



Report for Portland Preparedness Survey

There were 2,970 responses to the public survey between February and April of 2016. Key results are summarized below.

Geographic Representation and Residency Tenure

Survey responses were received from all risk reporting areas and from individuals who live outside of Portland. 75.5 percent of all respondents indicated that they live within Portland.

When non-residents are excluded, the percent of responses from risk reporting areas is representative of the estimated population in some cases; however, there are some areas with under- and over-representation. Over-represented areas included: Northeast, Southeast and Southwest. Under-represented areas include: Central City/Downtown and East Portland. The remaining reporting areas were within 1 percent of the estimated population. See the table below for more information.

Risk Reporting Area	Estimated Population	Estimated Percent of Population	Percent of Survey Responses (excluding outside of Portland)
Airport	2,674	0.4%	0.2%
Central City/Downtown	37,987	6.2%	3.6%
Central Northeast	47,644	7.8%	7.1%
East Portland	148,712	24.2%	9.6%
West/Northwest	26,875	4.4%	4.9%
North Portland	68,047	11.1%	12.1%
Northeast	57,842	9.4%	15.9%
Southeast	153,952	25.1%	32.6%
Southwest	70,262	11.4%	13.8%

The majority of respondents who live in Portland have lived in the City for 11 or more years (62 percent). 26 percent of respondents indicated that they have lived in the City for more than 25 years.

The top three areas where all survey respondents indicated that they and their families spend the most time include: Central City/Downtown (42 percent), Southeast (34 percent) and Southwest (25 percent). When non-Portland residents are excluded the top three areas indicated include Central City/Downtown (43 percent), Southeast (40 percent), Southwest and Northeast (about 25 percent each).

Demographics

72 percent of Portland resident respondents self-identified as middle income and 13 percent identified their household as low income. According to American Community Survey (ACS) estimates, approximately 12 percent of Portland families are surviving on incomes below the federal poverty line.

When non-Portland residents are excluded 99 percent of respondents indicated that they speak English at home. Only 9 respondents indicated that they preferred languages other than English. The ACS estimates that limited English speaking households make up approximately 4 percent of Portland households.

72 percent of Portland respondents indicated that they own their home, while 27 percent indicated that they rent their home. The ACS estimates that 43 percent of the housing units in the City are renter occupied.

Approximately 9 percent of respondents indicated that they have physical or mental disability. According to U.S census estimates 8.5 percent of Portland residents under age 65 have a disability. 13 (about 7 percent) of respondents indicating that they had a disability also indicated that they were 65 years of age or older.

Respondents were able to enter their own racial identity rather than choosing from pre-determined options. Approximately 79 percent of respondents indicated that they identified as white/Caucasian or Anglo. According to ACS estimates, 78 percent of the Portland population is white.

Hazards of Concern

For Portland residents, the top three hazard of concern selected were: earthquake (96 percent), severe weather (51 percent) and drought (34 percent). Dam failure (3.9 percent) and space weather (8 percent) were the least likely to be selected. The top three hazards remain the same when non-Portland residents are included.

53 percent of Portlanders indicated that they had experienced one of the hazard of concern.

Thoughts on Preparedness and Mitigation

Portlanders indicated that they have made efforts to reduce risk to their families. Portlanders clear storm drains (50 percent), have made non-structural retrofits, such as securing a water heaters (42 percent), and have planted drought-resistant plants (33 percent). Only 6 percent of Portlanders indicated that they have purchased flood insurance, while 27 percent indicated that they have purchased earthquake insurance. 17 percent of Portlanders indicated that they had not done any of the options indicated. There were a large number of respondents who indicated that they had not taken these measures because they rent or live in apartment buildings or condominiums.

The top three things Portlanders have done to prepare for a natural hazard event include: obtained emergency food and water (58 percent), have an emergency kit at home (54 percent) and registered for public alerts (46 percent). Only 10 percent of respondents indicated that they had done nothing to prepare. When non-Portland residents are included, the results are similar.

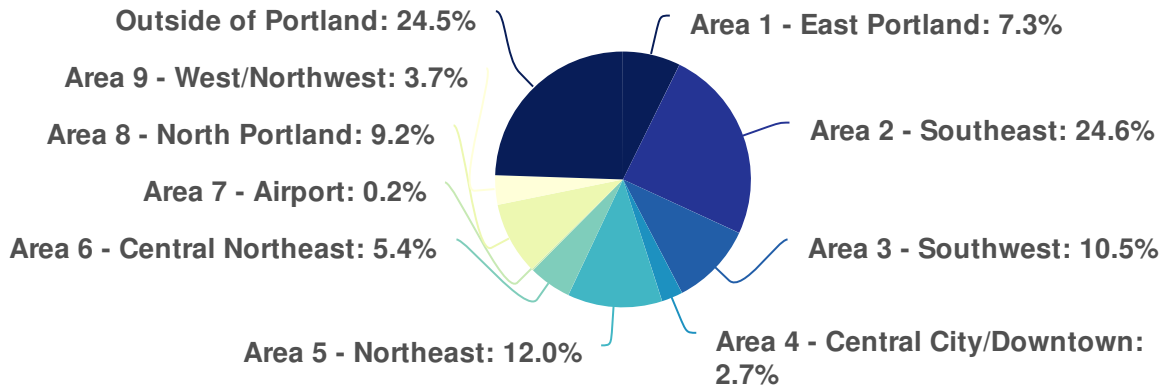
Portlanders indicated the top three reasons for not preparing for emergencies included: lack of money (40 percent),

being too busy (34 percent) and preparing being too overwhelming (32 percent).

Portlanders indicated that power outage (67 percent), water system damage (65 percent) and bridge closures (43 percent) would impact them the most. Responses were similar when all survey respondents are included.

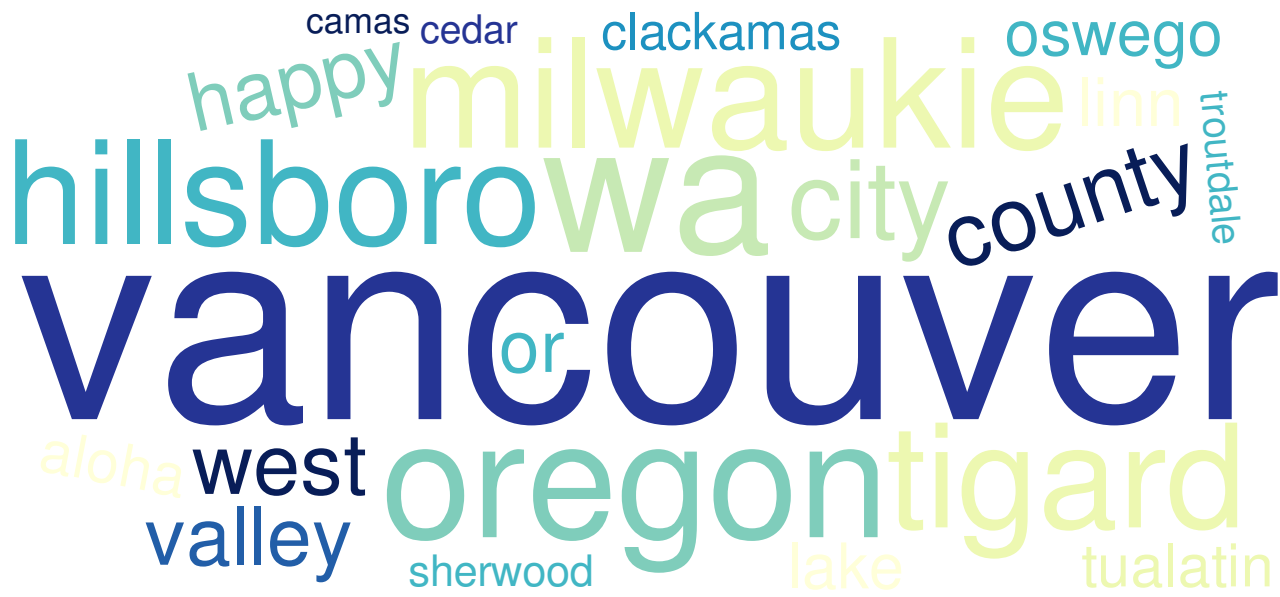
Portlanders selected strengthen infrastructure such as bridges, sewer lines and water pipes (85 percent), strengthen public buildings (44 percent), and help citizens reduce their individual natural hazard risks (36 percent) as the three most important things that the City of Portland government could do to reduce risk from natural hazards. Strengthening schools was also commonly mentioned.

1. Where do you live?



Value	Percent	Count
Area 1 - East Portland	7.3%	214
Area 2 - Southeast	24.6%	726
Area 3 - Southwest	10.5%	308
Area 4 - Central City/Downtown	2.7%	80
Area 5 - Northeast	12.0%	354
Area 6 - Central Northeast	5.4%	159
Area 7 - Airport	0.2%	5
Area 8 - North Portland	9.2%	270
Area 9 - West/Northwest	3.7%	109
Outside of Portland	24.5%	721
Total		2,946

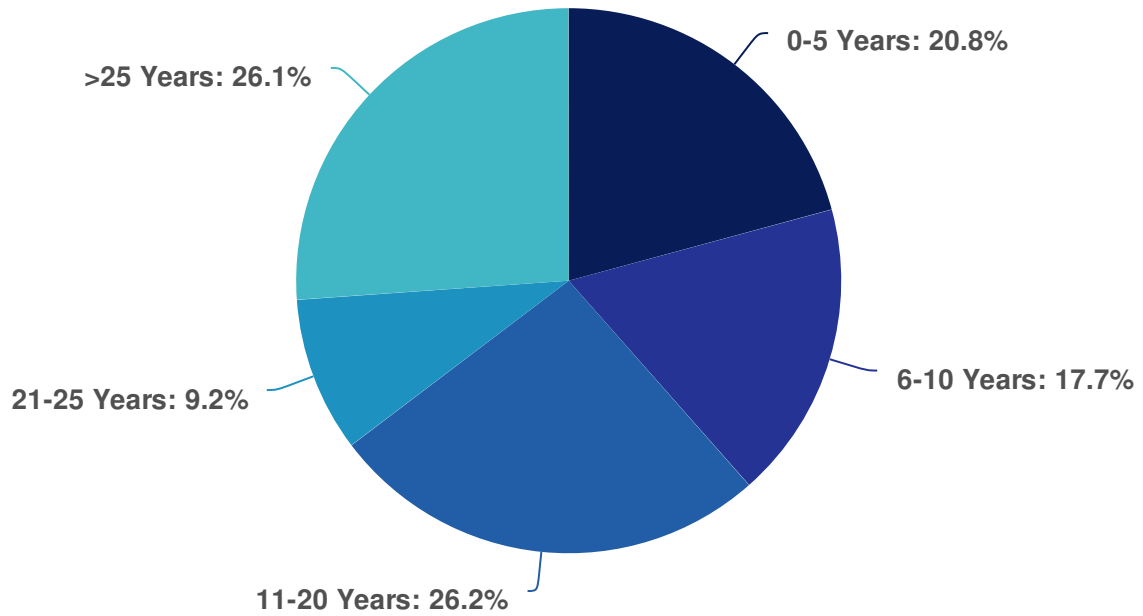
2. Where outside of Portland do you live?



Areas outside of Portland commonly mentioned include:

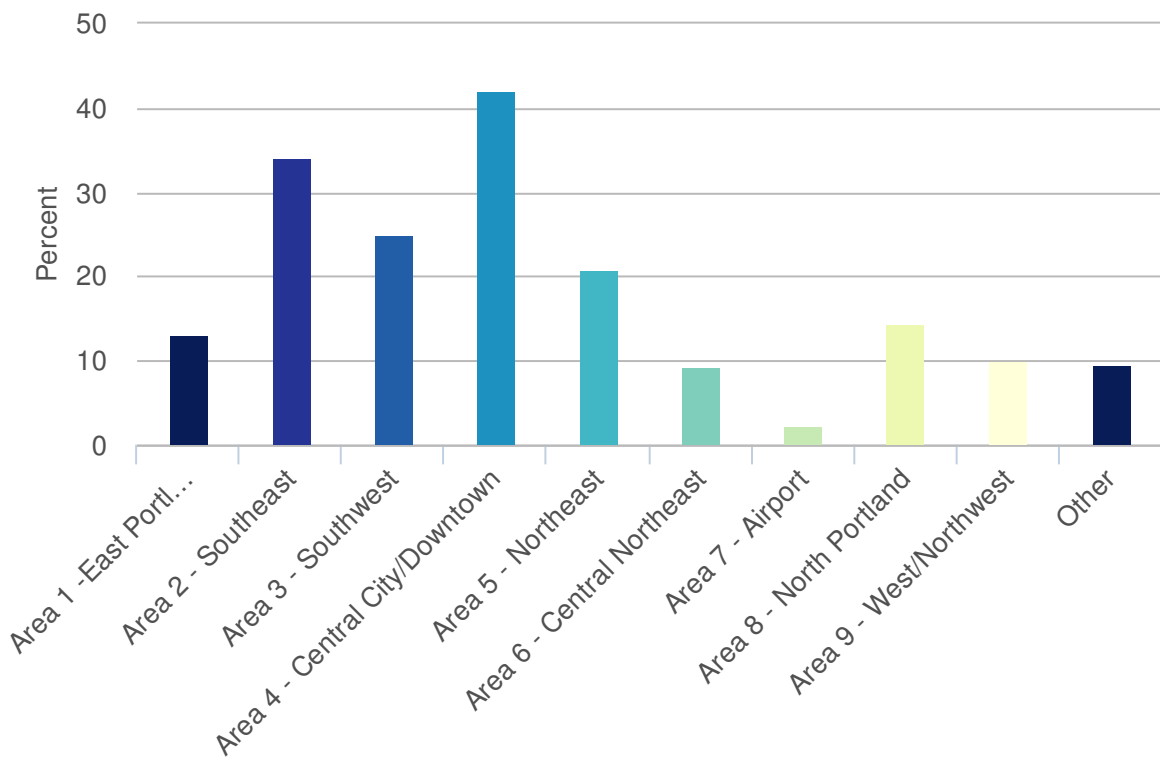
- Beaverton,
- Hillsboro,
- Tigard,
- Gresham,
- Milwaukie,
- Vancouver,
- Oregon City,
- Happy Valley,
- Lake Oswego,
- West Linn,
- Aloha,
- Tualatin,
- Sherwood,
- Troutdale,
- Fairview,
- Clackamas County,
- Gladstone,
- Newberg,
- Washington County,
- Camas,
- Cedar Hills,
- Forest Grove,
- Sandy, and
- Wilsonville.

3. How long have you lived in Portland?



Value	Percent		Count
0-5 Years	20.8%		433
6-10 Years	17.7%		367
11-20 Years	26.2%		545
21-25 Years	9.2%		192
>25 Years	26.1%		542
		Total	2,079

4. Where in Portland do you and your family spend most of your time (school or work)? Select all that apply.

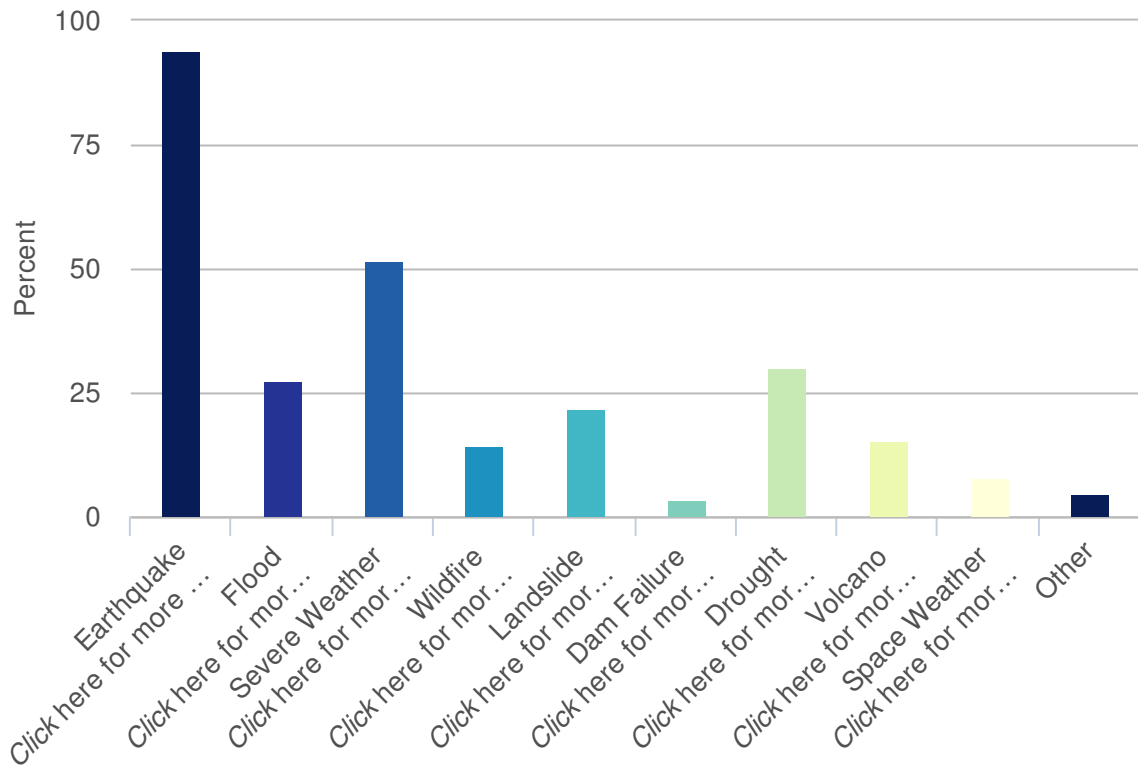


Value	Percent	Count
Area 1 - East Portland	13.2%	403
Area 2 - Southeast	34.0%	1,039
Area 3 - Southwest	25.1%	767
Area 4 - Central City/Downtown	42.0%	1,284
Area 5 - Northeast	20.8%	637
Area 6 - Central Northeast	9.3%	284
Area 7 - Airport	2.4%	74
Area 8 - North Portland	14.4%	441
Area 9 - West/Northwest	10.1%	308
Other	9.5%	291




Other areas commonly mentioned include:

- Beaverton,
- Vancouver,
- Hillsboro,
- Tigard,
- Milwaukie,
- Gresham,
- Oregon City,
- Lake Oswego,
- Hillsboro, and
- Clackamas County.

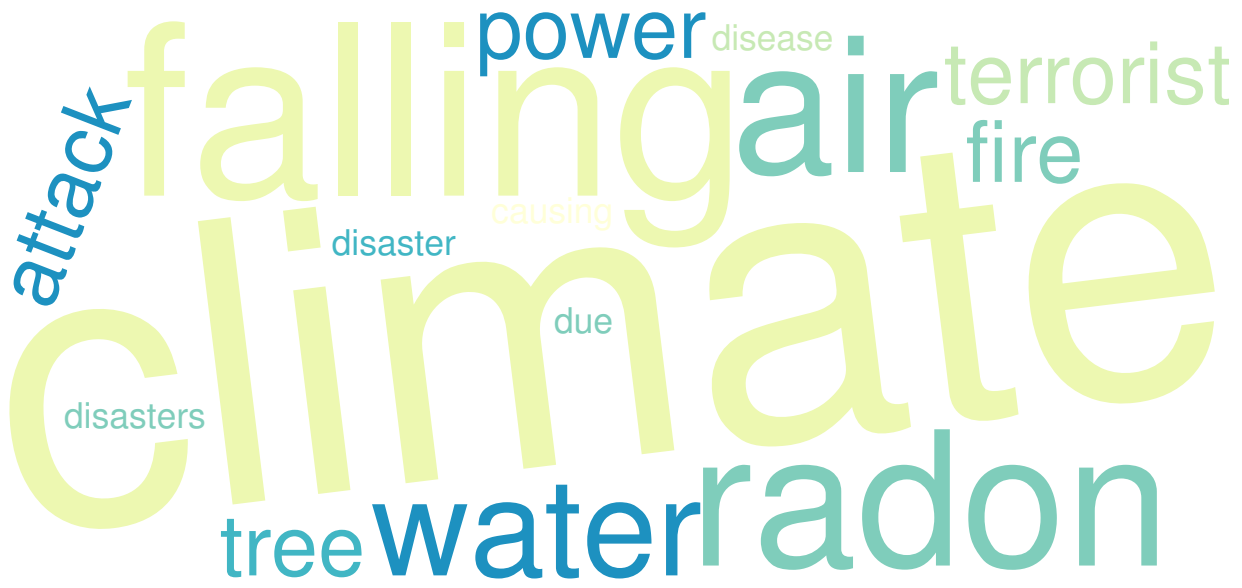
5. Select the three (3) natural hazards you worry about most.



Value	Percent	Count
Earthquake <i>Click here for more information about earthquakes.</i>	94.1%	2,846
Flood <i>Click here for more information about floods.</i>	27.5%	833
Severe Weather <i>Click here for more information about severe weather.</i>	51.7%	1,564
Wildfire <i>Click here for more information about wildfire.</i>	14.2%	429
Landslide <i>Click here for more information about landslides.</i>	22.0%	665
Dam Failure <i>Click here for more information about dam failure.</i>	3.6%	110
Drought <i>Click here for more information about drought.</i>	30.2%	913

Value	Percent	Count
Volcano <i>Click here for more information about volcanos.</i>	15.5%	 468
Space Weather <i>Click here for more information about space weather.</i>	7.9%	 240
Other	4.7%	 141

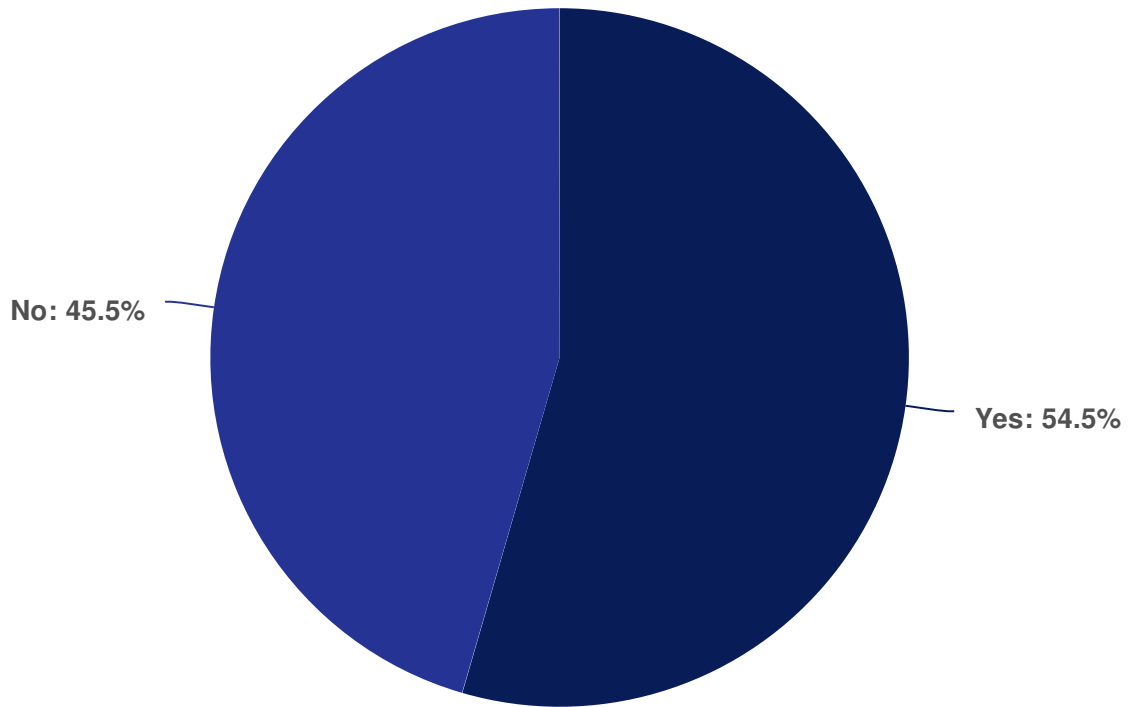
6. What other natural hazards do you worry about?



Other hazards commonly mentioned include:

- climate change,
- tsunami,
- falling trees,
- hazardous material spill/industrial accident,
- loss of electricity,
- economic collapse,
- pandemics,
- radon,
- sinkholes,
- poor air quality, and
- man-made disasters.

7. Have you experienced any of the hazards above?



Value	Percent	Count
Yes	54.5%	1,649
No	45.5%	1,377
Total		3,026

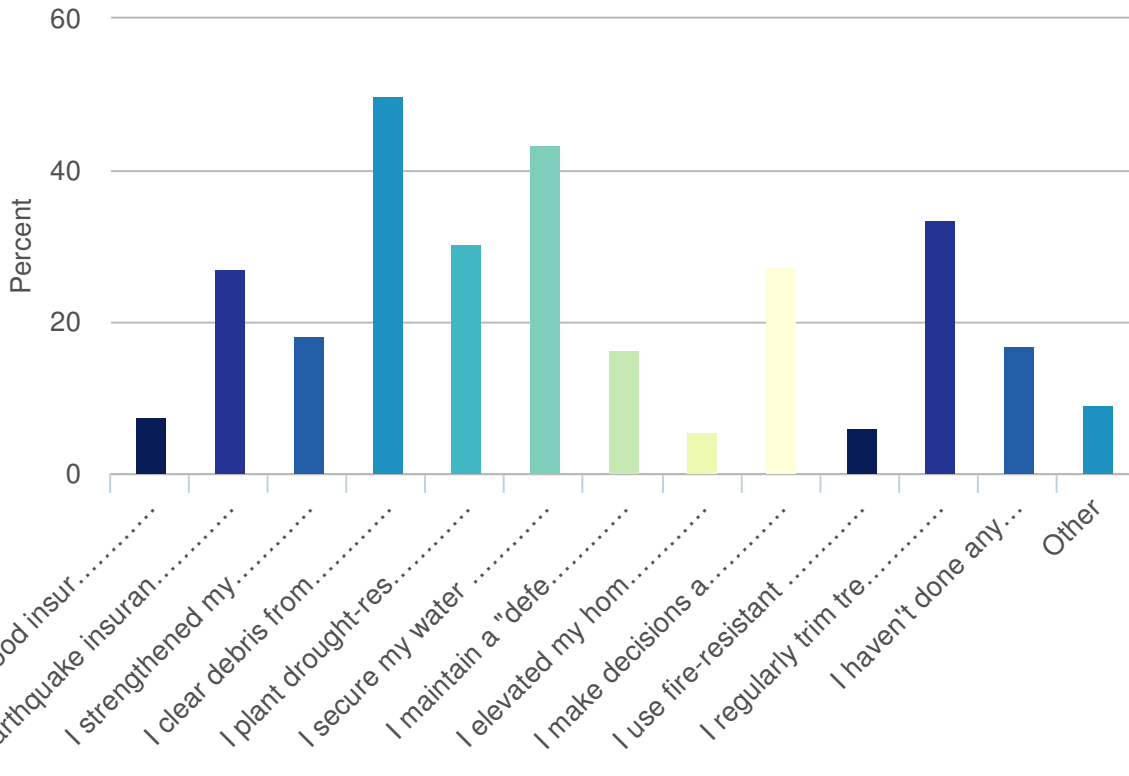
8. Can you tell us about your experience?



The vast majority of responses included hazards experienced living, working or vacationing elsewhere. For Portland experienced hazards, respondents most commonly referenced severe weather, earthquakes and flooding. Power outages, difficulty driving/commuting in severe weather, basement flooding and falling trees were commonly mentioned impacts. Many respondents mentioned the following:

- Earthquakes in California or elsewhere
- Portland “Spring Break Quake”
- Minor earthquakes in Portland
- 1996 Floods in Portland
- Eruption of Mt. St. Helens
- Ice storms
- Basement flooding due to severe weather/storms
- Columbus Day storms
- Small-scale nuisance flooding
- Water use restrictions from drought
- Power outages from severe weather/winter weather
- Difficulty driving/commuting in winter weather
- Landslides during the 1996 flood
- Tornadoes, mostly experienced elsewhere
- Hurricanes in other locations
- Wildfire, mostly experienced elsewhere
- Extreme temperatures (heat)
- Downed trees
- High winds
- Flooding in general or experienced elsewhere
- Small landslides in Portland
- Flooding in Johnson Creek, and
- Extreme cold.

9. Have you done any of these things to make you and your family safer? To follow links for more information, right click link and select "open in new tab".



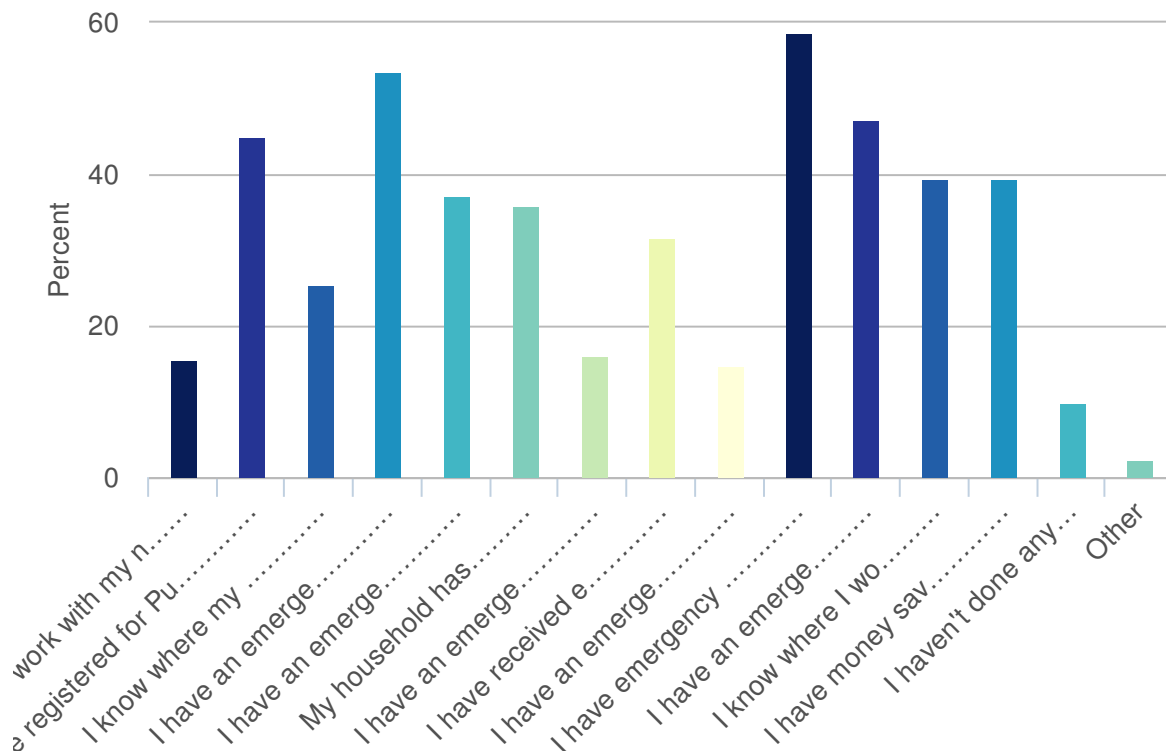
Value	Percent	Count
I buy flood insurance for my home. More information here.	7.6%	231
I buy earthquake insurance for my home. More information here.	27.0%	821
I strengthened my home against earthquakes. More information here.	18.1%	550
I clear debris from my storm drains. More information here.	49.8%	1,512
I plant drought-resistant plants. More information here.	30.3%	922
I secure my water heater, book cases, or other objects that could fall in an earthquake. More information here.	43.4%	1,318
I maintain a "defensible space" clear of vegetation and flammable material. More information here.	16.3%	495
I elevated my home or utilities above potential flood levels. More information here.	5.5%	168
I make decisions about fire-resistant materials. More information here.	27.0%	821
I regularly trim trees. More information here.	16.3%	495
I haven't done anything.	7.6%	231
Other	9.1%	281

Value	Percent	Count
I make decisions about where to live based on natural hazard risks. <i>More information here.</i>	27.4%	831
I use fire-resistant landscaping around my home. <i>More information here.</i>	5.9%	178
I regularly trim trees near my house or near power lines. <i>More information here.</i>	33.4%	1,015
I haven't done any of these.	17.0%	517
Other	9.2%	281

The vast majority of the comments related to living in an apartment, being a renter or preparing an emergency kit (addressed in the subsequent question). Common responses included:

- I live in an apartment/condo or rent
- Water capture systems, such as rain barrels
- Improved drainage around home, and
- Located/modified gas shutoff valves.

10. Have you done any of these things to be prepared for an emergency? To follow links for more information, right click link and select "open in new tab".



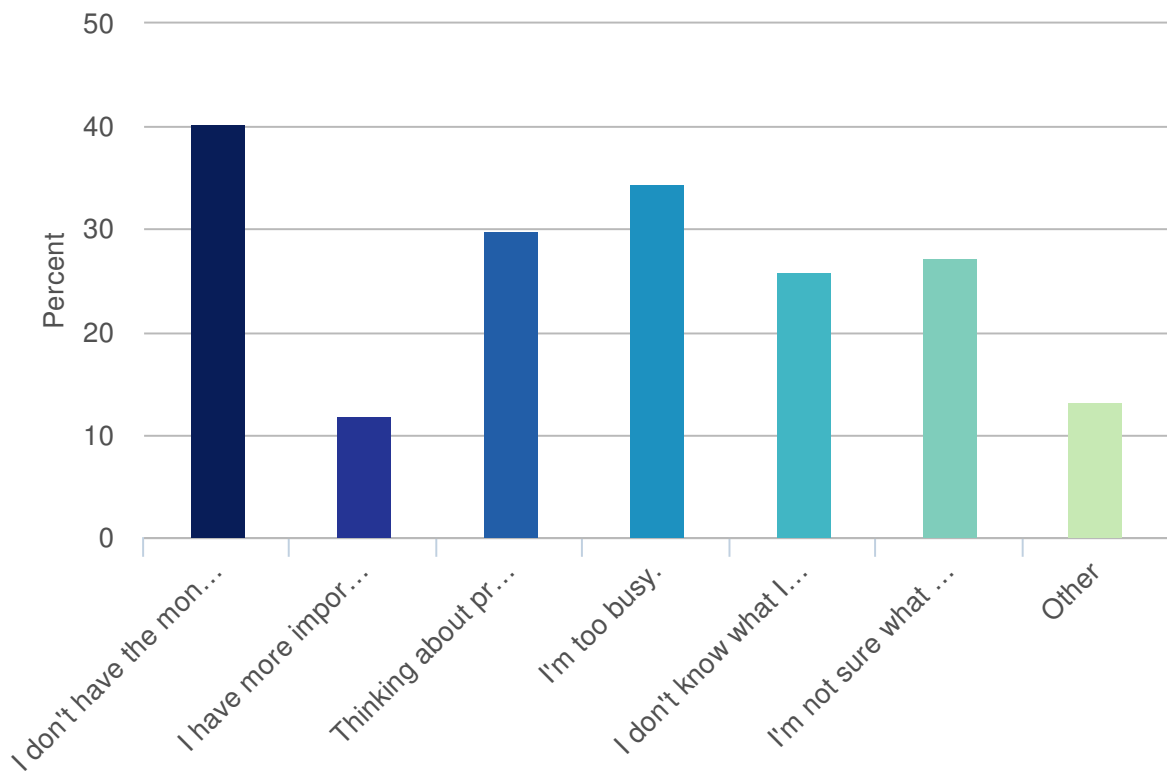
Value	Percent	Count
I work with my neighbors on emergency preparedness. More information here .	15.7%	479
I have registered for Public Alerts in my preferred language. Go to PublicAlerts.org to register.	45.0%	1,372
I know where my neighborhood BEECN is. Find your neighborhood BEECN here .	25.5%	778
I have an emergency kit at home. More information here .	53.5%	1,630
I have an emergency kit in my car. More information here .	37.2%	1,135
My household has an emergency plan. More information here .	35.9%	1,095
I have an emergency plan for my pets. More information here .	16.0%	487
I have received emergency training. More information here .	31.6%	964

Value	Percent		Count
I have an emergency source of power. <i>More information here.</i>	14.9%		455
I have emergency food and water. <i>More information here.</i>	58.6%		1,787
I have an emergency contact outside of the area. <i>More information here.</i>	47.4%		1,444
I know where I would go in an emergency. <i>More information here.</i>	39.6%		1,206
I have money saved for emergency use. <i>More information here.</i>	39.6%		1,207
I haven't done any of these.	9.9%		303
Other	2.3%		69

Other common responses included:

- Emergency kit at work
- NET/CERT volunteer
- Emergency communication system (e.g. ham radio), and
- Participate in drills.

11. Do any of these things make it hard for you to prepare your family for emergencies?

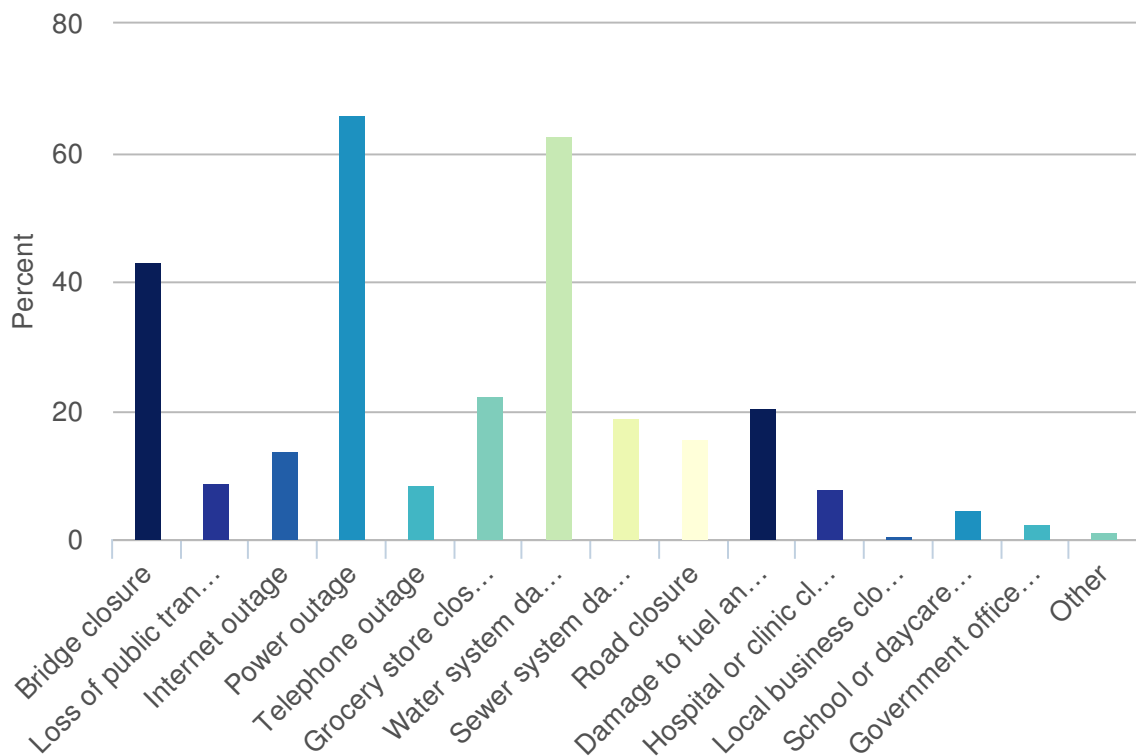


Value	Percent	Count
I don't have the money.	40.2%	990
I have more important things to worry about.	11.8%	290
Thinking about preparedness is just too overwhelming.	29.9%	735
I'm too busy.	34.5%	850
I don't know what I need to do.	25.9%	637
I'm not sure what my risks are.	27.2%	669
Other	13.3%	328






Other common responses included:

- Procrastination
- Laziness
- Denial
- Disability/elderly
- Don't have room or a secure place to store items
- Don't own home or live in an apartment building
- Difficulty retrofitting older homes
- Lack of people taking it seriously (friends/family/neighbors)
- Have started preparations, but have not completed them
- Have not prioritized it
- Lack of urgency
- Issues regarding rotation of food/medicine/water etc.
- Unsure how to address some issues related to planning/preparing
- Issues regarding preparations for pets
- Uncertainty/unknowns

12. Natural hazards can cause damage that makes it hard to carry out our daily lives. Select three (3) things that would impact you most.



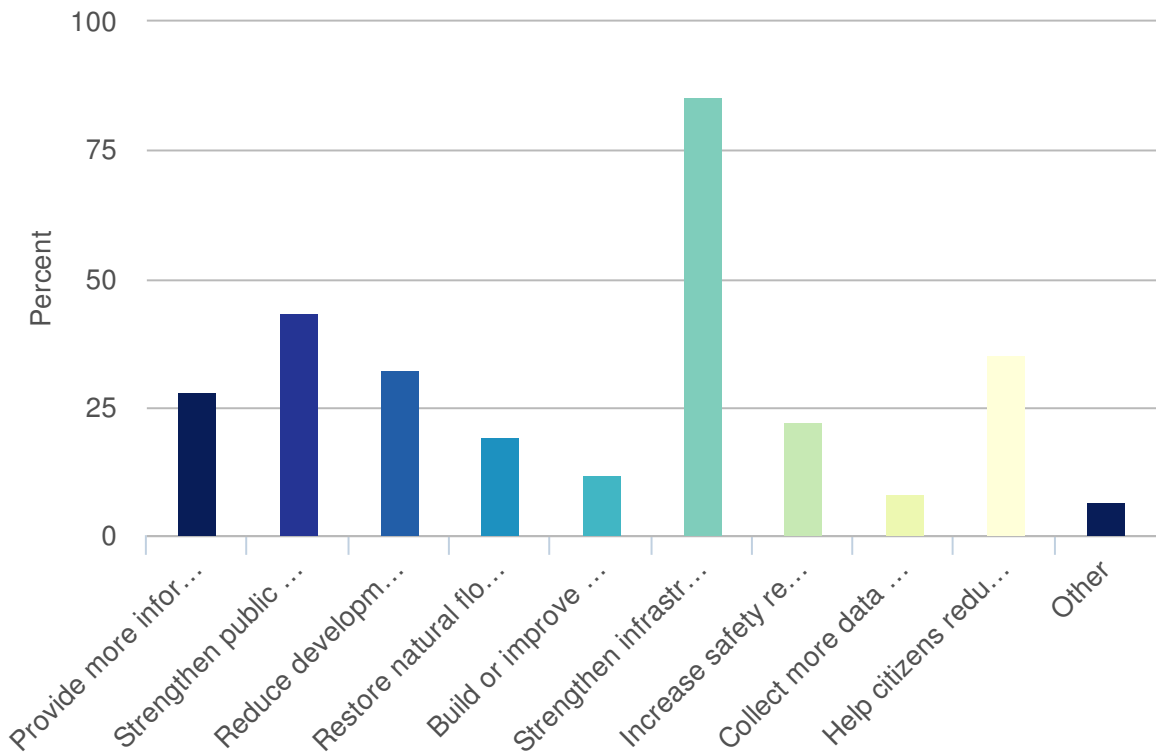
Value	Percent	Count
Bridge closure	43.0%	1,318
Loss of public transportation	9.0%	277
Internet outage	13.7%	421
Power outage	65.9%	2,020
Telephone outage	8.5%	260
Grocery store closure	22.2%	682
Water system damage	62.6%	1,918
Sewer system damage	19.0%	582
Road closure	15.7%	481
Damage to fuel and natural gas infrastructure	20.4%	626

Value	Percent		Count
Hospital or clinic closure	7.9%		243
Local business closure	0.7%		21
School or daycare closure	4.5%		137
Government office closure	2.3%		71
Other	1.2%		36

Other common responses included:

- Getting medicine
- Damage to home
- All options listed
- Damage to public schools, and
- Cell phone outages.

13. What are the three (3) most important things the City of Portland government offices should do to reduce the risk from natural hazards?

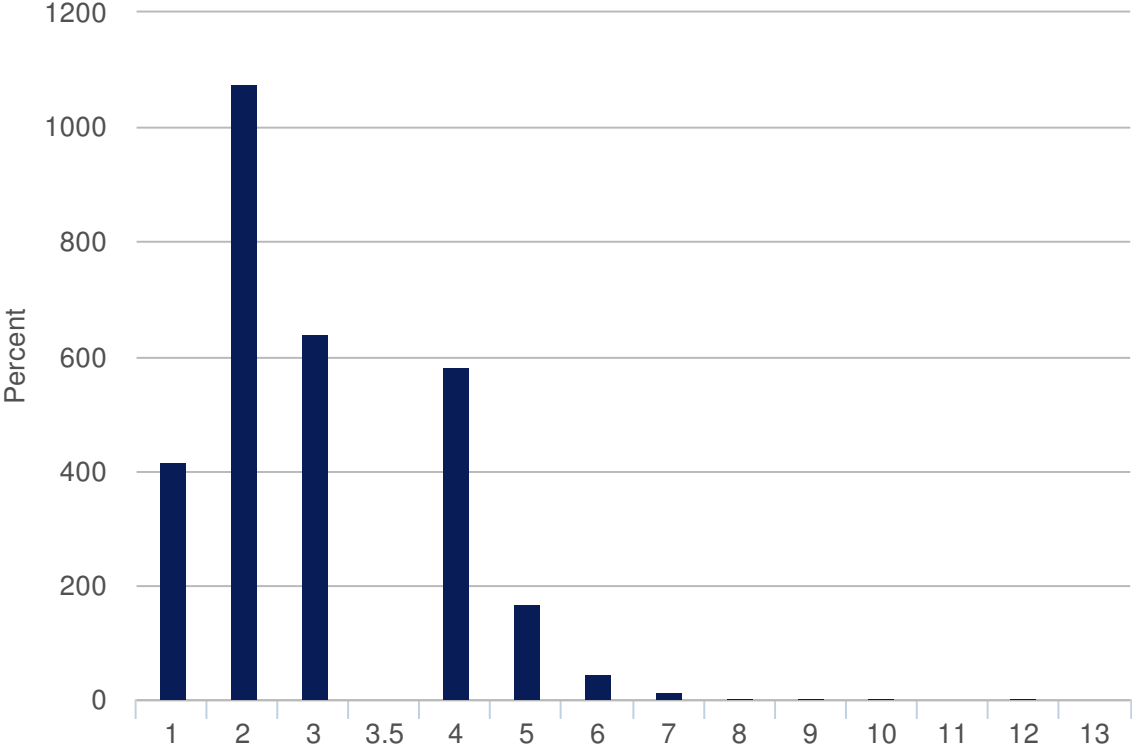


Value	Percent	Count
Provide more information to the public about natural hazards.	28.1%	839
Strengthen public buildings.	43.3%	1,296
Reduce development in known hazardous areas.	32.3%	966
Restore natural floodplains and open space.	19.1%	570
Build or improve man-made protections (levees for example).	12.0%	360
Strengthen infrastructure such as bridges, sewer lines, and water pipes.	85.5%	2,557
Increase safety requirements for building permits.	22.4%	671
Collect more data and information about hazard areas.	8.2%	244
Help citizens reduce their individual natural hazard risks.	35.2%	1,054
Other	6.4%	192

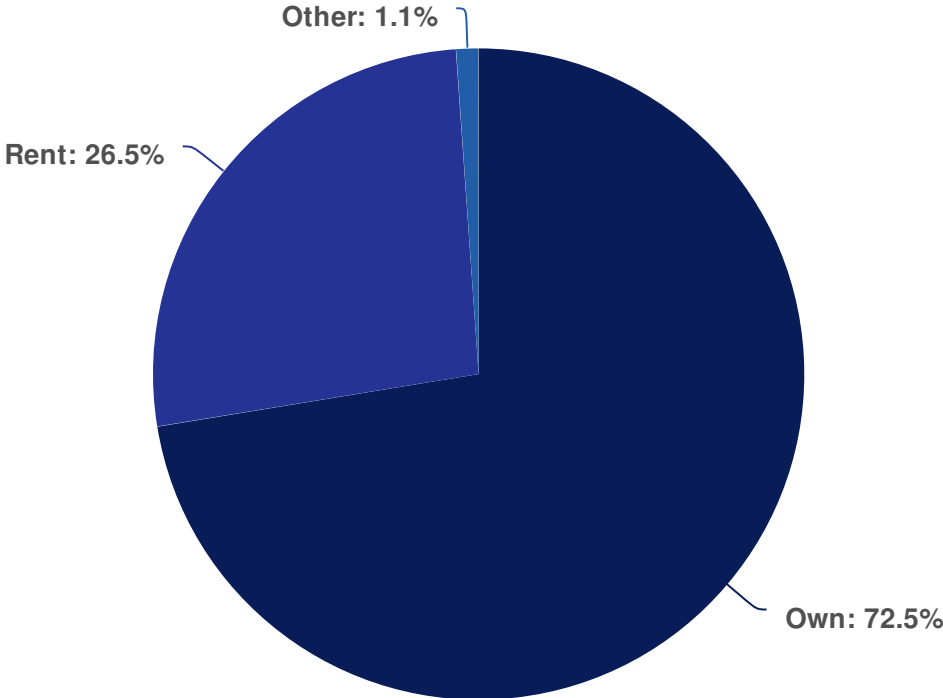
Other common responses included:

- Strengthen schools
- Road infrastructure improvement/address traffic issues
- Subsidize retrofits/preparedness
- Underground utilities
- Tax breaks
- Increase funding/wise use of public resources
- Address oil/gas infrastructure and shutoffs
- Strengthen bridges
- Require upgrades/retrofits
- Provide more information/guidance on planning and preparedness
- Offer more training/classes
- Help make it easier for residents to prepare, especially vulnerable populations.

14. How many people are in your household?

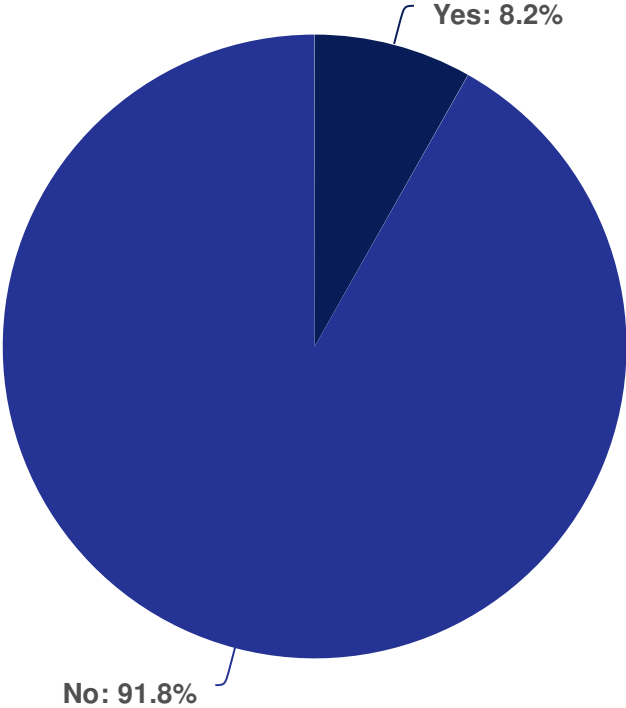


15. Do you own or rent your home?



Value	Percent	Count
Own	72.5%	2,131
Rent	26.5%	779
Other	1.1%	31
Total		2,941

16. Were you born in another country?



Value	Percent	Count
Yes	8.2%	232
No	91.8%	2,607
Total		2,839

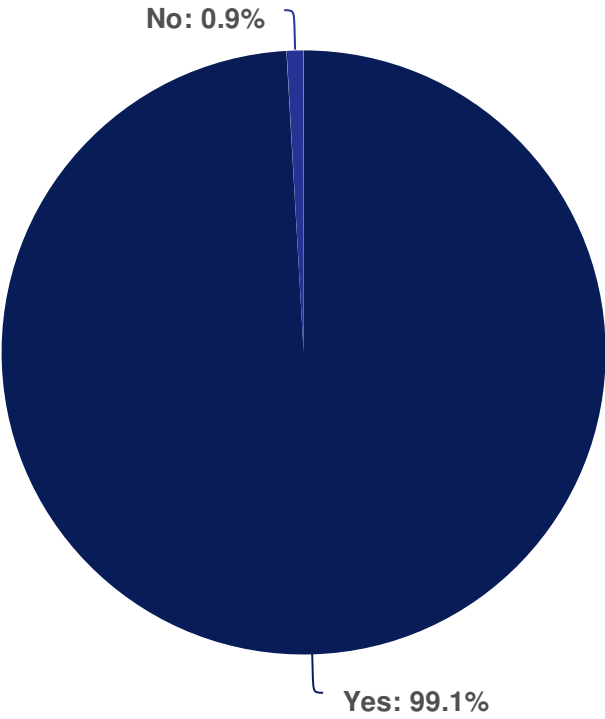
17. Where were you born?



Other common responses included:

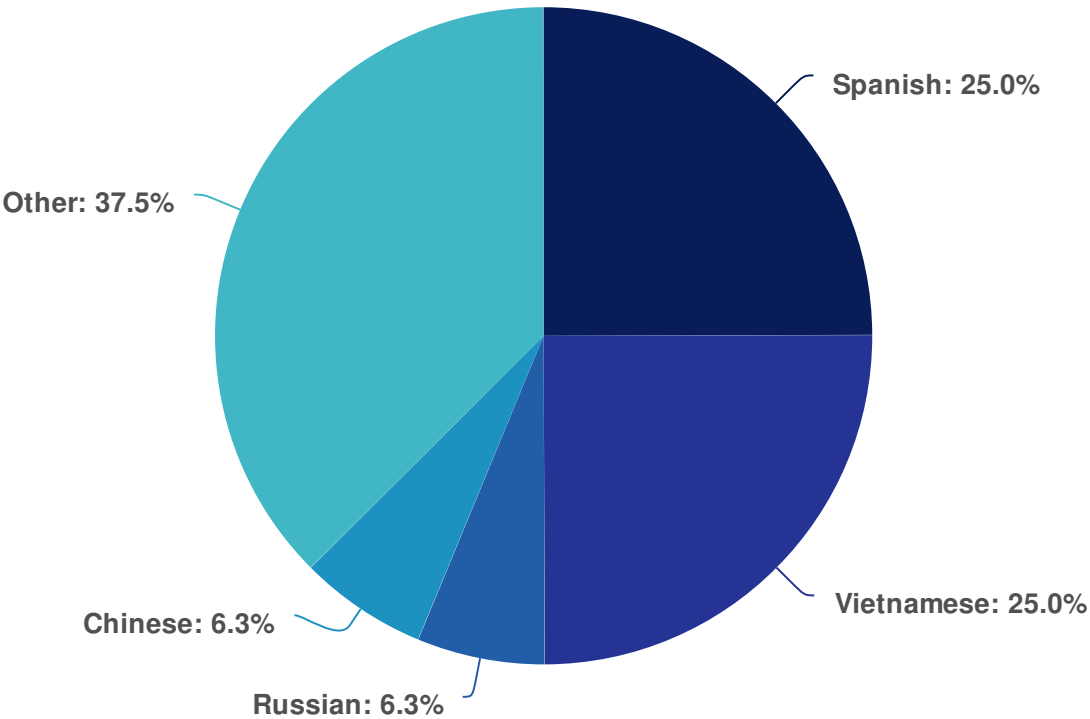
- Germany
- Canada
- Japan
- Philippines
- England
- Mexico
- Ukraine
- Vietnam

18. Do you speak English at home?



Value	Percent	Count
Yes	99.1%	2,921
No	0.9%	27
Total		2,948

19. What language do you prefer?

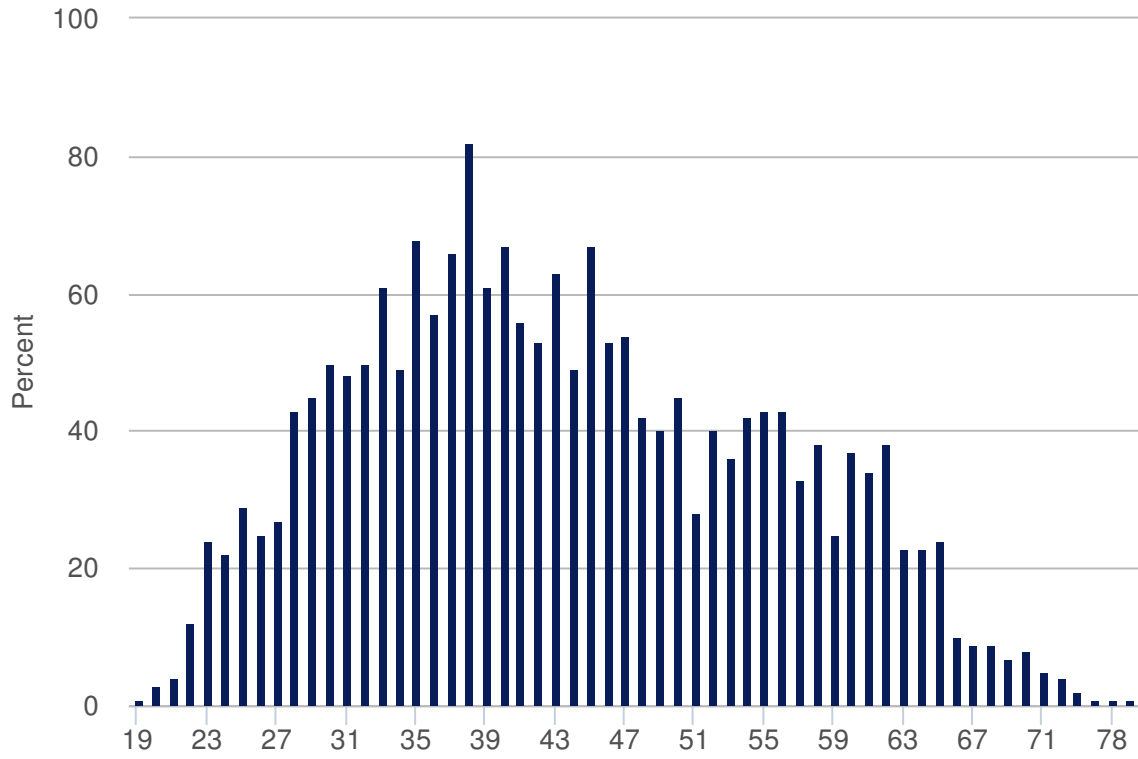


Value	Percent		Count
Spanish	25.0%		4
Vietnamese	25.0%		4
Russian	6.3%		1
Chinese	6.3%		1
Other	37.5%		6
Total			16

Other responses included:

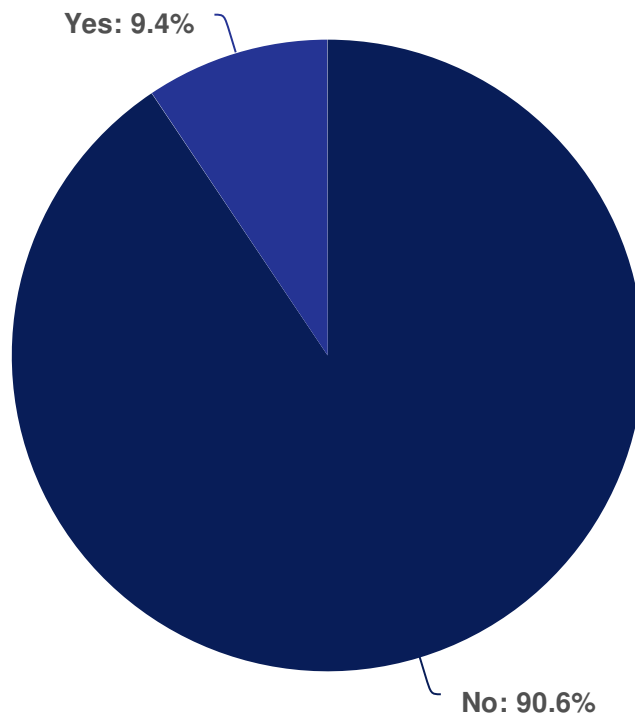
- English
- Hindi
- Nepali
- Persian

20. What is your age?



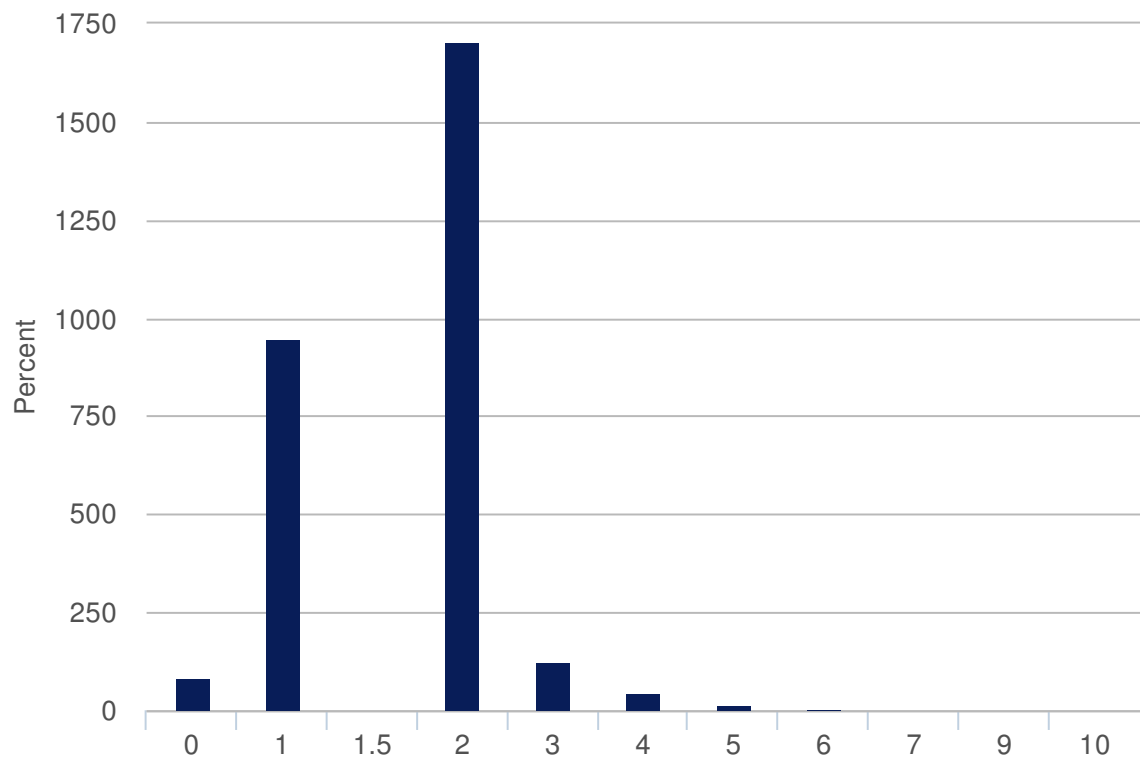
Average age is 43.5 years

21. Do you have a physical or mental disability?



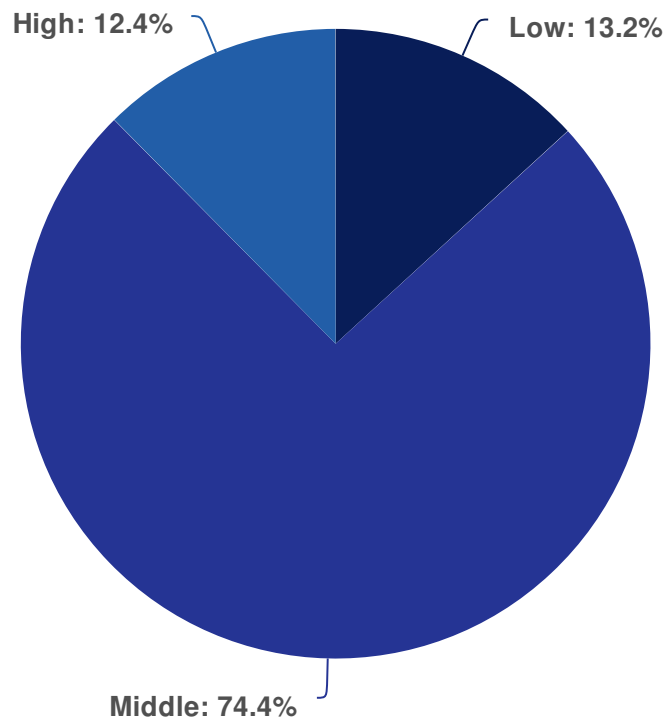
Value	Percent	Count
No	90.6%	1,817
Yes	9.4%	188
Total		2,005

22. How many people in your home work to provide for the family?



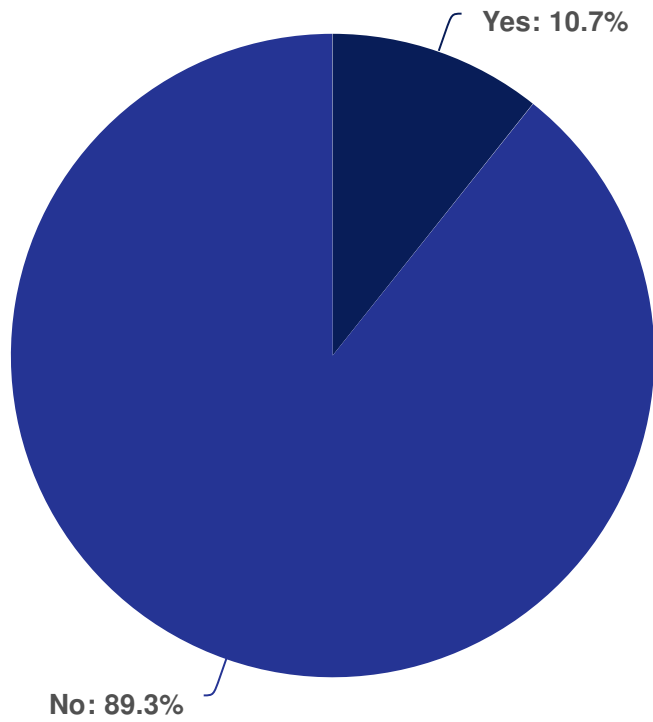
Average is 1.7 people.

23. Would you consider your household income low, middle, or high?



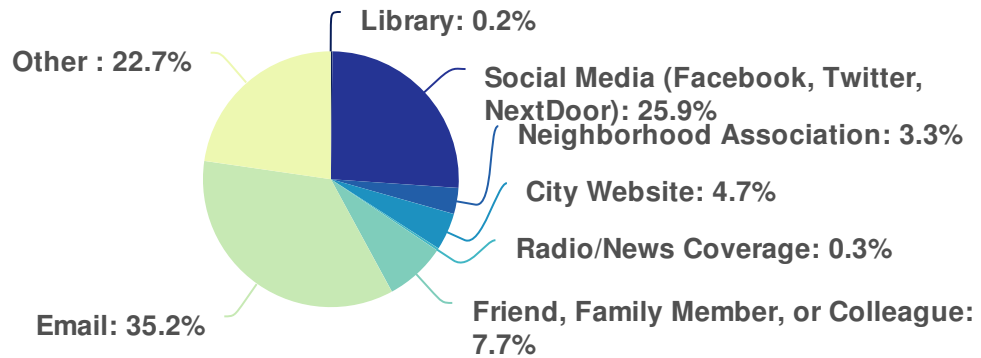
Value	Percent	Count
Low	13.2%	388
Middle	74.4%	2,185
High	12.4%	363
Total		2,936

25. Are you a trained Community Emergency Response Team/Neighborhood Emergency Team member?



Value	Percent	Count
Yes	10.7%	312
No	89.3%	2,611
Total		2,923

26. How did you find out about this survey?

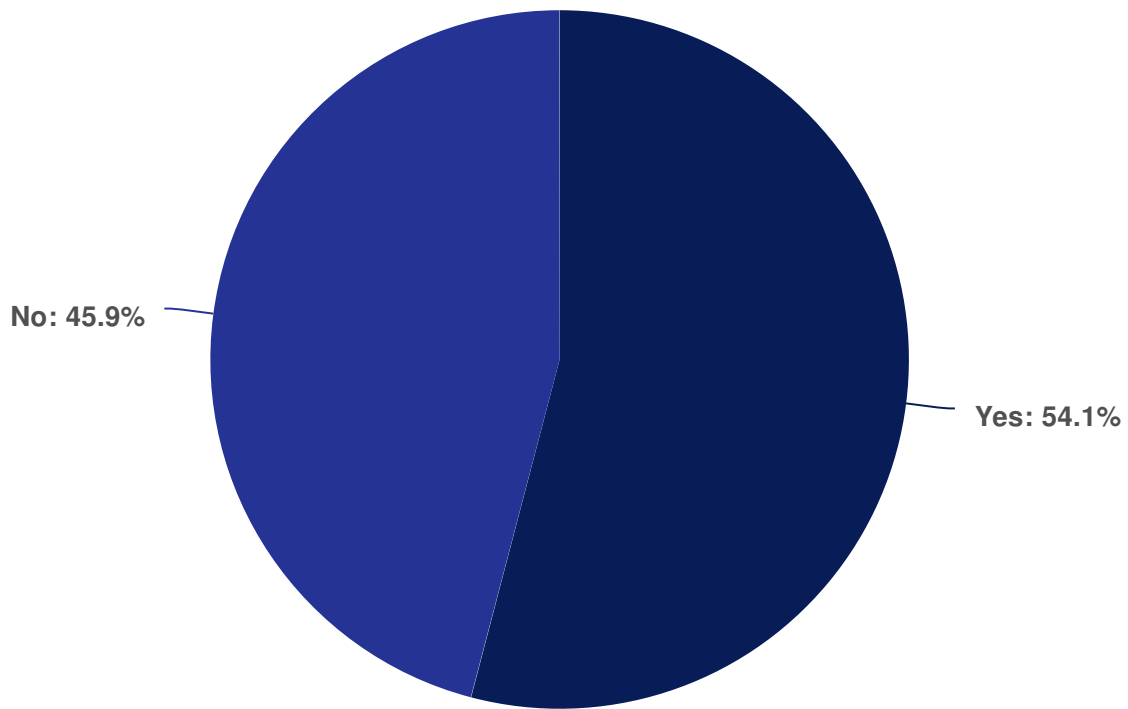


Value	Percent	Count
Library	0.2%	5
Social Media (Facebook, Twitter, NextDoor)	25.9%	760
Neighborhood Association	3.3%	96
City Website	4.7%	139
Radio/News Coverage	0.3%	10
Friend, Family Member, or Colleague	7.7%	227
Email	35.2%	1,035
Other	22.7%	666
Total		2,938

Other common responses included:

- Work/employer
- OHSU
- ARES
- Ozone
- School
- Flash alert

27. Would you like us to contact you with related information and training opportunities?



Value	Percent		Count
Yes	54.1%		1,556
No	45.9%		1,318
Total			2,874