most effective. Interestingly, various types of advertisement (televisions, radio, billboards, newspaper) all received relatively low responses. Table E-8 shows the effectiveness rating of information dissemination methods expressed by survey respondents.



**Table E-8: Most Effective Method for Respondents to Receive Information Concerning Natural Disaster-Related Home Safety**

Answer	Number
Television news	440
Newspaper stories	331
Mail	315
Fire Department/Rescue	245
Radio news	227
Fact sheet/brochure	224
Email newsletters	220
Online news outlets	126
Public workshops/meetings	121
University or research institution	87
Schools	72
Television ads	56
Books	50
Social media (e.g. Facebook)	38
Magazine	34
Radio ads	33
Other	33
Outdoor ads (e.g. billboards, etc.)	32
Newspaper ads	26
Chamber of Commerce	21
Q-6 total	2,731

Source: 2011 NHMP Public Opinion Survey

An overwhelming majority of survey respondents (87-percent of those who answered Question 7) indicated that they were not aware of their county's natural hazards mitigation plan prior to receiving the survey. This suggests the need for increases in or changes to local NHMP education and outreach programs.

**Table E-7: Respondent Knowledge/Awareness of County Natural Hazards Mitigation Plan**

Answer	Percent	Number
Yes	13%	124
No	87%	814
Q-7 total	100%	938

Source: 2011 NHMP Public Opinion Survey

Consistent with the responses displayed in Table E-7, only 12-percent of respondents claimed to be aware, prior to the survey, that FEMA requires their county to update the NHMP every five years in order to be eligible for federal pre- and post-disaster hazard mitigation funds.

**Table E-8: Respondent Awareness of FEMA Requirements for Five Year NHMP Update to Receive Hazard Mitigation Funding**

Answer	Percent	Number
Yes	12%	110
No	88%	827
Q-8 total	100%	938

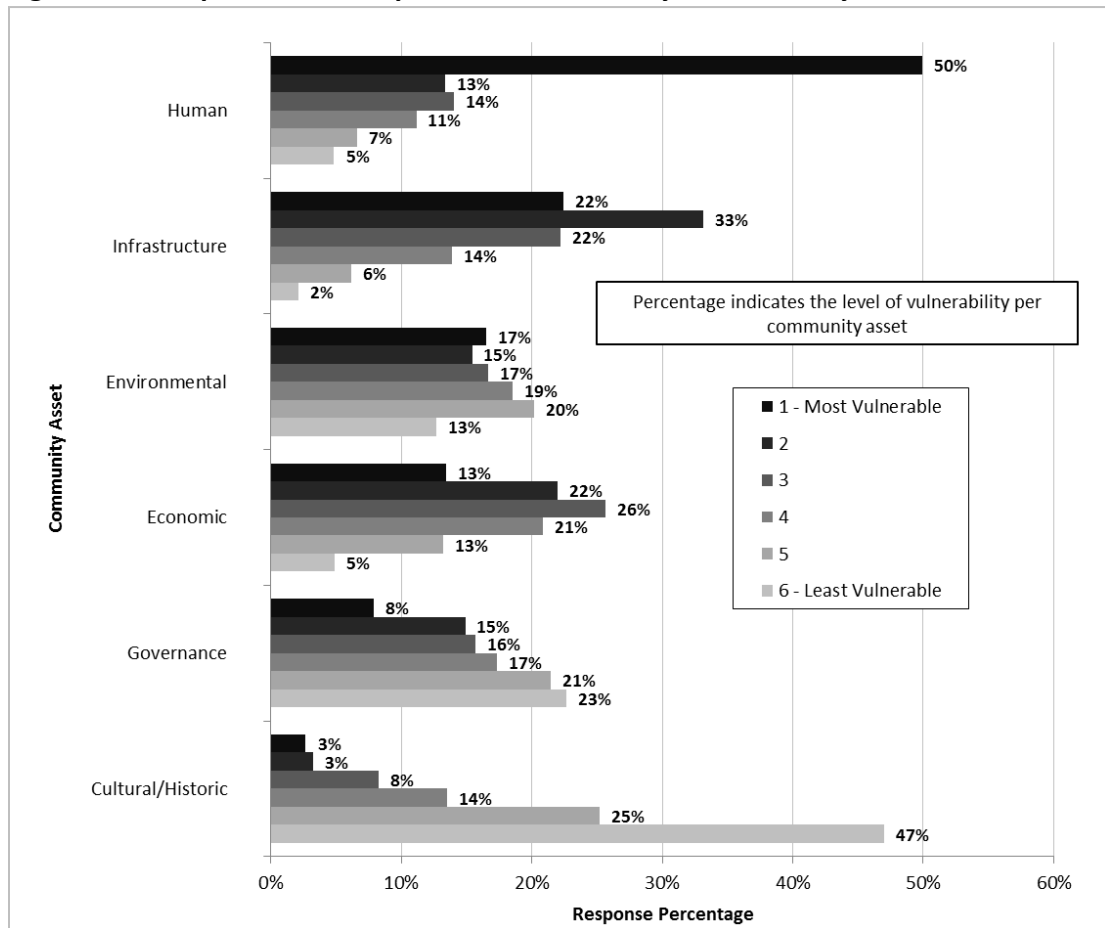
Source: 2011 NHMP Public Opinion Survey

## **Community Vulnerabilities and Hazard Mitigation Strategies**

This section outlines the assets that survey respondents felt would be vulnerable to natural hazards in the region. The section also describes citizens' priorities for planning for natural hazards and the community-wide strategies respondents support.

The survey asked respondents to rank categories of community assets in terms of their vulnerability. These questions were intended to help the Mid-Columbia region and surrounding communities determine citizen priorities when planning for natural hazards, by comparing the level of importance that they attach to specific community assets and risk reduction activities. Figure E-2 illustrates that respondents found human related assets to be by far the most vulnerable (50-percent), followed distantly by infrastructure (22-percent). Survey respondents found environmental assets to be the third most vulnerable (17-percent), followed closely by economic assets (13-percent), however economic assets made up a noticeably higher proportion than environmental assets in rankings 2-4. Cultural/historic assets (three-percent) received the lowest consistent ranking in terms of vulnerability, preceded somewhat closely by governance (eight-percent).

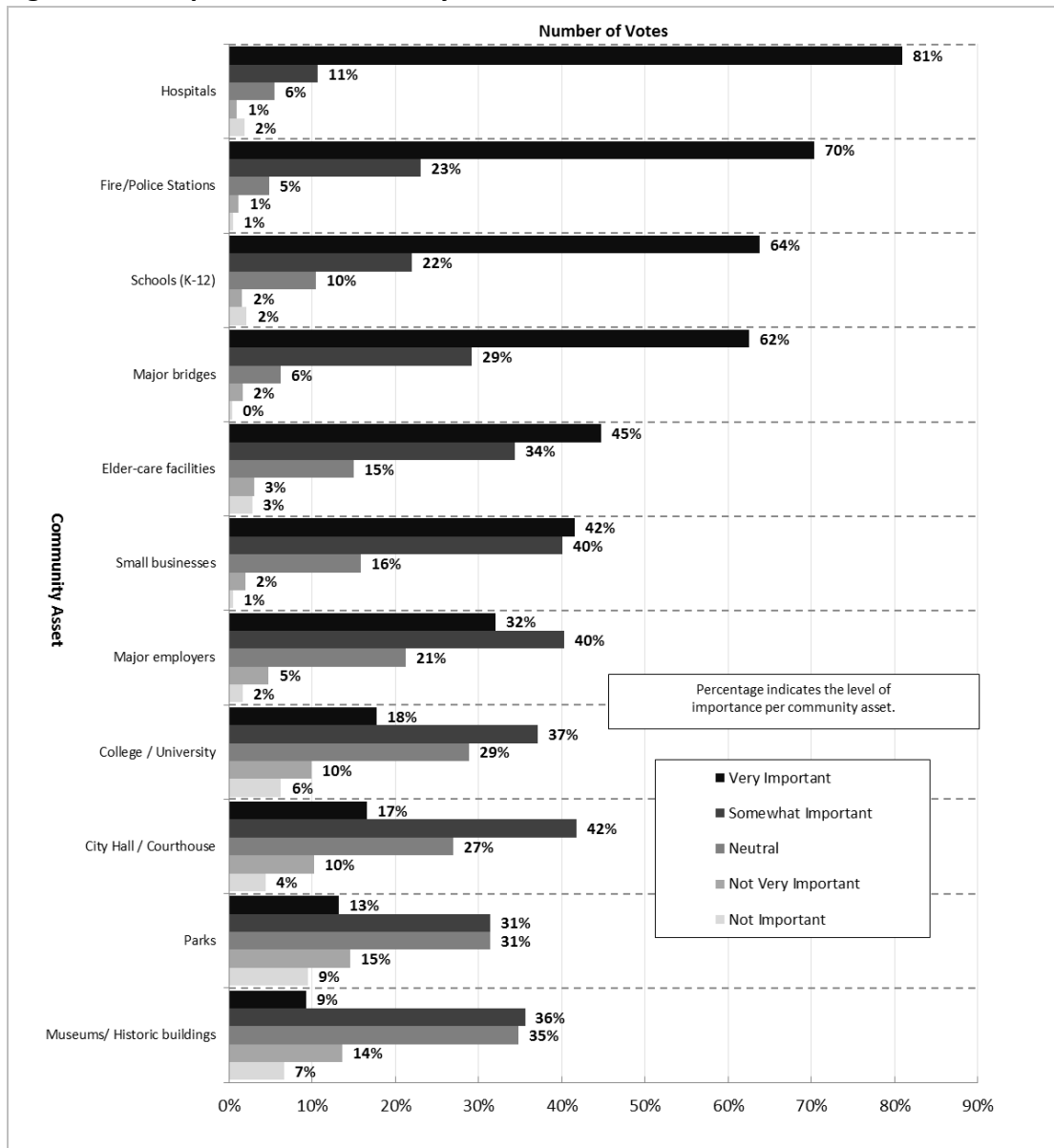
**Figure E-2: Respondent Perceptions of Community Vulnerability**



Source: 2011 NHMP Public Opinion Survey

Next, the survey asked respondents to indicate the importance that they attach to particular types of public and private community assets. As shown in Figure E-3, over 90-percent of respondents indicated that hospitals, major bridges and fire/police stations are very important or somewhat important to them. In addition, over 80-percent indicated that schools (K-12) and small businesses are very important or somewhat important to them. Parks were the least important to survey respondents, followed closely by museums/historical buildings, college/university, and city hall/courthouse.

**Figure E-3: Respondent Community Asset Valuation**



Source: 2011 NHMP Public Opinion Survey

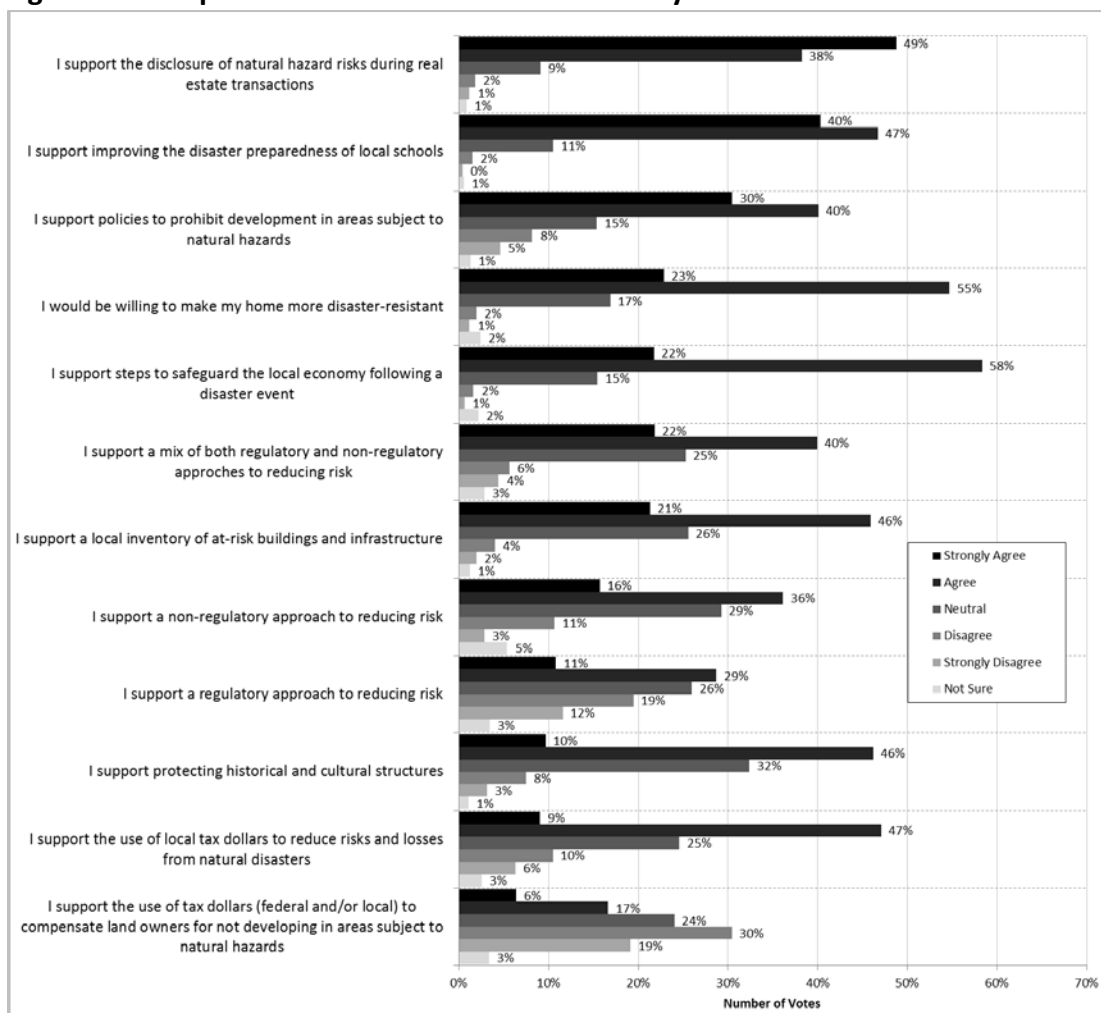
A number of activities can reduce your community's risk from natural hazards. These activities can be both regulatory and non-regulatory. Please check the box that best represents your opinion of the following strategies to reduce the risk and loss associated with natural disasters.

To gauge attitudes toward different types of mitigation strategies, the survey asked respondents to indicate their level of support for various risk reduction activities. Figure E-4 shows that while there is general support among survey respondents about protecting assets such as schools, homes, businesses and historic or cultural assets, respondents were somewhat mixed in their agreement about how to accomplish those protections.

With respect to specific asset types, 87-percent of the respondents strongly agree or agree that they support improving the disaster preparedness of local schools, over 80-percent of respondents strongly agree or agree that they support steps to safeguard the local economy, and over 77-percent strongly agree or agree that they would be willing to make their homes more disaster-resistant. In addition, 87-percent strongly agree or agree that they support disclosure of natural hazard risks during real estate transactions.

With respect to risk reduction strategies, respondents generally appear to support a mix of regulatory, non-regulatory and tax-dollar based approaches. For example, over 50-percent of respondents support the use of tax dollars to reduce risk and losses from natural hazards and over 60-percent indicate support for a mix of regulatory and non-regulatory approaches to reducing risk. That said, respondents overwhelmingly support the use policy strategies over the use of tax supported compensation strategies when specifically used to limit development in hazard areas. As Figure E-4 shows, fewer than 25-percent of respondents indicated support when specifically asked about the use of tax dollars to compensate property owners for not developing in hazard areas (with close to 50-percent disagreeing or strongly disagreeing with a compensations approach) while 70-percent of respondents indicated general or strong support for policies that prohibit development in areas subject to natural hazards (with only 13-percent in disagreement).

**Figure E-4: Respondent Preferences for Community Risk Reduction Activities**

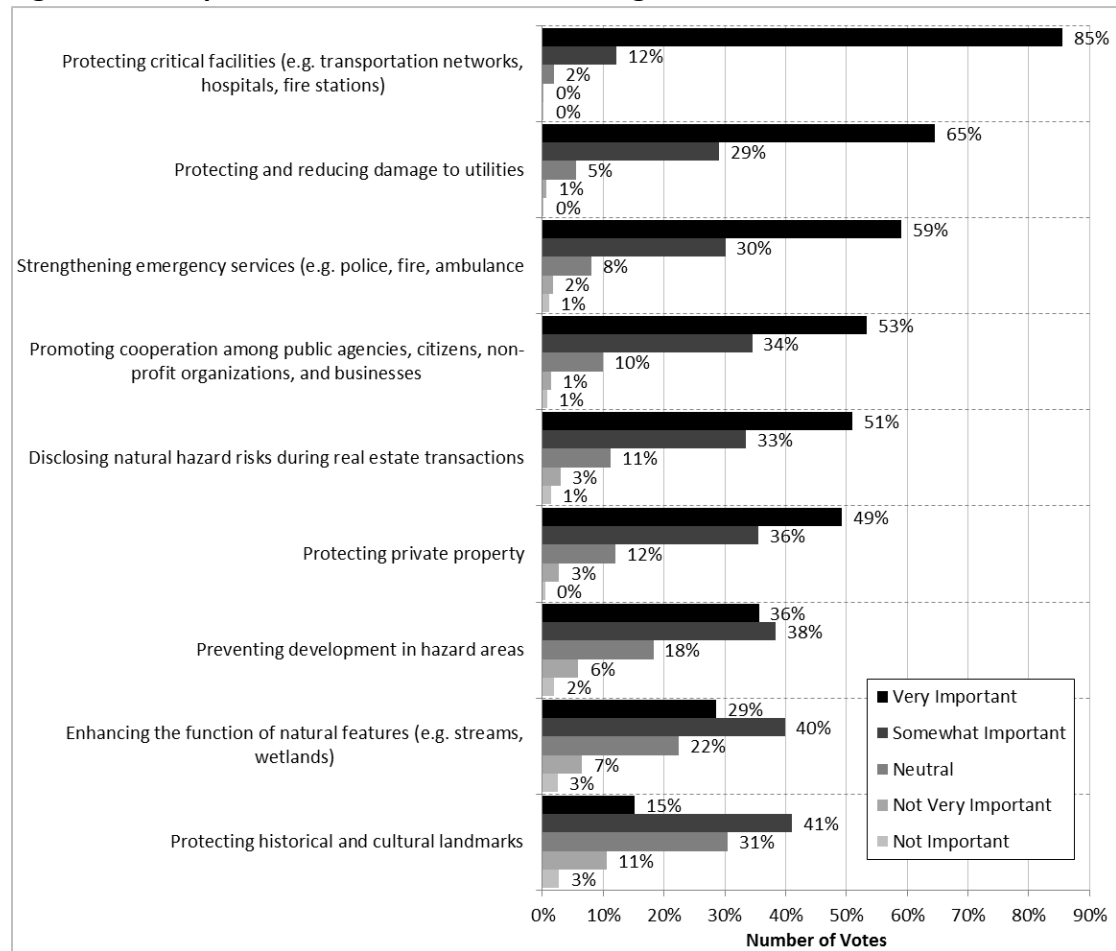


Source: 2011 NHMP Public Opinion Survey

The survey then asked respondents to indicate the level of importance they would place on a number of policies and priorities within their communities. The protection of critical facilities (e.g. transportation networks, hospitals, fire stations) received the strongest level of support with close to 100-percent of respondents finding it to be important or very important. Similarly, over 90-percent of survey respondents found protecting and reducing damage to utilities to be important or very important, with just under 90-percent who found strengthening emergency services (e.g. police, fire, ambulance) to be worthy of the same designation.

Roughly 50-percent of survey respondents felt that protecting private property and disclosing natural hazard risks during real estate transactions was important, as was promoting cooperation among public agencies, citizens, non-profit organizations, and businesses. Protecting historical and cultural landmarks was the lowest priority for survey respondents, followed by enhancing the function of natural features (e.g. streams, wetlands), and preventing development in hazard areas. Figure E-5 summarizes the results for priorities regarding planning for natural hazards in the region.

**Figure E-5: Respondent Natural Hazard Planning Priorities**



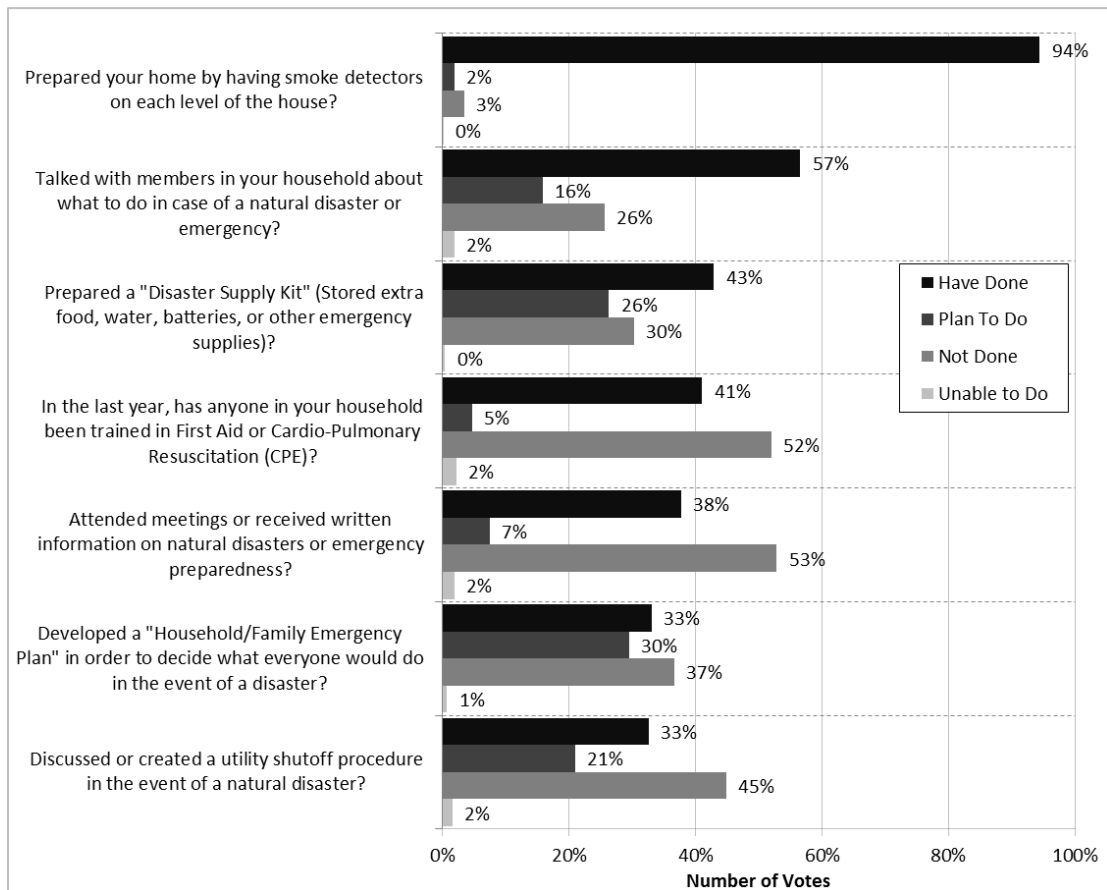
Source: 2011 NHMP Public Opinion Survey

## Mitigation and Preparedness Activities in your Household

This section provides an overview of household level natural hazard mitigation and preparedness activities in the Mid-Columbia region.

Over 56-percent percent of respondents claimed to have talked with members of their households about what to do in the case of a natural disaster or emergency. In addition, 43-percent had prepared a “Disaster Supply Kit” which entails storing extra food, water, and other emergency supplies, while 41-percent were trained in first aid or CPR during the past year. Nearly 95-percent of respondents had placed smoke detectors on every level of the home while more than a third of respondents claimed to have attended meetings or received information on natural disasters or emergency preparedness, developed a “Household/Family Emergency Plan,” and/or discussed/created a utility shutoff procedure in the event of a natural disaster. Figure E-5 summarizes all of the activities that respondents indicated they have done, plan to do, have not done, or were unable to do to prepare for natural disasters.

**Figure E-5: Activities that Respondents Have Done, Plan to Do, Have Not Done, or are Unable to Do**



Source: 2011 NHMP Public Opinion Survey

## General Household Information

Demographic questions provide a statistical overview of the characteristics of the respondents. This section asked respondents about their age and gender, level of education, median income, race, ethnicity, and length of residence in the state of Oregon.



### **AGE AND GENDER**

Table E-9 shows the age range of survey respondents. The median age of survey respondents was 55-64 years old.

**Table E-9: Age of Survey Respondents**

<b>Age</b>	<b>Percent</b>	<b>Number</b>
<19	1%	5
20-24	2%	18
25-29	2%	19
30-34	3%	23
35-39	5%	43
40-44	6%	56
45-49	7%	65
50-54	12%	111
55-59	14%	127
60-64	15%	141
65-69	13%	121
70-74	8%	69
75-79	5%	47
80+	8%	73
Q-14 total	100%	918

Source: 2011 NHMP Public Opinion Survey

Table E-10 displays the gender of survey respondents, where women accounted for 54-percent of the sample.

**Table E-10: Gender of Survey Respondents**

<b>Gender</b>	<b>Percent</b>	<b>Number</b>
Female	46%	428
Male	54%	502
Q-15 total	100%	930

Source: 2011 NHMP Public Opinion Survey

### **LEVEL OF EDUCATION**

In general, survey respondents were evenly distributed in terms of levels of education. About 16-percent of survey respondents specified they held a GED or were high school graduates, compared to over 31-percent who specified having attended some college or trade school. Just fewer than 35-percent of respondents had completed a college degree, while just over 16-percent of respondents had acquired a postgraduate degree.

**Table E-11: Level of Education**

Answer	Number	Percent
High School Grad/GED	147	16%
Some College/Trade School	291	31%
College degree	323	35%
Postgraduate degree	149	16%
Other	16	2%
Q-16 total	926	100%

Source: 2011 NHMP Public Opinion Survey

### **HOUSEHOLD INCOME**

Just under 22-percent of respondents had household incomes of \$30,000 or less, over 32-percent had incomes from \$30,000-\$60,000, roughly 25-percent had incomes between \$60,000-\$99,999, while just over 21-percent had incomes of \$100,000 or more.

**Table E-12: Household Income**

Household Income	Percent	Number
Less than \$10,000	4%	33
\$10,000-\$19,999	9%	70
\$20,000-\$29,999	9%	74
\$30,000-\$39,999	10%	86
\$40,000-\$49,999	10%	86
\$50,000-\$59,999	11%	89
\$60,000-\$69,999	9%	71
\$70,000-\$79,999	7%	59
\$80,000-\$89,999	6%	46
\$90,000-\$99,999	4%	33
\$100,000-\$149,999	14%	119
More than \$150,000	7%	56
Q-17 total	100%	822

Source: 2011 NHMP Public Opinion Survey

### **REGIONAL RESIDENCY**

Table E-13 lists the zip codes reported by survey respondents.

**Table E-13: Respondent Zip Code**

Answer	Percent	Number	Answer	Percent	Number
96086	0%	1	97063	3%	12
97001	0%	2	97065	3%	12
97002	0%	2	97067	1%	4
97004	0%	2	97068	6%	26
97009	2%	9	97070	2%	8
97013	3%	12	97071	0%	2
97014	2%	8	97081	0%	1
97015	2%	7	97086	1%	4
97017	0%	1	97089	2%	7
97021	3%	12	97140	0%	1
97022	1%	3	97206	1%	3
97023	2%	8	97219	0%	2
97027	1%	5	97222	4%	20
97028	0%	1	97267	6%	28
97029	0%	1	97750	4%	16
97031	22%	99	97756	0%	1
97033	1%	3	97801	7%	32
97034	2%	11	97812	4%	18
97035	3%	13	97813	0%	1
97037	2%	7	97818	1%	5
97038	3%	13	97823	1%	4
97039	4%	18	97830	6%	29
97040	2%	8	97835	0%	1
97041	4%	18	97836	1%	6
97042	0%	1	97838	8%	35
97044	0%	2	97843	0%	1
97045	8%	36	97844	1%	5
97049	1%	3	97862	4%	18
97050	1%	6	97868	0%	2
97051	0%	1	97874	2%	8
97055	2%	11	97875	1%	3
97056	0%	1	97880	0%	1
97058	28%	129	97882	1%	4
97062	0%	2	97886	1%	4
			Q-18 total	100%	456

Source: 2011 NHMP Public Opinion Survey

Of the seven counties the survey was mailed to, the most returned surveys came from residents of Clackamas County (31.8-percent). In Wasco County 201 surveys were returned, followed by 153 in Hood River County, and 122 in Umatilla County. Due to the survey distribution methodology, fewer surveys were distributed to Umatilla County than were to

Clackamas, Wasco or Hood River Counties, otherwise the return rate from the county may have more closely matched that of Clackamas County, which has a more comparable number of residents compared to the other counties in the region.

**Table E-14: Percent of Surveys Received Per County**

County	Percent	Number
Clackamas County	32%	297
Hood River County	16%	153
Gilliam County	3%	26
Morrow County	3%	25
Sherman County	5%	47
Umatilla County	13%	122
Wasco County	21%	201
Wheeler County	7%	64
Q-19 total	100%	935

Source: 2011 NHMP Public Opinion Survey

Over 80-percent of survey respondents have lived in Oregon for 20 years or more, roughly 10-percent have lived in Oregon for 10-19 years, and nearly 5-percent have for 5-9 years.

**Table E-15: Length of Oregon Residency**

Answer	Percent	Number
Less than 1 year	1%	5
1-5 years	4%	34
5-9 years	5%	44
10-19 years	10%	97
20 years or more	81%	754
Q-22 total	100%	934

Source: 2011 NHMP Public Opinion Survey

### **HOUSING CHARACTERISTICS**

Homeownership is an important variable in education and outreach programs, and knowledge of the percentage of homeowners in a community can help target the programs. Additionally, homeowners might be more willing to invest time and money in making their homes more disaster resistant. Over 87-percent of survey respondents are homeowners.

**Table E-16: Home Ownership**

Answer	Percent	Number
Rent	13%	119
Own	87%	808
Q-23 total	100%	927

Source: 2011 NHMP Public Opinion Survey

Nearly 79-percent of survey respondents live in single family homes, 12-percent live in manufactured homes, and five-percent in apartments; the other four-percent live in duplexes, condo/townhouses, or some other form of housing.

**Table E-17: Housing Type**

Answer	Percent	Number
Single-family home	79%	710
Duplex	1%	5
Apartment (3-4 units)	1%	8
Apartment (5 or more units)	4%	35
Condo/townhouse	2%	16
Manufactured home	12%	112
Other	2%	18
Q-24 total	100%	904

Source: 2011 NHMP Public Opinion Survey

#### **RACE AND ETHNICITY**

Just under 97-percent of survey respondents specified white as their race; of those that replied, only 28 (roughly three-percent) specified a race other than white. Table E-18 presents the results.

**Table E-18: Respondent Race**

Race	Percent	Number
American Indian or Alaska Native	2%	16
Asian	1%	12
Black or African American	0%	3
Native Hawaiian or Other Pac Islander	0%	1
White	96%	879
Q-20 total	100%	911

Source: 2011 NHMP Public Opinion Survey

With respect to ethnicity, just under two-percent of survey respondents self identified as Hispanic or Latino, whereas US Census figures suggest that the number should be much higher for the region. For example, nearly 15-percent of the population in Wasco County is reported as Hispanic or Latino in origin, compared to nearly 24-percent in Umatilla County.

**Table E-19: Respondent Ethnicity**

Ethnicity	Percent	Number
Hispanic or Latino	2%	16
Not Hispanic or Latino	98%	826
Q-21 Total	100%	842

Source: 2011 NHMP Public Opinion Survey

## Written Responses to Open-Ended Questions

This section includes the transcripts of respondent answers when checking the “other” option provided in some questions. In addition, we’ve included comments provided by respondents at the end of the survey.

Question 1: During the past five years in the county you currently reside in, have you or someone in your household directly experienced a natural disaster such as an earthquake, severe windstorm, flood, wildfire, or other type of natural disaster? Other:

- Electrical outage
- Excess air pollution related to coal-fired plant and/or coal transported through Wasco County
- Hurricane
- Large fallen trees
- Rainstorm – very heavy
- Solar flares (emergency pulse)
- Unseasonable freeze, crops killed
- Water spout
- Wild animal damage

Question 2: How concerned are you about the following natural disasters affecting your county? Other:

- Airborne pathogens
- Anarchy
- Animal/plant virus infection
- Asteroid annihilation
- Chemical spill
- Combinations of . . .
- Corona mass ejections
- Dam failure (3)
- Dangerous wild animals
- December 21, 2012
- Depression & hunger
- Electrical outage
- Fog
- Government exploding more
- Hail
- Human cause (fallout)
- Ice storm
- Incompetent government @ all levels
- Large fallen trees (2)
- Mt. Ranier erupting
- Nuclear meltdown/war
- One of dams break
- Radiation from Hanford
- Reservoir above us getting damaged & flooding downhill on top of us
- Severe rain storm
- The Dalles dam breaking
- Tornado (2)
- Tsunami
- Tsunami evacuation zone

Question 4: From whom did you last receive information about how to make members of your household and your home safer from natural disasters? Other:

- Books (2)
- Boy Scouts & school projects
- CERT Training through Fire Dept.
- Church (4)
- Coast to Coast - George Nory
- CSEP
- Discover Channel, OPB, History Channel
- Emergency department of some type
- Employer (15)

- Employer CERT team
- Family
- FEMA
- Fire Department (12)
- Fire department distributed “Fire Preparedness” brochure
- Forest service
- Internet (4)
- Internet blogs
- Local health fair, community events
- Magazine
- Myself, I’m a former combat sailor (Panama 89, Desert Shield, Desert Storm)
- Myself, I was in a flood in Ashland that ruined the water & sewage plant
- Never
- None
- Providence Health Fair (hospital)
- Reading
- Safety commission
- School (2)
- Self
- Self-Google search
- Senior center
- Talk radio conservative
- Training
- TV commercials
- TV Outdoor Channel
- Web
- Work on disaster control committee OHSU library

Question 5: Whom would you most trust to provide you with information about how to make your household and home safer from natural disasters? Other:

- Books (3)
- Churches (10)
- Coast to Coast – George Nory
- Common sense
- Community events
- Consumer Reports
- County sheriff
- Department of Forestry
- Depends on what kind of disaster
- Drinking water supply
- Fellow church members
- Fire department (4)
- Fire department/police (2)
- God
- Hospital
- Internet blogs
- Internet research
- Mortgage lender
- Multiple sources preferred
- Law offices
- Local government agencies
- Local police department
- None
- Not the government!
- Personal research/internet
- Police
- Self (3)
- Senior center
- Several sources – best
- Someone who has gone through disaster
- Talk radio conservative
- Utility services

Question 6: What is the most effective way for you to receive information about how to make your household and home safer from natural disasters? Other:

- Churches (9)
- Door-to-door “hangers”
- Fire department/police
- Government

- Internet blogs
- News podcasts
- Newspapers
- Online, institution info

- Online publications/websites
- Read book
- Sheriff's office
- Website

10. Next we would like to know what specific types of community assets are most important to you. *Other*

Rating	Community Asset
1	Active senior center
1	Active volunteer opportunities
1	Agriculture
1	Airports (2)
1	Ambulance
1	Animal shelters
1	Bridges
1	Broadband
1	Children!
2	Chamber of Commerce
1	Child abuse services/facility
1	Churches (12)
1	City maintenance
1	City works
1	Clean air
1	Columbia River (2)
1	Communications (3)
1	Community hall
1	Cultural arts
1	Dams (8)
1	Disaster plan
1	Dog & cat rescue
1	Ecological resources (2)
1	Education
1	Electrical substations
1	Electricity (6)
1	EMS
1	Evacuation routes
1	Family
1	Family farms
1	Farms (4)
1	Fire/ambulance
1	Food supplies/banks (19)
1	Forests
1	Foster care homes
1	Fuel availability (2)
1	Gas (3)
1	Geological study
1	Grain storage & shipping facilities
1	Hardware/lumber stores
1	Health Dept.
1	Highway/street maint. (2)
1	Highways/streets (17)
2	Highways/streets
1	Homes (2)
1	Humans
1	Individual property
1	Internet access (2)
1	Jobs
1	Lake

Rating	Community Asset
1	Laundromat
1	Livestock facilities
2	Library (9)
1	Local Catholic church
1	Local general practice MDs
1	Local medical clinic
2	Local rural veterinarian
2	Meals on Wheels
1	Local shopping
1	Medical clinic (7)
1	Mentally ill facilities
1	Mountains/trees/streams (2)
1	Movie theater
1	My apt.
1	National forest
1	NORCOR
1	Orchards
1	OSU Extension/4-H
1	People
1	Pharmacies (2)
1	Police/sheriff
2	Pool
1	Post Office (3)
1	Power infrastructure
1	Prisons
1	Public transportation (5)
1	Radio/CB
1	Range land
1	Recreation (3)
1	Red Cross (2)
1	River health
1	Scenic view
1	Security/safety (2)
1	Sewer
2	Sewer
1	Sheriff's Dept. (2)
1	Shopping areas
1	Sidewalks
1	Social services
1	Telephone (4)
1	Utilities (11)
1	Walking trails
1	Water sources (12)
1	Water for farming
2	Water supply
1	Water treatment
1	Wilderness areas (2)
2	Wildlife/fish
2	Wildlife
2	Wineries



Question 16: Please indicate your level of education. Other:

- 11<sup>th</sup> grade (2)
- Associates degree
- Automotive engineering, fire science degree, fire science instructor (retired)
- D.M.D., M.D., Ph.D.
- Dropped out of high school
- Extensive post-grad studies
- Half way through master's program online
- I got to the 9<sup>th</sup> grade, but did not finish
- JD, UO law school
- Masters in music
- Navy schools
- Nuclear medicine technology
- Post-master certification
- Quit high school to join the army
- Still in high school

Question 24: Do you own or rent your home? Other:

- 3 livable quarters, all separate
- 3,000 ft w/2 story garage
- Apartment (2)
- Apartment in single family home
- Retirement community
- Cracker box
- Farm (3)
- Farm w/outbuildings (2)
- Live with family
- Ranch (3)
- Ranch w/bunkhouses
- House
- Commercial property
- RV
- Travel trailer

## Additional Comments

We received the following comments in response to the “Please feel free to provide any additional comments in the space provided” box at the end of the survey.

- You should be aware that I live in an apartment at Willamette View Retirement Community and preparedness is ever present in the general and overall planning in programs and printed word.
- Floods if all Columbia dams burst.
- Thanks for your interest in our community. U of O is positioned to use evidence-based science to evaluate/recommend/prioritize strategies to mitigate the disruptions of likely national disasters. Before acting, most citizens must be energized to prepare based upon credible & direct advice.
- Churches and schools are important for 1) comfort, 2) familiarity, 3) size for housing large groups, 4) willingness to be open for the public. I saw nothing suggesting the importance of churches.
- I thank God for your efforts to make us safe.
- 1) It would be very useful to discover locations of local community buildings that would provide emergency provisions. 2) Taking a quick seminar regarding emergency things-to-know.
- Income info should have NO effect on any questionnaire – there are stupid wealthy people and other very intelligent poor people, i.e. example – people running for elected offices – there sure are some “real sinners” out there!
- I feel there needs to be help for land owners to clear brush to prepare for wildfire in areas, also as land owners.
- The big earthquake is coming. Oregon must be ready.
- Building codes are too easy-going knowing that the sub-Cascadia fault line is waiting to happen. In other words, the prescriptive path for building is too lenient.
- My answers are based on the fact that I live in a disaster-free area, mostly.
- Due to my health and age I live in an assisted living facility.
- I neither trust nor rely on government for anything. I have ZERO confidence in the propaganda machine that is our current print and broadcast media. I trust only myself and my family. We will survive.
- I would not support any proposals for tax increases!
- Biggest threat is a major earthquake affecting the entire Pacific Northwest region. Public seems unaware of this threat from Cascadia Subduction Zone.
- I feel wildfire is by far the most problem in the Eastern Oregon area. Now that Ordinance is almost closed I would like to see “Oregon Emergency Management” set up to build fire guards now. It would put lots of people to work and we sure do need that and next summer is too late to start building them. We had lots of cleared areas many years ago. Now railroad and wheat farmers buy insurance and don’t have fire guards.
- As I and my family only moved to Oregon in January 2008 from the U.K. I am still not familiar with many of the situations referred to in this survey. I am sorry I cannot be more helpful.
- As a geologist in OR & WA, earthquakes are the biggest concern facing our area in the near future. Our infrastructure and non-reinforced structures will not withstand even a moderate subduction zone quake. Geologic history has shown repeated 9+ magnitude earthquakes, most recently in the 1600s. Government will cease to function without our

bridges and roads. Serious effort needs to be dedicated to identifying vulnerable features and buildings.

- I applaud your efforts to improve and comply with disaster preparedness and its requirements.
- I own an adult foster home. I have emergency preparedness plan, maps, supplies, food, water, info on every single person in my home, and phone numbers of contacts in case of emergency. I and my staff are as prepared as anyone can be. A lot of survival depends on how quick you are at making decisions and right decisions under pressure. So have plans, practice procedures, and if it happens hopefully everyone reacts correctly based on practice.
- I lost faith in FEMA after Hurricane Katrina and in info given by top government officials (“duct tape”). But I think the government (Fed and local) should show leadership in these areas. Partnership with university may help with credibility. I also don’t trust the media to report it accurately enough. These days they often seem to oversimplify or over-sentimentalize.
- Don’t want to see implementation of disaster plans as reason to hire more government employees.
- Should ask type of social economic data for people 1) Do they work? 2) Do they work for a) emergency service, 2) critical infrastructure, 3) government, 4) disaster mitigation group, 5) school. 3) Do they have children? 4) Is there anyone in the household with disabilities? This will allow for more detailed trenching & more focus on community efforts.
- Due to cutbacks I’m not too confident Umatilla County can provide any realistic disaster plan or relief. Ensuring electrical utility service/restoration is most critical for disaster recovery in my area.
- Hope the time, effort, and expense of this survey results in information that will be used to plan for dealing with natural disasters. If not, this survey is a waste of time and expense.
- We have no school, hospital, or elder care facilities. Our daycare facilities are important. We have pre-school but no permanent site. Also, we did (5 to 6 years ago) have a county-wide power outage and I called everywhere to find fuel for stranded motorists – the only gas station in Sherman County that can still pump gas is the station (Texaco @ the time) at the east end of Rufus! Shaniko in Wasco County could not pump gas either. My husband is an EMT/firefighter and regional safety officer for ODOT. He will respond (either as ODOT or a volunteer) in the event of a natural disaster and I and extended family will do as he says if he’s able to communicate with me. More planning and preparedness would be good though so I know exactly what to do, how to do it, and when to do it! Thank you for your survey!
- It’s hard to relate to any natural disasters in our area as we’ve never had any real ones in my 80 years except strong winter storms. Our town is on a hill so is pretty immune to these.
- Thanks for doing this. My best to all in 2012.
- We would be interested in a disaster training – not via video or internet – from a line person.
- Several years ago I was involved in a severe dust storm traveling on I-84. In this dust storm a number of people were killed in highway accidents. It was really terrible. Since this time, not much, if anything, has been done to mitigate or regulate the high levels of

agricultural tillage adjacent to the interstate highway. I would suspect that the agricultural operators along this highway receive significant federal subsidies. Why not regulate this?

- I never had understood why people develop in possible high risk areas such as on rivers or bluffs, and expect someone else to pay for loss. I am not for regulatory action or policies to prohibit owners from doing what they want, however, I do believe people should be responsible for their actions.
- FEMA is bungling and incompetent at best and looks like a criminal dirty tricks outfit. Not only did they fail @ New Orleans, they attacked people who did help. Recommend disbanding of FEMA, prosecute FEMA. They have much to answer for and have done no good. The kind of emergency they want is to attack people and put them in slave labor camps.
- I would like to recommend that at least once a year the counties should do a Practice run just in case there is a natural disaster. That way people won't freak out and cause more problems if a disaster happens.
- Concern for seniors who retire in rural places. How will their residence be identified for providing assistance in a major disaster? The question applies to handicapped as well.
- My family has had some unhappy experiences with FEMA. A bridge over a creek built by the owners for approximately \$1,200 was flooded and when they tried to borrow money to rebuild were told that they must have an engineer fly over inspection, etc. to the tune of approximately \$10,000 in order to get a loan. Even though this was not a grant but a payable loan. Needless to say, they did not use FEMA loan and found it a big joke that FEMA was there to help in emergencies!
- Education on preparedness is essential (widespread). Community preparedness is key – community involvement, truth about regional hazards would help people to prepare. Government cannot be relied on for truth. Media cannot be relied on for truth. Possibly very proactive community education workshops through fire, police, schools for the entire area. Some people's emergency preparedness = a gun → they just take what they need by force instead of stocking up.
- We experience wildfires or a threat of one nearly every year. Our volunteer fire departments are a great comfort. They respond immediately and perform with unbelievable expertise.
- 1) We need more local first aid classes. 2) Posting notices in our Post Offices is a good way to communicate. 3) All of our local utilities need to be more involved in educating for disasters.
- Fuel (\*e.g. dead wood) for wildfires in the forests is one of the main hazards in our area.
- We live in a remote area, in a canyon, crossing creeks, accessible from one direction only. We are extremely concerned about wildfire & flood due to our lack of accessibility. We have been instructed by a fire department visit how to make our area more fire safe.
- An earthquake near Spray would isolate (100-percent) the town from outside help or leaving for any reason. Surrounded by a lot of rock rims. One way in would be air!
- Good info, needs to be done. Good survey!
- Encouraging employers to train employees would be another outlet for learning. My employer, Mid Col Center for Living, has taken an upfront, prepared, and involved approach to emergency and/or disaster awareness. I think all employers should do the

same. I have taken my training home & shared w/my family & friends it is comforting to know we are prepared.

- The time taken for a federal agency to act/react places much undue strain on those most affected. The recent Nehalem flooding and the FEMA antics were an embarrassment to the citizens of Vernonia & surrounding area.
- About 7-8 years ago I attended a Red Cross Preparedness meeting to deal with the possibility of a chemical depot leak and its effects on the populace. Fortunately, we never had to find out how the plan worked!
- Fish & wildlife don't allow streams to be cleared to avoid flooding. Fish seem to be more important than people or property to them!! Not a good way to be.
- I live in a home for the elderly, about 100 people. I answered the questions about where I live.
- Some of the answers I gave are because I don't trust the people who would ultimately make the decisions – especially environmentalists. I think some are not in the majority of our population to realize the basic needs. In other words, they go overboard and only have their opinion. Thank you.
- Organize acts, curb disobedience. Could result in serious consequences & would refute an organized response.
- Wildfire, wind, & ice storms are our biggest concern here. Maintaining the farming lifestyle is more important than preserving buildings. Saving farms leads to continued support of the community as farms continue to generate income.
- Education is much stronger than regulation because you can achieve voluntary action; nobody has resources to enforce regulations after they are written.
- I am very concerned about the long-term detrimental effects of extensive pesticide use in this area on the many orchards here and the cross-contamination with the drinking water, both municipal and even individual wells that are privately owned. I see what appears to be a statistically larger developmentally challenged population here and wonder if there is a connection to the extensive pesticide use and water runoff.
- Resources need to be developed, determined, and maintained by local neighborhoods and communities because in the event of a large disaster outside resources will more than likely be strapped or not available.
- I have worked in hospitals in nuclear medicine, s-ray, and radiation therapy for 38 years. Have been involved in nuclear medicine disaster preparedness in Arkansas and Oregon and gone through training for dirty bomb response. Worked at Mid-Columbia Medical Center in The Dalles, Oregon, for 22½ years.
- Thanks to those of you who are devoted to smart safety strategies. We do what we can, also.
- I feel that the emphasis should be on individual preparedness. Too many people feel that the government should & will be at their doorstep in an emergency. I feel that the information should be aimed at citizens.
- 1) Need community information as to where to assemble in a disaster. 2) Need education as to how to prepare as a public employee to help others. 3) Is a staging area in place for children and animals?
- Homeowners/buyers should be aware of potential risk, but government should not ensure again (e.g. flood) it.
- Our county/city has never held a meeting to inform the public of any disaster plan. I don't even know where they have emergency shelter or supplies.

- Utilities, utilities, utilities.
- Thanks for the opportunity to participate in your survey.
- We do not have a hospital in our county. Roads and bridges are very important to reach a hospital if Air Link cannot fly. The John Day River floods often.
- We live in a secure community & have very few natural disasters and Mexicans help me out a lot!!
- With global climate change and natural disasters increasing in frequency and severity it is a good thing that you are undertaking this work! I became particularly frustrated while trying to honestly complete this survey, especially Questions 11 and 12 and almost threw it in the trash. Why? Lack of definitions, examples, explanations, implications of answers, etc. Some of the questions seemed to me could only be validly answered by someone fairly well versed in land use planning, disaster planning, and management. Please understand that I find almost all surveys of any type frustrating and I throw them away, however, I believe in what you are doing, so I am taking the time to offer my comments. The survey would probably have gotten a better feeling for citizen attitudes, ideas, and priorities and thus more accurate and meaningful results if there had been some type of **introductory “white paper”** document discussing the hazards and explaining the current principles of natural hazard mitigation and providing some of the information mentioned below. Q1: Minimizes the import by framing it only in the personal context – “...have you or someone in your household directly experienced...” The questions should have started with “Which natural disasters have your county experienced in the last 4 years?” Q6: The “Other methods” seemed to actually be sources of the information, not ways of receiving information. Q11: “... regulatory approach to reducing risk, “...non-regulatory approaches.” Examples of regulations that might be used and examples of non-regulatory approaches would be helpful to know. “support policies to prohibit development in areas subject to natural hazards.” Private property? Public lands? Examples of such policies. Use of local tax dollars to reduce risks and losses from natural disasters – examples. Steps to safeguard the local economy following a disaster – examples. Q12: Protecting private property? By whom? How? Who pays? I cannot accurately answer this question without knowing the context. In a “white paper,” ODF’s wildfire impact/protection self-certification program for Forestland-Urban Interface Lots would be a great example. What does “enhancing the function of natural features” mean? Q11 and 12: Disclosure of natural hazard risks during real estate transactions – Who is to be the official body to make these risk determinations including the probabilities of such occurrences? Will insurance companies be able to use this information to “cherry pick” clients offering to insure some clients/properties, both public and private, and not others?
- We believe successful disaster management depends on people working together in specific local neighborhood groups rather than depending on community-wide response by EMS. Help with organizing these groups on a community-wide scale is necessary.
- Thank you for bringing this to our attention. It lets us know what we need to be thinking about doing to prepare for a disaster.
- I received far more disaster info (i.e. hurricane) the few years I lived in Florida than I have ever received while living in Oregon.
- We have spent about \$30,000 in the last two decades to flood-proof our residence. Our neighbors have paid/constructed similar amounts to control flood/debris flow problems!

- Because the questions were pretty general there was a need of more specific information (Q11). The survey was a good vehicle to have a discussion with our children and grandchildren. We did the survey at a family dinner.
- I do understand that government needs to be involved in mitigating/preventing natural disasters, but I also believe citizens and landowners have the same responsibility. I don't believe tax dollars should be used to pay landowners when they buy property and it has potential disaster areas, i.e. building a house on an ocean beach.
- We live near the Columbia River and experience windstorms frequently throughout the year. More information about "severe windstorms" would be beneficial.
- There are several homes and properties not occupied or bank-owned in the area. This is a hazard as well since they're not being maintained or kept up. These can be disasters waiting to happen. It's frustrating when the bank won't sell until prices are up.
- Wheeler County has a population of around 1200 – no radio, no newspaper! We have no way to communicate with residents in small communities that are 75 to 90 miles apart. Our officials are elderly and for the most part uneducated or unwilling to act on behalf of citizens. The best thing the U of O could do is provide us with a way to communicate. Cell towers, cable, radio stations, etc are all needed.
- I think people who live in cities are more likely to be unprepared. There is an assumption that the state, FEMA, or National Guard can take care of them. If the disaster is widespread this is not true. When a widespread disaster strikes, people have to rely upon themselves and assist others as possible. I've lived on a farm and in cities. Farm people know their neighbors. I believe community building and outreach are important aspects that are missing, especially in areas of population density. If a large disaster strikes Facebook & Twitter could go down – even if it doesn't it does not substitute for knowing one's immediate neighbors. We insulate ourselves – from neighbors and extreme possibilities.
- Both have had first aid training. One had CPR training, many hours of fire fighting. We have landscaped our property protecting in case of flooding.
- In the future you should define the "use of a regulatory approach." I don't think many "civilians" are familiar with the jargon. Jargon should be avoided when at all possible in public surveys.
- I feel people should be able to build where they want. However, if they choose to build in a natural disaster prone area and the natural disaster occurs, tax @ shouldn't go to help them. They knew!
- Small towns such as Pendleton are home to many intelligent, flexible, and self-sufficient people who I am confident, once they learn to communicate better, will make the changes necessary to weather any storm.
- Would be very excited to attend informational meetings on this subject. We as a family are not prepared for a disaster. This makes you think about the issue.
- RE: #20 & 21. Hispanic is no more white than Indian. Why isn't there a race for Hispanic? Just saying!
- In the event of a national disaster information on preparing for pets would also be appreciated.
- I want to thank all who are working with this organization. This survey has brought awareness to me and everyone around me that I have talked to about this matter. Thank you.

- As a small business owner I already filled out three sets of reports each year to BATF, Oregon Fire Marshall, and Fed DOT. Also pay \$700-800 to file reports. Don't need any more paperwork to fill out or fees to pay.
- The Sheriff's Department employees do not understand or know local ordinances. Planning Commissions do not support environmental issues. All departments refuse to comply with ORS 192 preventing citizens from access to information.
- My husband and I took the time to fill out this questionnaire because we've been concerned about what would happen if we were to have a natural disaster occur in The Dalles-Hood River, Oregon area. To the best of our knowledge the two most devastating disasters that could occur in this area would be an earthquake and Mt. Hood could erupt. With the major fault line that we have in this area, along with the chance of Mt. Hood could erupt, we truly feel that the residents in this area have not been prepared properly for either of those disasters. If either of these were to occur, the entire area on both sides of the river would basically be shut off from the rest of the state on both sides of the Columbia River. We have been extremely fortunate for many years not to have incurred a disaster, but our day is coming. We truly feel that this area needs to be educated on what to do and where to go sometime in the near future, before it's too late.
- Mostly I'm concerned with wildfire. We have two homes, paid for. One is in the urban interface in Washington State. I keep my property clear of brush and downed trees, but it is only a matter of time until the west burns given all the bug kill.
- Earthquake is my biggest fear of property damage and possible loss of life.
- Thanks for asking! Good luck with your results.
- No mention of housing & feeding of victims. Don't wait for FEMA.
- See "Oregon At Risk" from OSSPAC.
- In future surveys, either allow "mixed" for race and ethnicity, or don't ask. It makes a mixed-ethnicity person like me have to choose one parentage over another. As for race, in addition to inter-'racial' marriage, there is no biological/scientific basis for the term. Also, this should be literacy-adjusted. Many of the words would stump many people. This is a very high-literacy level survey. Is this being made available in Spanish?
- Oregon residents who are not accustomed to earthquakes really need to be educated. News media needs to stop acting like they want a serious natural disaster to occur in Oregon. Education needed for everyone if there is a big earthquake on the Cascadia Subduction Zone.
- This is a wonderful idea. I look forward to receiving info on how to plan for disasters.
- 1) Every household needs to know the current route of evacuation! Need to teach this in the schools. 2) Need fire extinguishers or garden hoses ready to go in case of indoor/outdoor fires (burn barrel ban!). 3) Our hazard in Maupin is the railroad & tanks that haul chemicals. The general public has not been informed of any siren system & evacuation route.
- I live in a three-story apartment building built in the late 60s. If there is an earthquake it will all come down and I am on the bottom level. Also, I lived through Hurricane Andrew in Florida so I know exactly what preparedness can do.
- I'm worried about unsafe trees falling on our house.
- 1) I believe we have two major threats – windstorms, resulting in downed trees, damaged buildings, etc. This can happen any year. It should be a foundation from which



to build disaster preparedness. 2) The other threat is earthquake. When it finally does hit, it might be ugly – if we are practiced at one we will be better prepared for two.

- Police, fire, medical very important for us all. Thanks. Our gorge is most beautiful and loved by all. Recycling, peace, and harmony for all hopefully. Thanks.
- Sheriff's offices were not listed. While similar, they perform a more demanding service in rural counties than police. In Wasco County they cover almost 3,000 miles as opposed to less than 10. They have responsibility for search and rescue, marine, forest, animal control functions, and jails in addition to law enforcement duties, all of which are critical in emergencies.
- I think people in rural areas are generally more prepared because they experience power outages (along with water loss) more often and have become more self-reliant. I don't want a nanny state! We don't need government doing more things for us. We need government doing less things to us.
- We do not trust FEMA for anything!
- For me, as a senior citizen, it would be helpful to get a brief written summary of what I should do in my area of town for listed emergencies. Evacuating is not an easily accomplished option for many of us as senior citizens. Would buses (school?) be a possibility? Pets?
- Have lived in earthquake-prone areas. Also high wind areas. Always have disaster kit at ready.
- I believe in less government regulation and I do not think there is tax money available to pay for some of the things implied here. Our county is almost broke and so is our state & federal government. People need to take more care of themselves and not depend on the government to do so.
- We are very concerned about wildfires in our area. We are surrounded by wooded acreage with a large electrical line and a natural gas line to the east of our property.
- This county couldn't help anyone. They argue over everything. The government is in the way to progress. Red tape, no jobs, only stoppage from government. We had a diabetic visit who forgot their needles – no one had any available. Clinics or ambulance said it was not their job. In a disaster? Laughing out loud. You better look out for yourself if you visit here. Sheriff is 1 hour away. Better be packing a gun. Robbers get away with no consequences.
- I'm in a small town in Wheeler County. The need I see is how to care for these people in a natural disaster. In the rest of the state supplies of food would stop & they would come to this area. I think there should be stockpiles in each community.
- 1) Give homeowners more freedom to cut down very large trees near or around home, property, roads, infrastructures, etc. that they believe will cause major damage to these areas if trees should fall down from storms and/or natural or war acts. Permits and/or city requirements are to regulatory and leave dangerous trees in place. So please stop permits and regulations. We need to get these trees under control and away from private and public structures. 2) Every two to three days police, fire, and ambulance come down Hwy 43 in West Linn, Lake Oswego, etc. blaring their sirens. Could we have them train on highways outside city limits with sirens, and train in Hwy 43 with sirens off or maybe just once a month with them on. We don't know if it is something serious that they are going to or just training. This is also causing major noise pollution and disturbance during sleep hours with animals barking and we won't know when it is for real or not when something major happens such as disasters. Thank you so much.

- Might be a good idea to address special needs of rural landowners. These people have animals, livestock, and other features that may present unique circumstances in an emergency. Utilities are the primary asset I rely on, especially electricity which is important for heat, refrigeration, & well water. Earthquake or volcanic eruption is two major disasters I am concerned about that will have a major effect on Clackamas County. Special info, training, information, and survival kits would be valuable. Thanks for this opportunity!
- It is up to the owners of property to take care of themselves and their property, not the government. Neighbors and friends will take care of each other.
- As a survivor of an F-5 tornado in 1974 and then a blizzard in 1978 I strongly believe in disaster preparedness and possibly emergency exercises involving as many agencies as possible such as what Gary Brown did for Sioux City, Iowa, in 1989. They had an awesome response from police, fire, National Guard, volunteers, etc. resulting in lives saved after the crash of United 232. It would be great to have that kind of team ready to respond to any natural disaster!
- I don't know where to find the information needed to do the things listed in the household preparedness section.
- Community meetings are always on Saturday and I work. Evenings would be better.
- Stop spending money on light rail and use it to fortify road and utility infrastructure.
- Newspapers could print stories/maps, etc. occasionally to help inform the public of regular procedures, possible problems, escape routes, and who would be first responders to different types of events. So at least the public would have a "rough" idea in place.
- One area of disaster mitigation could be the promotion of PVSolar to offer a backup plan for electrical power should our utility grid breakdown.
- There needs to be more workshops or disaster meetings.
- The Native American, disregarding spiritual beliefs & customs, has more common sense than any other race/ethnicity. The Native American has always respected, preserved, and taken care of the land. They (American/Native Indian) take only what they need and preserve/protect what they don't need. The Native American is the best EPA ever. PUT THEM IN CHARGE OF ECOLOGY. They (Native Americans) don't rape the landscape. ASK THEM!!! Also, we need less, not more, federal government.
- We have very few instances of natural disasters. The worst have been freezing & destroying fruit trees and some destruction from high winds and dust.
- In Wasco County not enough information goes out to the public about preparedness programs. Can public access online a copy of programs?
- We had a large tree limb fall on cars and insurance wouldn't pay for anything because they say it was a natural disaster. And there was a flood once because the dam was full and the man who opened the gates of the dam was gone. Do you consider this a natural disaster or negligence?
- We have chemical facilities here with ammonia and weed & bug killers (all poisons) – most in large tanks. A disaster could trigger a second disaster. These tanks are located on the edge of town at a higher elevation than 98-percent of the town. The natural drainage would be into the town proper.
- I am a Red Cross volunteer and trainer.
- Brochure mailings explaining utility shutoff, emergency kit contents, quantity of food (days) to have on hand, good places for family members to meet if separated & why,

other issues regularly associated but not thought about during/concerning natural disasters. Have community information meetings made up of community citizens. If any of these exist make them more accessible/known about to community citizens. Thank you!

- In Wamic we are only concerned about flood because we are not allowed to clear the stream bed of three mile creek above and below town. We flood because the creek is forced to spread out because of overgrowth in the creek. The creek is dry for part of the year, yet we are not allowed to clean the creek. We flood only because of politics and nothing natural.
- Good idea – thank you for asking!
- I believe people should be advised on real estate documents if the home they are about to buy is built on an ancient landslide. As consumers we'd have no idea! I am shocked how few people carry earthquake insurance. To me, this is like a ticking time bomb situation like those who didn't insure in Louisiana before Katrina hit. Wish we'd help people understand the real quake danger here!
- This is a great thing to do. As a small community, a natural disaster would devastate our town.
- Thank you!!! Would be interested in the results. Number 9 was a little confusing ... human life is most important to me but in our rural area it is not likely to impact people.
- My experience is that my local fire department & U.S. Forest Service office had little/limited info readily available about fire prevention in small acreage residential zones in upland forest ecosystem. This should change with staff and related kits/packets of info easily accessible/no fee.
- Like the concept of personal preparedness for natural disasters, etc. Personal responsibility and gathering of info, etc. Don't totally agree with government agencies mandating policies or spending money on things that should be individual responsibility, etc., i.e. government really does things half as good for twice the cost.
- I'm very concerned that our county's grotesquely incompetent "planning" department could be involved in any activities that could affect safety or emergency response.
- Would like to know if there is a community facility where people can go if their homes are damaged (i.e. school gym, etc.).
- We have a wood stove in case electricity goes out. We have also strapped water heaters to walls & reinforced beams to floor joists with gussets. We have thinned out many tree limbs near house but still have more. Attending a meeting and receiving written info on preparedness would be very helpful.

This page left intentionally blank.