



King County

Flood Awareness & Preparedness Survey

Research Findings

December 13, 2010

About the Survey

- Prepared for King County by Cocker Fennessy, Inc. for the [King County Department of Natural Resources and Parks](#).
- Follow up survey to benchmark 2009 survey of Green River flood preparedness & awareness conducted for the [King County Flood Control District](#).
- 2009 survey conducted to provide information about, and assess awareness of, the increased flood risk due to operational changes at the Howard Hanson Dam; assess outreach effectiveness; and assess current level of preparedness.

Objectives

- Assess public awareness & concern of flood risk
- Identify actions residents are taking to prepare
- Determine communication practices and preferences
- Provide information about Howard Hanson Dam situation and flooding risk
- Compare to 2009 baseline

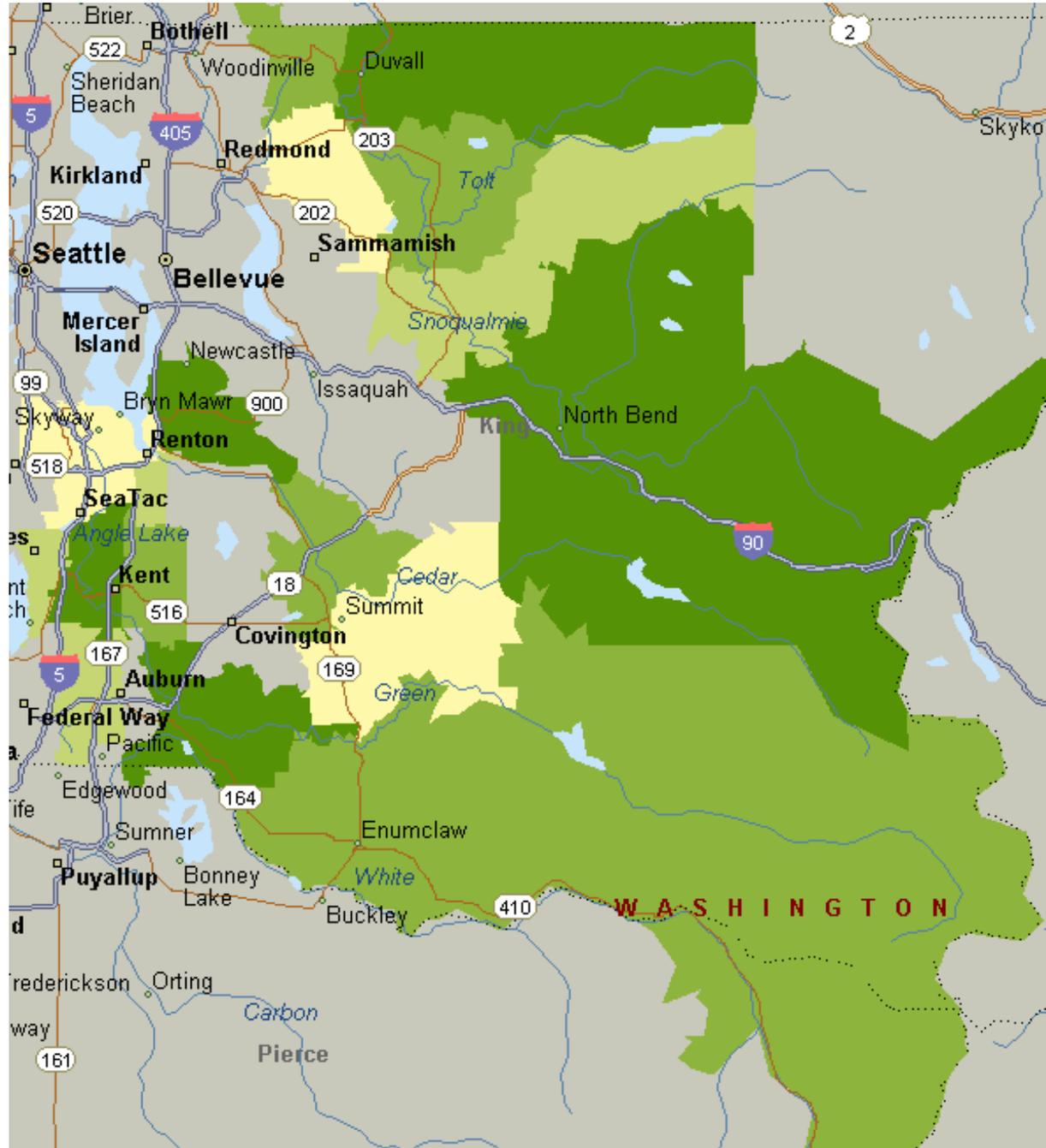
Methodology

- Telephone survey (n=753) of residents in Cedar, Green, Snoqualmie and White River basins (not entire county)
- Quotas and weighting to reflect regional demographics
- Margin of error +/- 3.6% at 95% confidence interval
- Survey fielded November 8-17, 2010

Respondents in the Cedar, Green, Snoqualmie and White River basins completed the telephone survey.

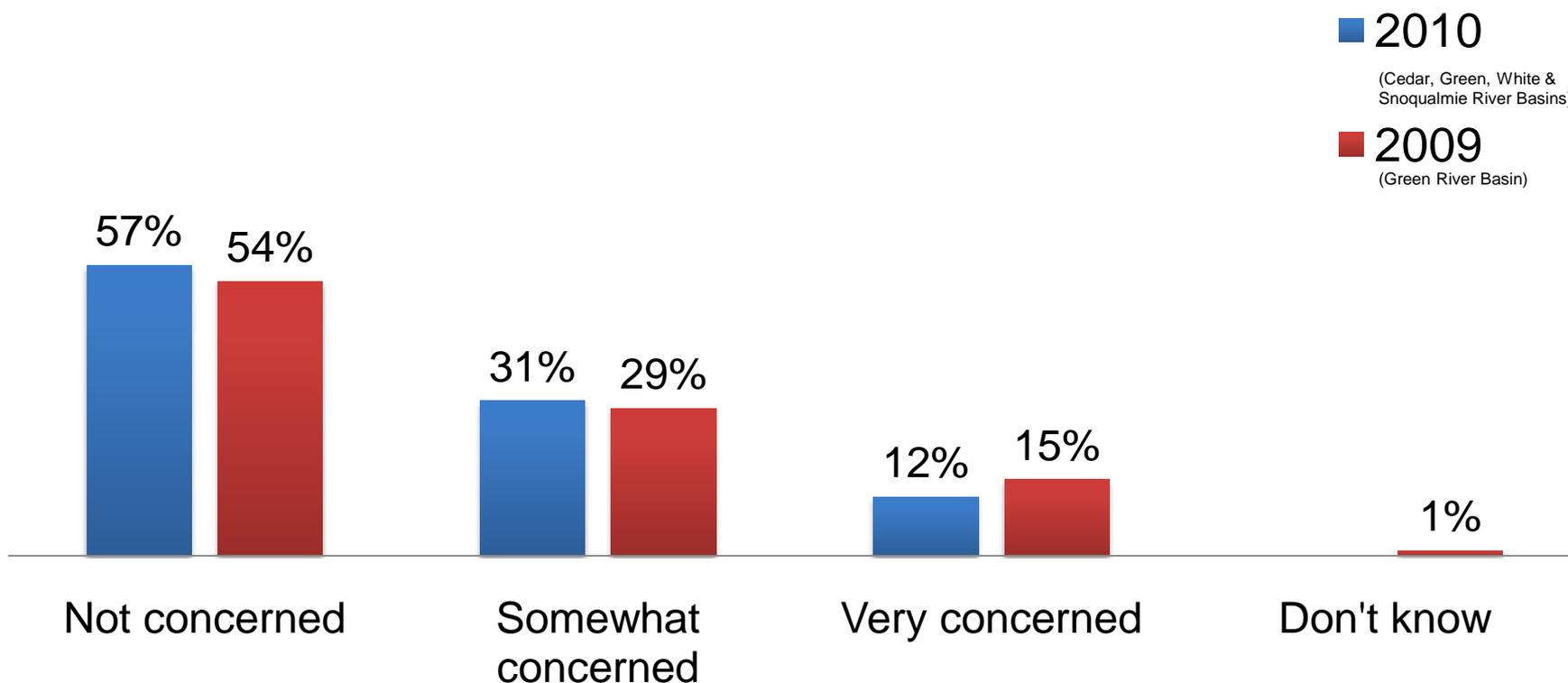
Responses by Zipcode, per shaded area

-  42 to 55
-  28 to 41
-  14 to 27
-  1 to 13



**A majority (57%) are not concerned about flooding.
Findings are consistent with 2009 results.**

Q6. With regard to floods, would you say you are...



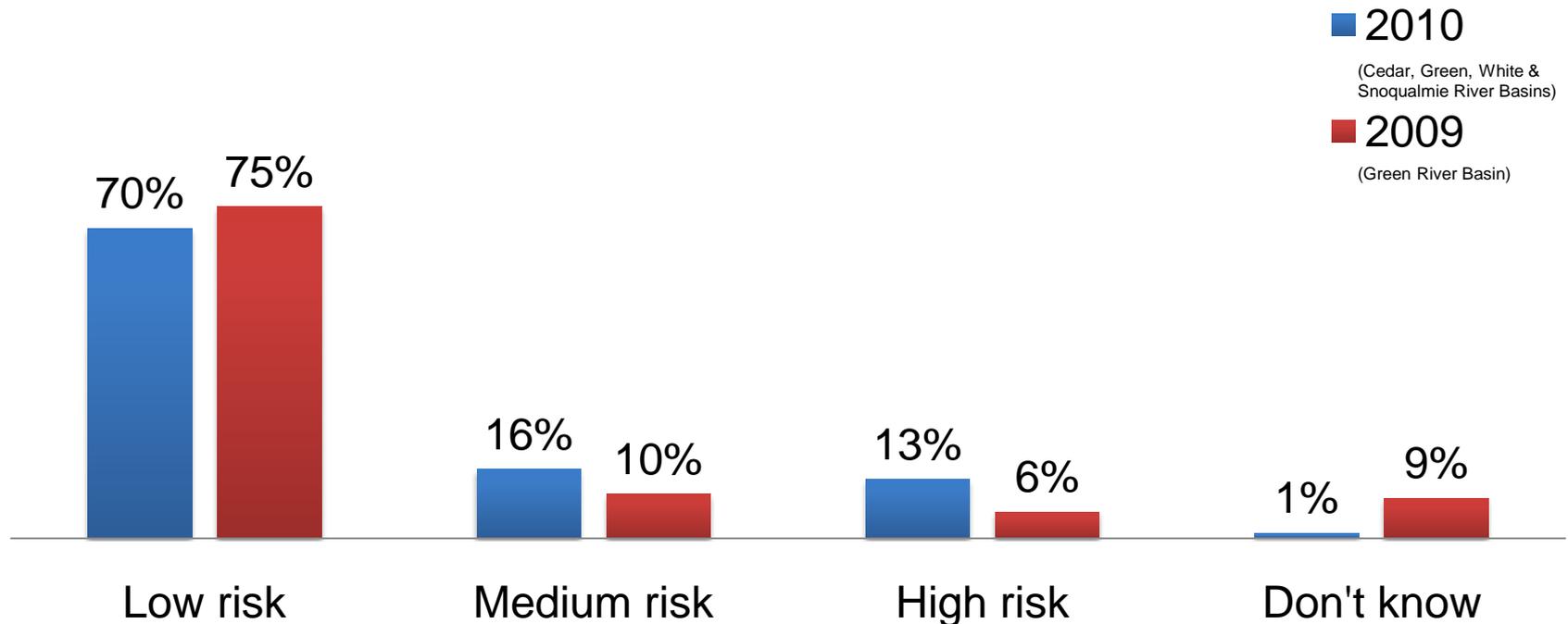
Those with incomes less than \$30,000 per year, people who are non-White and those in non-single family homes are among the most concerned about flooding.

***Flooding Concern
Statistically significant cross-tabulations***

Not Concerned	Somewhat Concerned	Very Concerned
Male Income >\$30K College degree White Single-family home Low risk of flooding 1 or more miles from river, Do not live in a flood plain Live in the Cedar River basin No flood insurance	Under \$30K Non-White Medium or high risk of flooding Snoqualmie , Green and White River basins Live in a flood plain	Under \$30K Non-White Not in a single-family home High risk of flooding Green or Snoqualmie River basins Live in a flood plain Have flood insurance

7 in 10 feel they live in an area with a low risk of flooding.

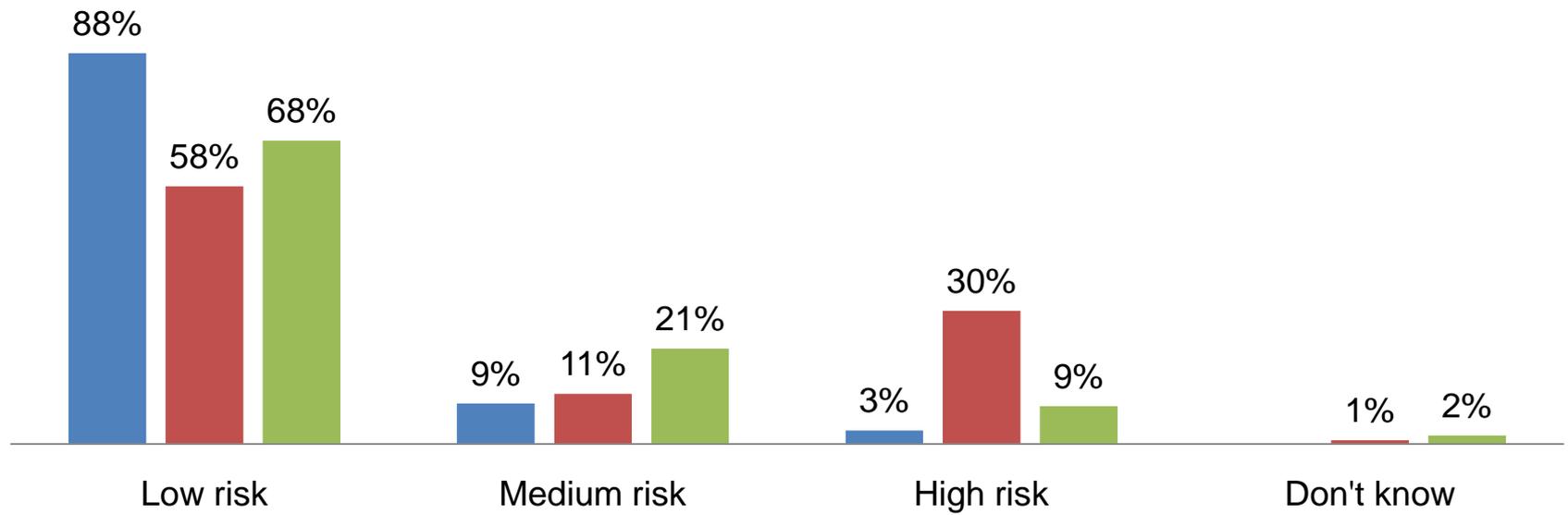
Q7. To the best of your knowledge, how would you describe the level of risk for flooding in the area where you live?



Respondents in the Snoqualmie River basin are significantly more likely to say “high risk.”

**Q7. To the best of your knowledge, how would you describe the level of risk for flooding in the area where you live?
(Responses by River Basin)**

■ CEDAR ■ SNOQUALMIE ■ GREEN/WHITE



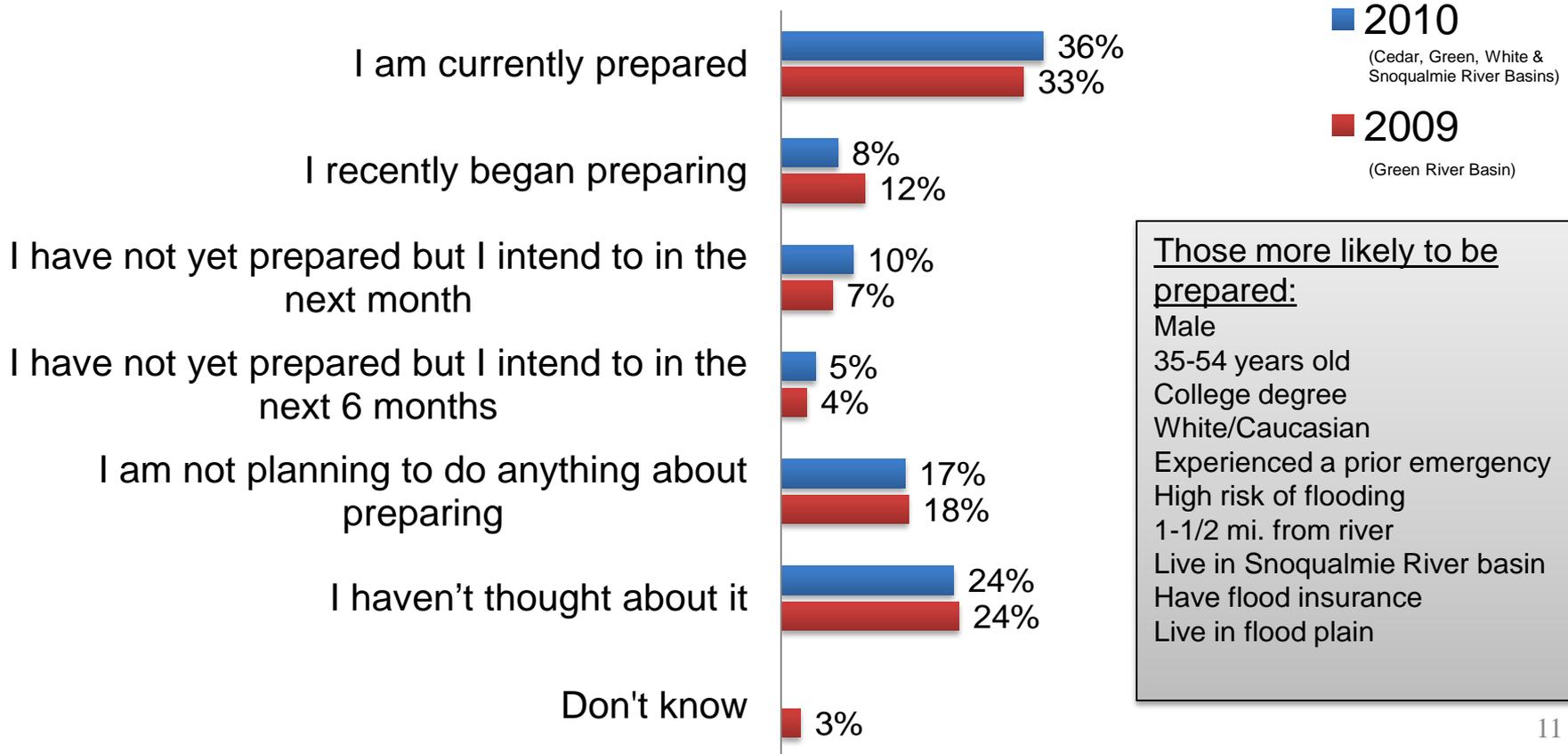
Women, people with children, people ages 35-54 and those in the Snoqualmie River basin are more likely to say, “high risk”.

***Risk Perception
Statistically significant cross-tabulations***

Low Risk	Medium Risk	High Risk
Male \$50K+ College degree English-speaking Own home Single-family home 1+ miles from river Cedar River basin	<\$30K No college degree Not a single-family home Rent No pets Green River basin Live in a flood plain Have flood insurance	Female Have children 35-54 years old Not a single-family home Snoqualmie River basin Live in a flood plain Have flood insurance

44% are currently prepared or recently began preparing for a major flooding event.

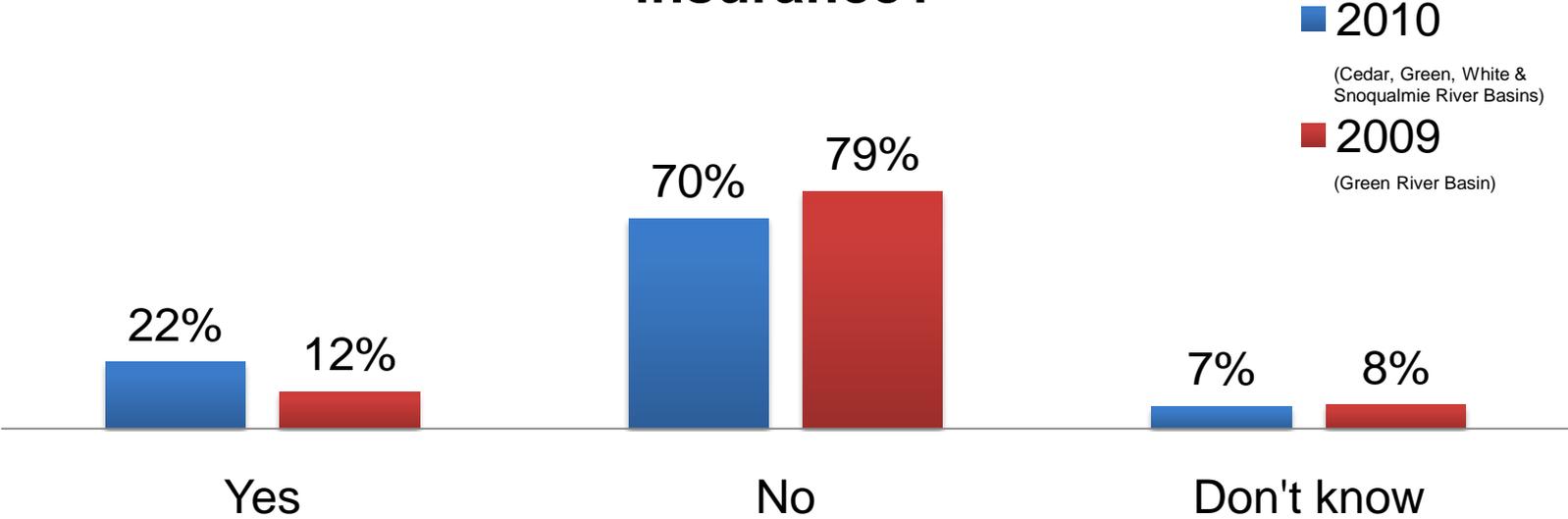
Q8. In thinking about preparing for a major flooding event, which best represents your preparedness?



Those more likely to be prepared:
 Male
 35-54 years old
 College degree
 White/Caucasian
 Experienced a prior emergency
 High risk of flooding
 1-1/2 mi. from river
 Live in Snoqualmie River basin
 Have flood insurance
 Live in flood plain

The proportion of respondents reporting that they have flood insurance has increased significantly since 2009.

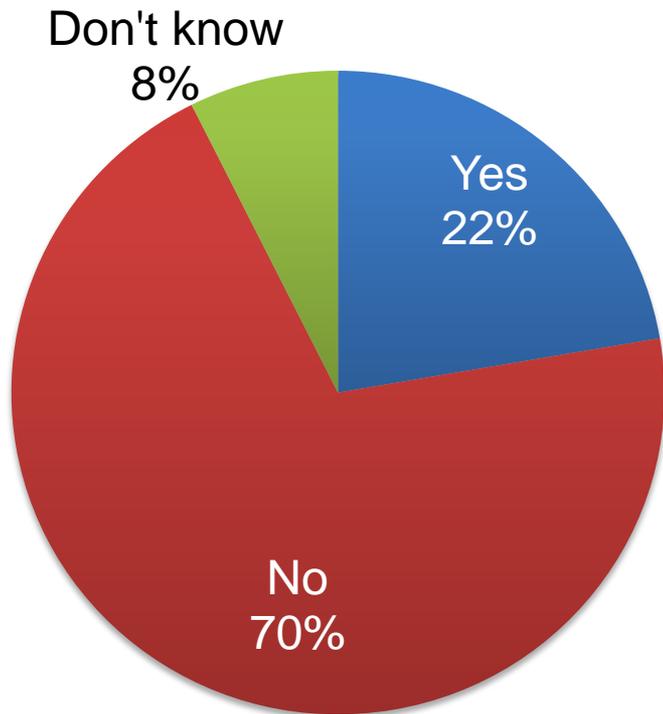
Q9. Does your household have flood insurance?



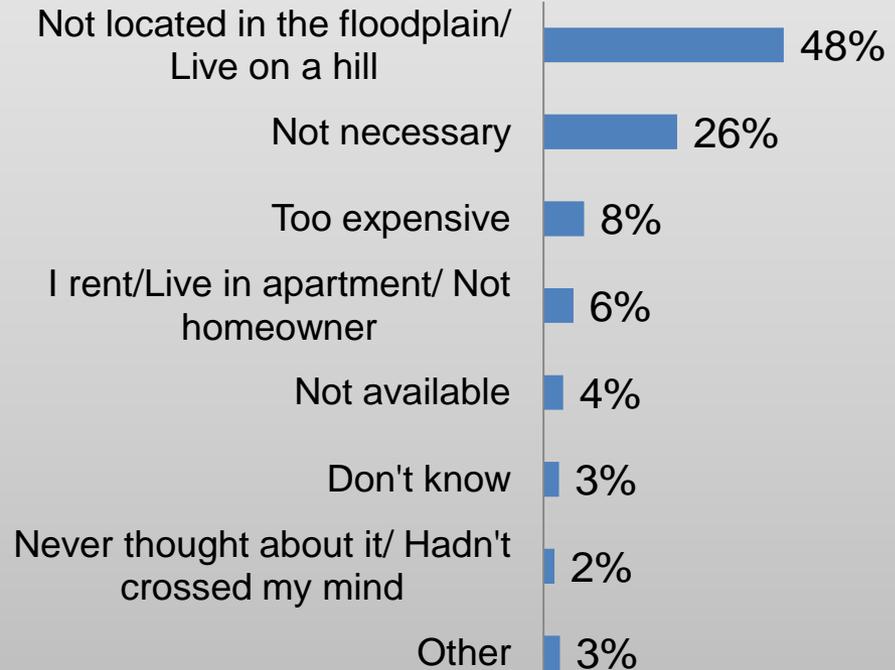
Those more likely to have flood insurance
\$35-\$40K
Medium or high risk
0-1/2 mi of river
Green or Snoqualmie River basin
Live in flood plain

22% have flood insurance.

Q9. Does your household have flood insurance?

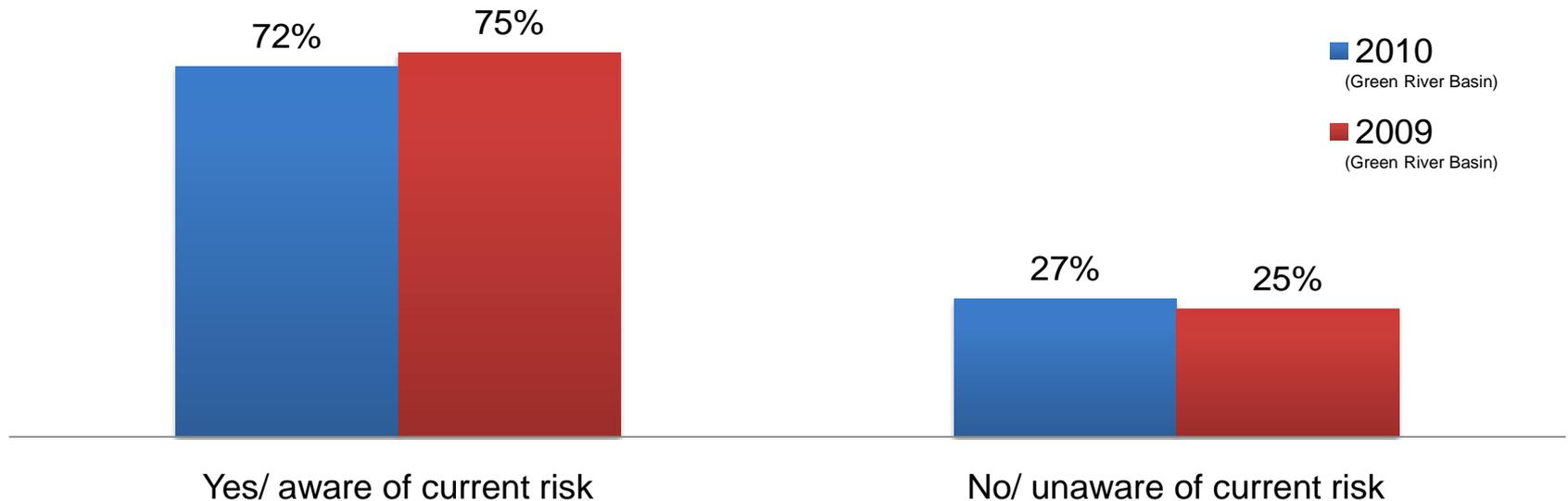


Q10. [IF Q9=NO] What is the main reason your household does not have flood insurance?



A strong majority of those in the Green River basin (72%) are aware of the current risk of flooding.

[GREEN RIVER ZIPS, ONLY] Q11. Prior to me reading this statement had you heard anything about the need to prepare for a higher risk of flooding during the current flood season?

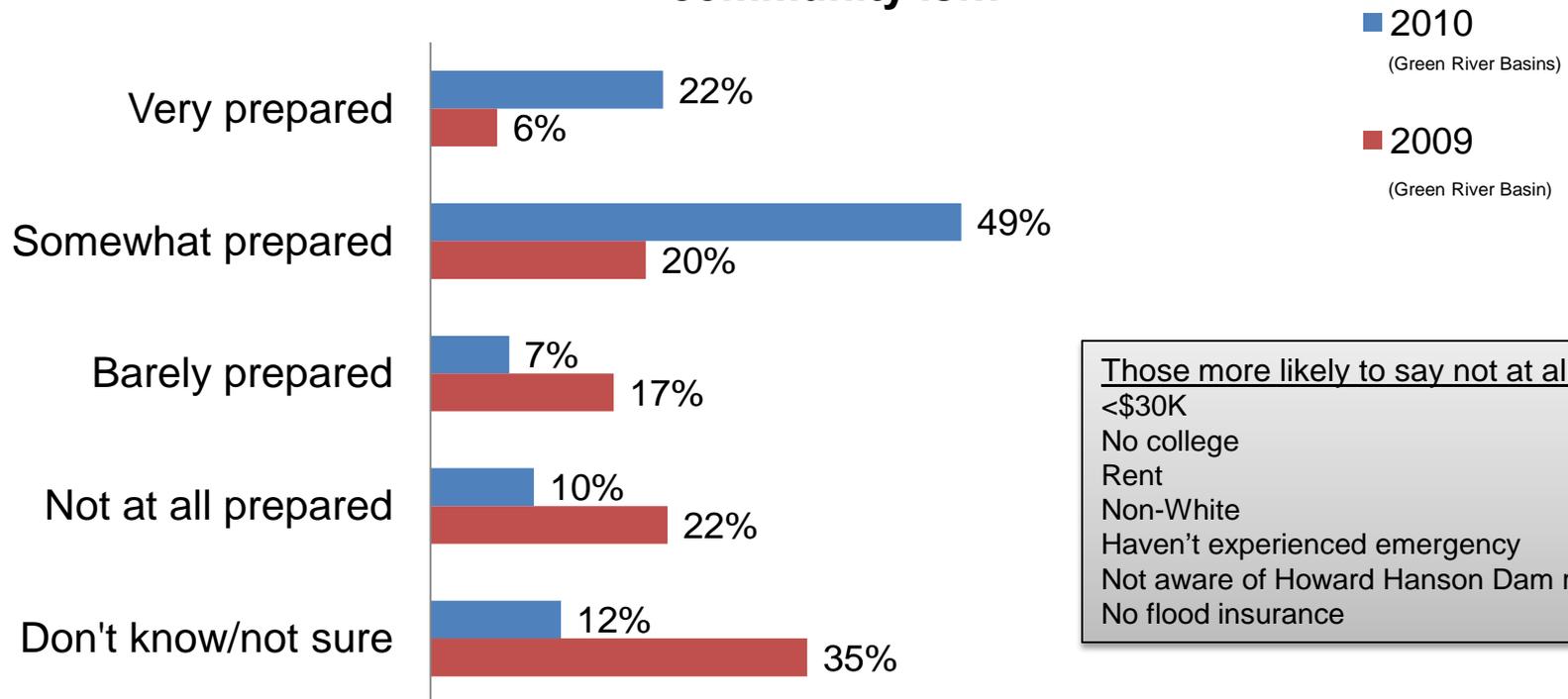


Those more likely to be aware
Experienced an emergency
35-54 years old
\$100K+
Spanish-speaking
Own home

Statements read to respondents in 2009 and 2010 differed. In each case, the current risk was described.

71% in the Green River basin feel their community is somewhat or very prepared for a flood emergency. This is a significant increase from 26% in 2009.

[GREEN RIVER ZIPS, ONLY] Q12. Overall, how prepared is your community for a flood emergency? Would you say your community is...



Those more likely to say not at all prepared:

- <\$30K
- No college
- Rent
- Non-White
- Haven't experienced emergency
- Not aware of Howard Hanson Dam risk
- No flood insurance

85% have supplies at home to last several days in the event of an emergency.

Flood Emergency Preparedness Summary (Top 3 Responses)

■ YES ■ NO ■ DK/REF.

Q14. At home, do you have enough food, water and necessary supplies, such as medicine, to last several days in the event of a flood emergency?



Q20. In the event of a flood emergency, are you prepared to evacuate or do you know several routes to higher ground?

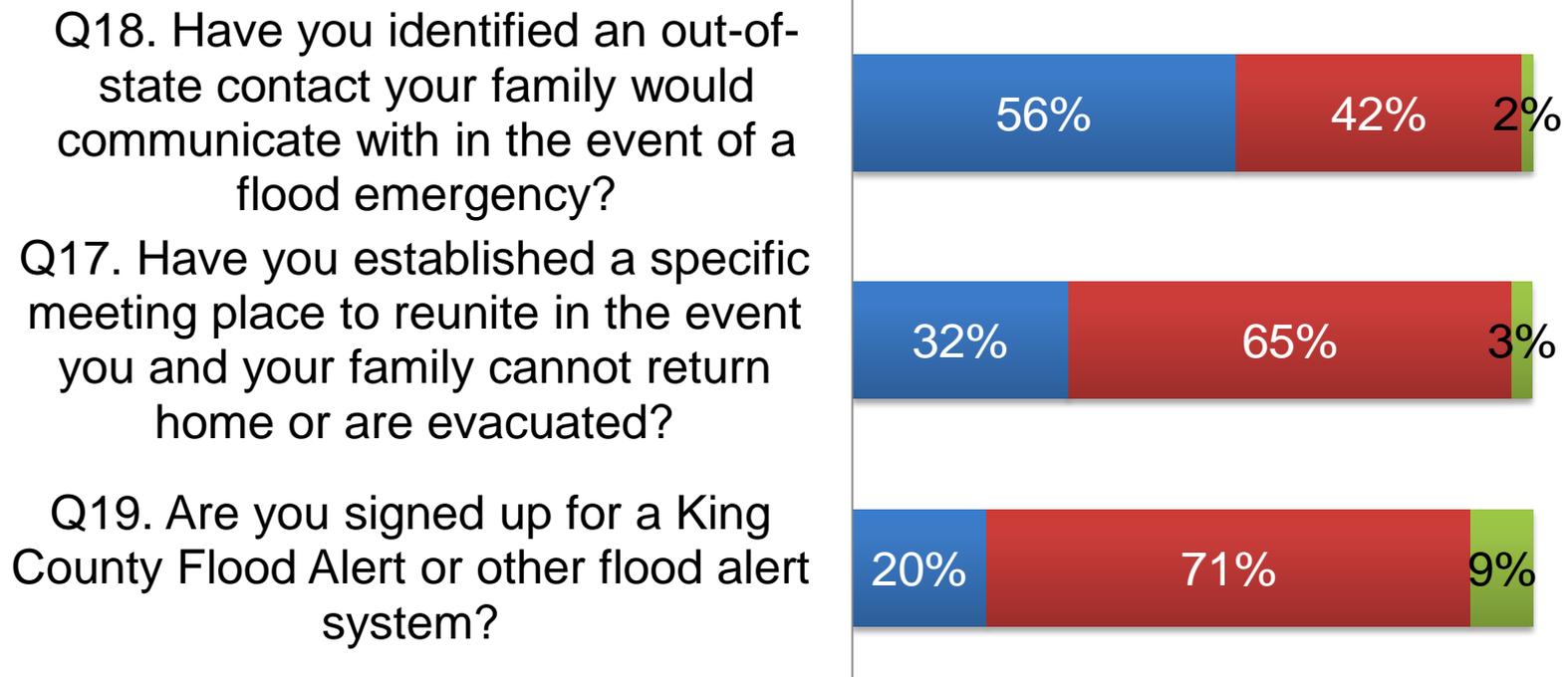


Q16. Do you own a hand-crank or battery-operated radio?



Flood Emergency Preparedness Summary (Bottom 3 Responses)

■ YES ■ NO ■ DK/REF.



Men, respondents 35 years and older, and those with incomes greater than \$30,000/year were more likely to have taken the specific preparation steps we queried.

*Specific Emergency Preparations (Those more likely to be prepared)
Statistically significant cross-tabulations*

Food, water, supplies to last several days

Male
35+ years old
\$50K+
White
English
Single family home
No children
Experienced emergency
0-1/2 mi or 5+ mi of river
Snoqualmie River basin

Out-of-state contact

35-54 years old
\$50K+
College degree
English
Experienced emergency
Low risk of flooding

Hand-crank or battery radio

Male
35+ years old
\$30K+
White
Single family home
Own home
Pets
No children
College degree
Experienced emergency
White or Cedar River basin
HHD awareness

Meeting place

Experienced emergency
Low risk of flooding

Emergency supply kit

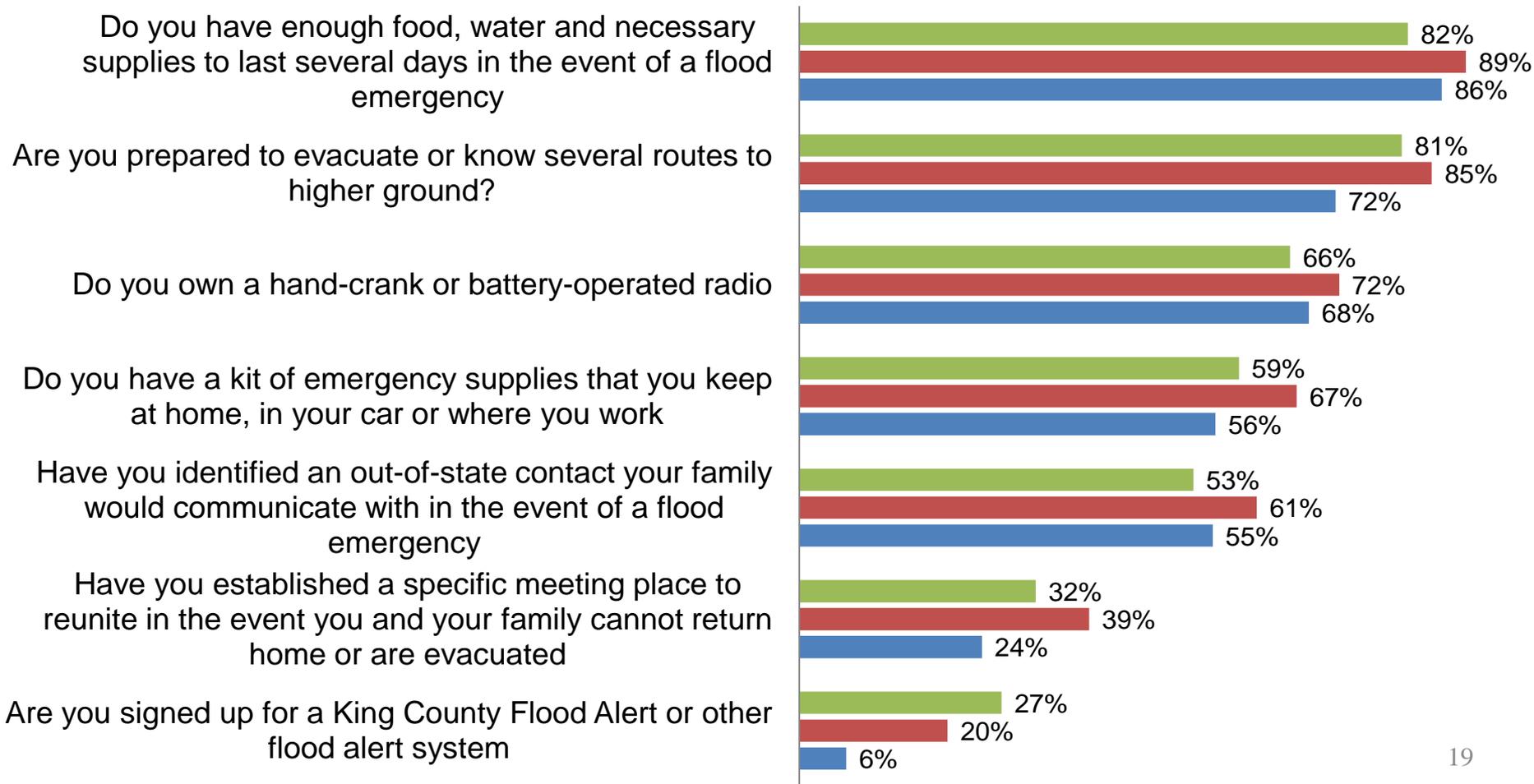
Male
\$30K+
White
English
Pets
No children
Experienced emergency
Have flood insurance

Flood Alerts

<\$100K
Med-High risk
0-1/2 mi of river
Green or Snoqualmie
Flood plain
Have flood insurance

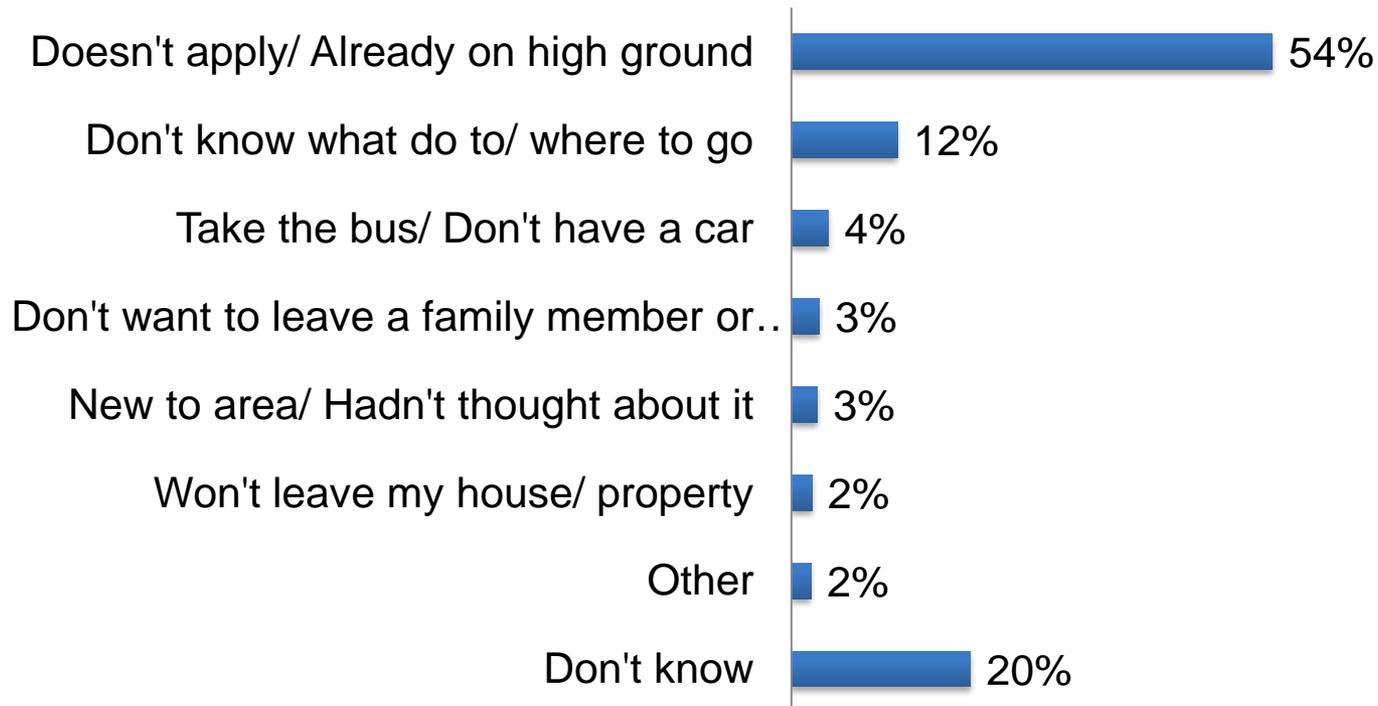
Flood Preparedness Summary Table (% Responding Yes, by River Basin)

■ Green/White ■ Snoqualmie ■ Cedar



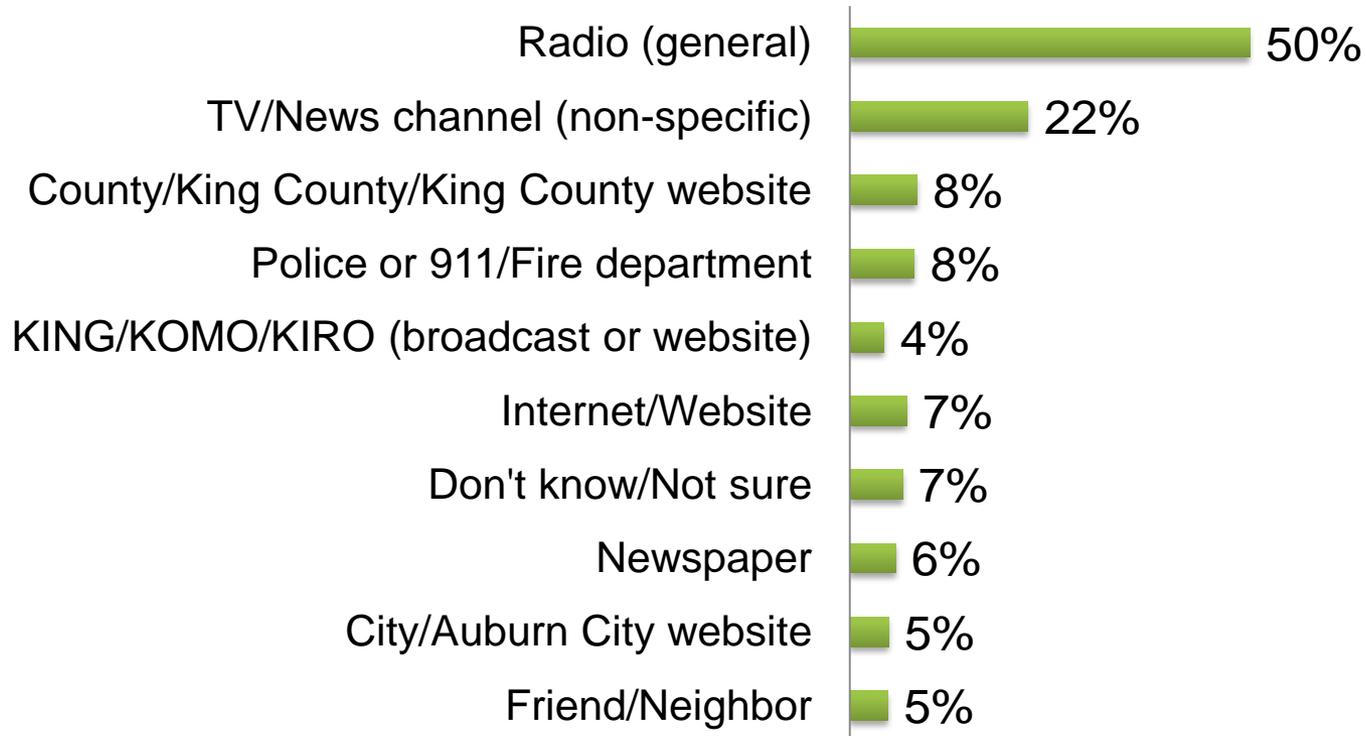
Of those who are not prepared to evacuate to higher ground, most say this is because they are already on high ground.

Q21. [IF Q20=B/NO (Not prepared to evacuate to higher ground.)] Why do you say this?



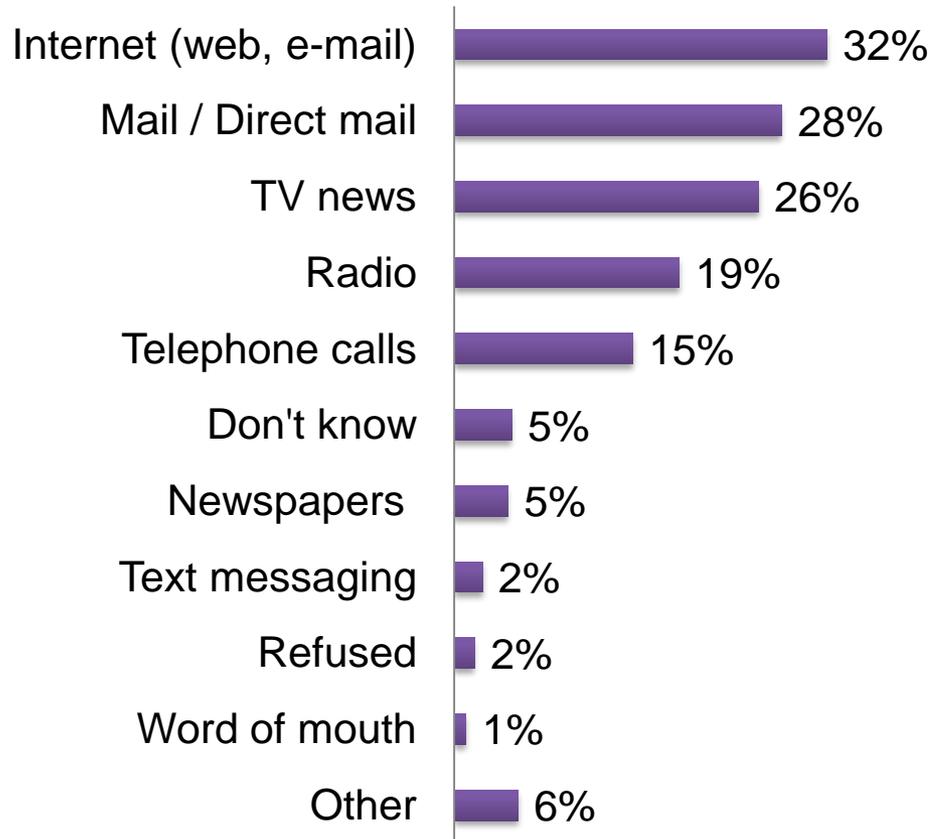
72% turn to radio or TV news for trusted information during a flood event.

**Q22. During a flood event, where would you turn for trusted or credible information?
(Top 10 responses)**



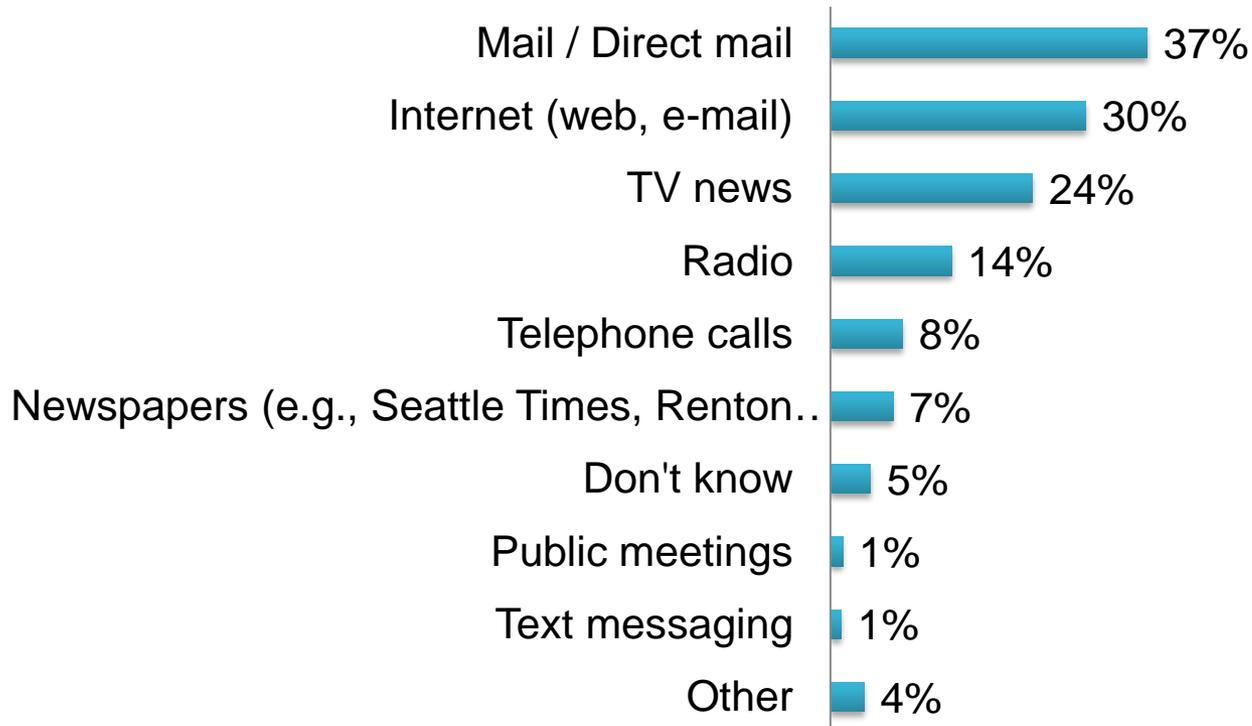
When it comes to flood preparation and emergencies, electronic communication and direct mail are preferred forms of communication.

Q23. What is the best way to get information to you about flood preparation and emergencies?



Mail and electronic communications are also the preferred means of communication from and about King County and other local governments.

Q24. What is the best way to get general information to you from and about King County and other local governments?



Key Findings

- A strong majority believe they are at a low-risk of flooding
- Those most likely to be concerned about flooding:
 - Lower-income, non-Whites, multi-family residence, live in the Green or Snoqualmie River basins
- There's been a significant increase in the proportion of respondents who feel their community is somewhat or very prepared for a flood emergency
- High levels of awareness of the current risk along the Green River
- Significant increase in proportion reporting they have flood insurance

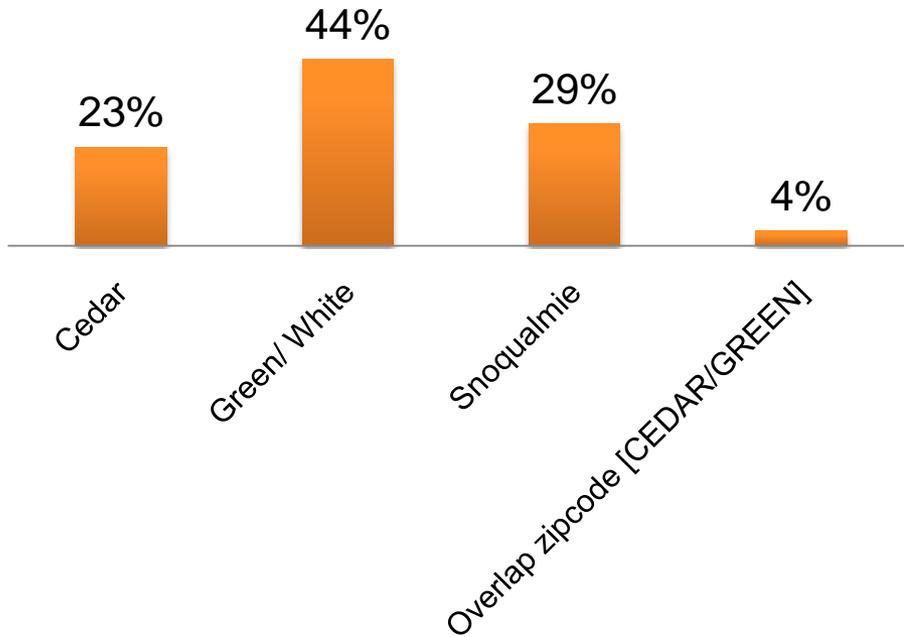
Key Findings

- Men and those who have experienced a flooding event are more likely to take make specific preparations
- Radio and TV are top sources for information during a flood event
- Internet, mail and broadcast news are preferred sources of information about flood preparation and emergencies
- People prefer to receive county information via direct mail and internet

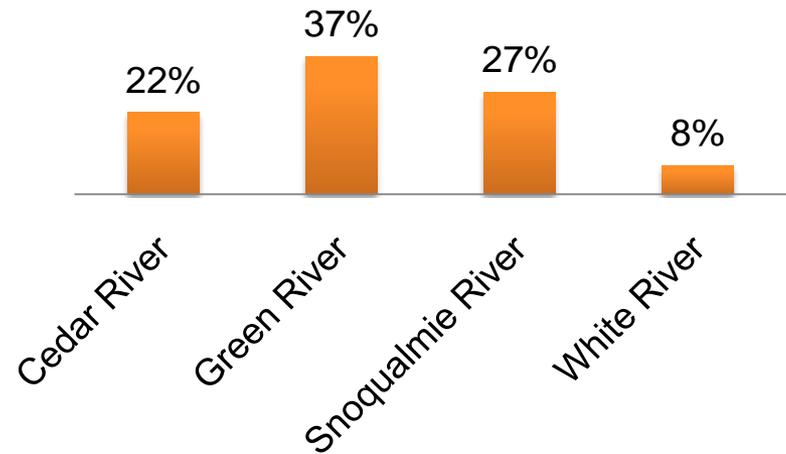
Background & Demographics

Respondents from Cedar, Green, Snoqualmie and White River basins completed the survey.

Q2. Before we get started, may I have your home zipcode?

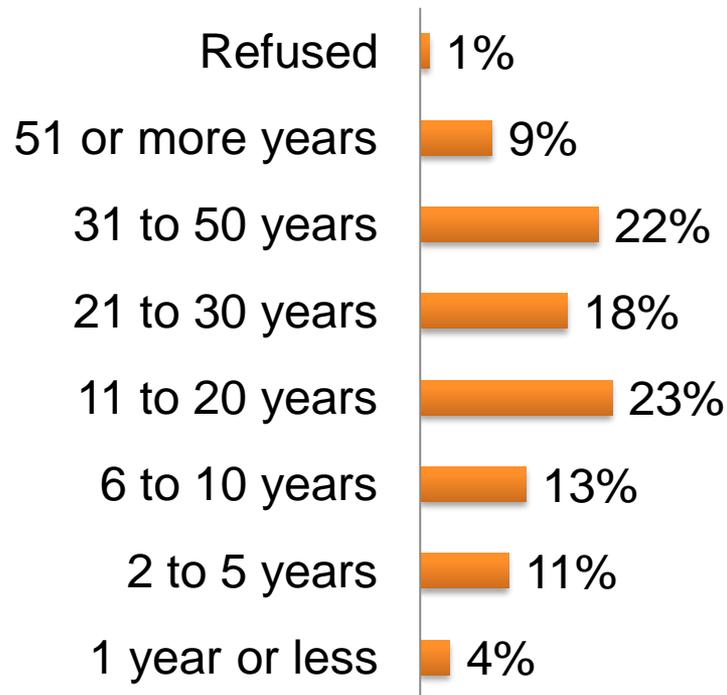


Q29. Which of the following rivers is closest to your home?



71% have lived in King County 10 or more years.

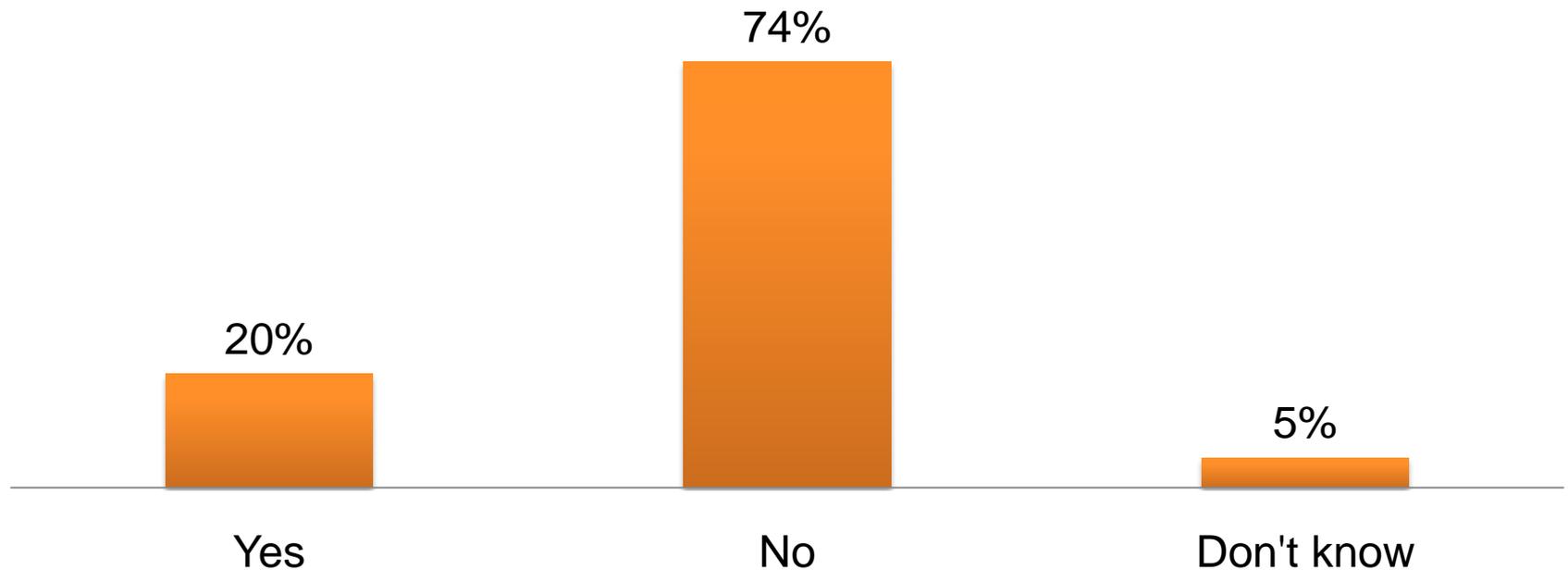
Q26. How many years have you lived in King County?



**Median:
20 years**

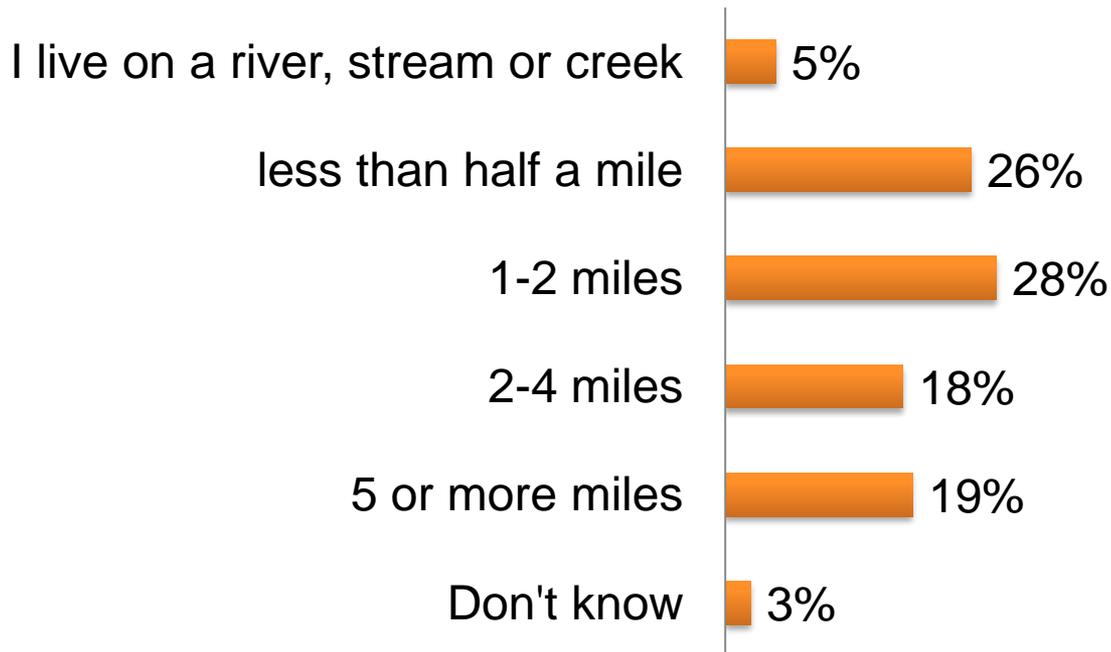
Only 20% of respondents indicated that they currently live in a flood plain.

Q27. Do you currently live in a flood plain?



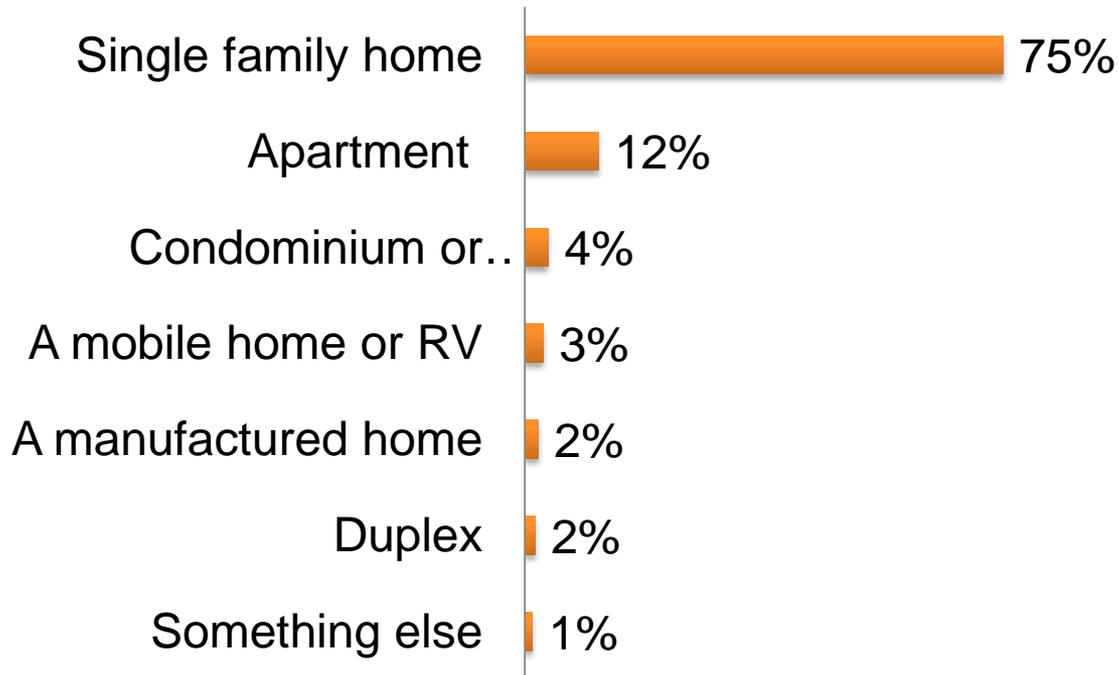
31% live within one mile of a river stream or creek.

Q28. How close do you live to a river, stream or creek?



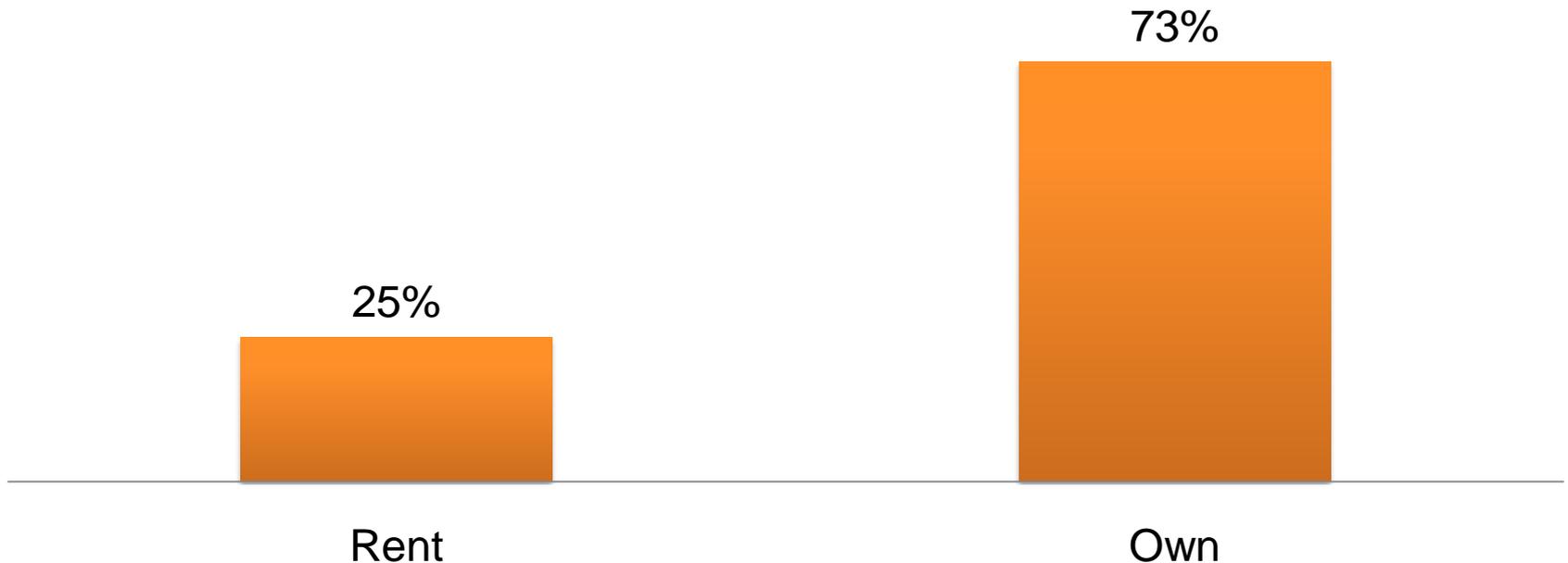
A significant majority live (75%) in single family homes.

**Q30. Which of the following best describes the place you live now?
Is it a...**



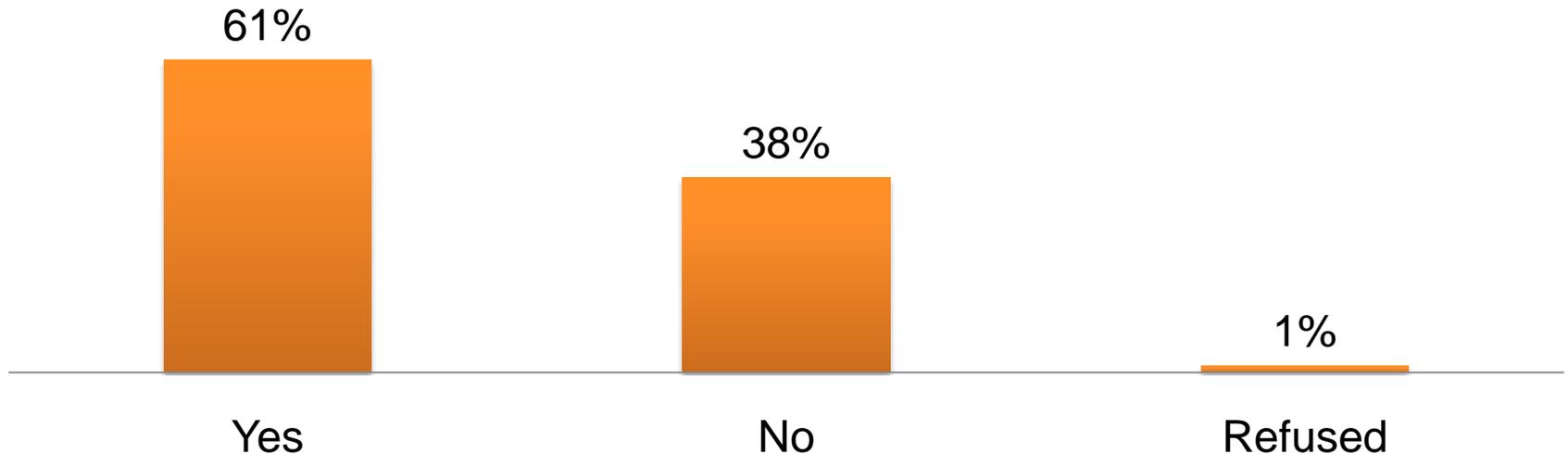
Most respondents (73%) own their own home.

Q31. Do you rent or own your own home?



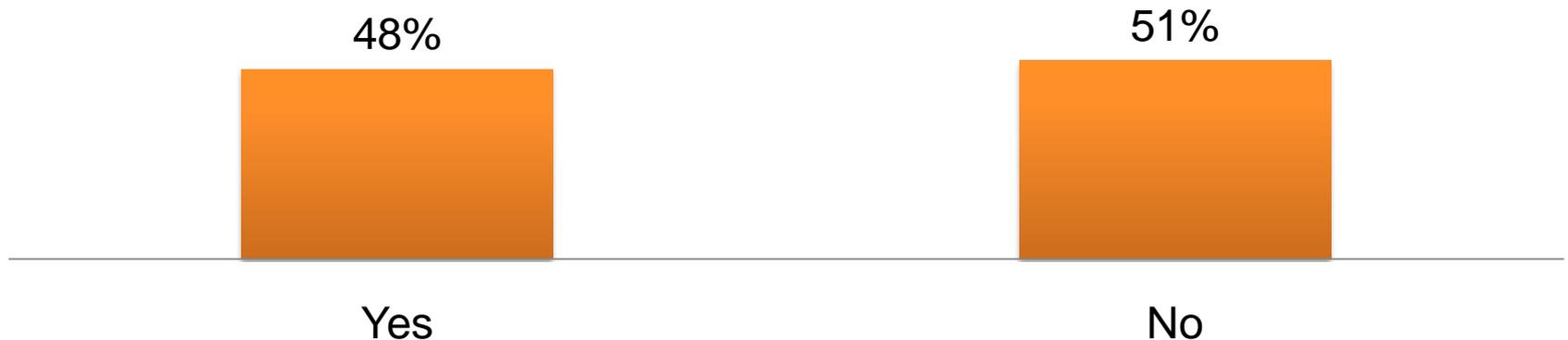
A majority (61%) have a pet or animals.

Q32. Does your household or property have a pet or any animals?



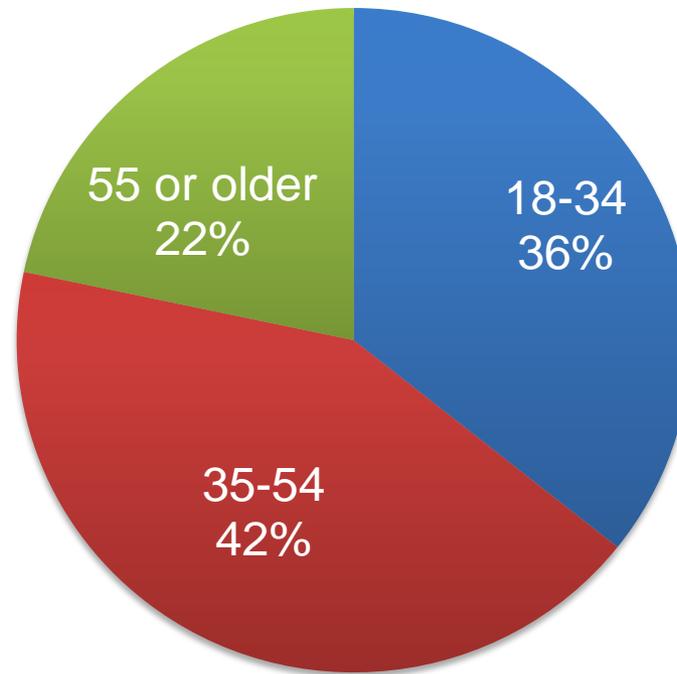
Nearly half (48%) have personally been involved in an emergency situation as the result of a natural disaster.

Q25. Have you ever personally been involved in an emergency situation before as a result of a natural disaster such as a flood, earthquake, hurricane or tornado?



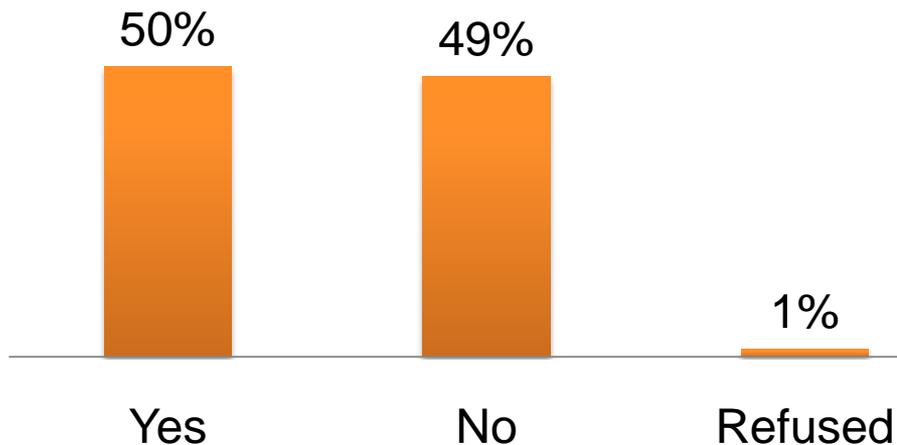
Respondents' ages are consistent with the ages of the study area population.

Q3. Which of the following categories includes your current age?

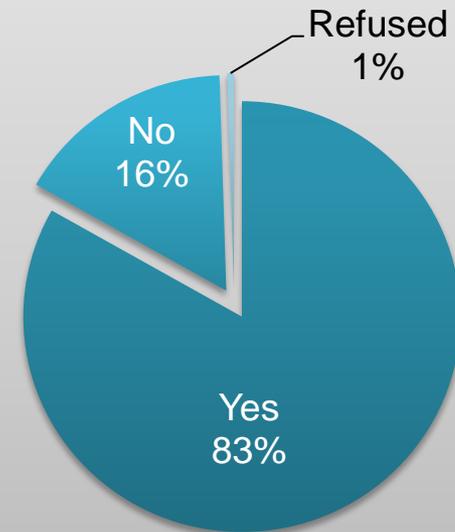


50% live in households with children under age 18. Most of these children (83%) attend school outside of the home.

Q33. Are there any children under the age of 18 living in your home?

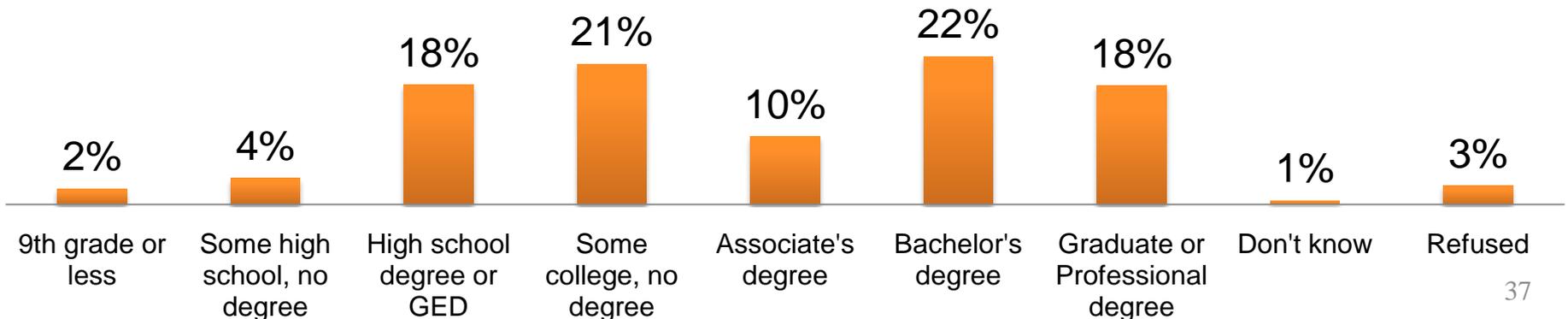


Q34. [IF Q33=A/YES] Does this child/or any of these children currently attend a school outside of your home, including day care or part time kindergarten?



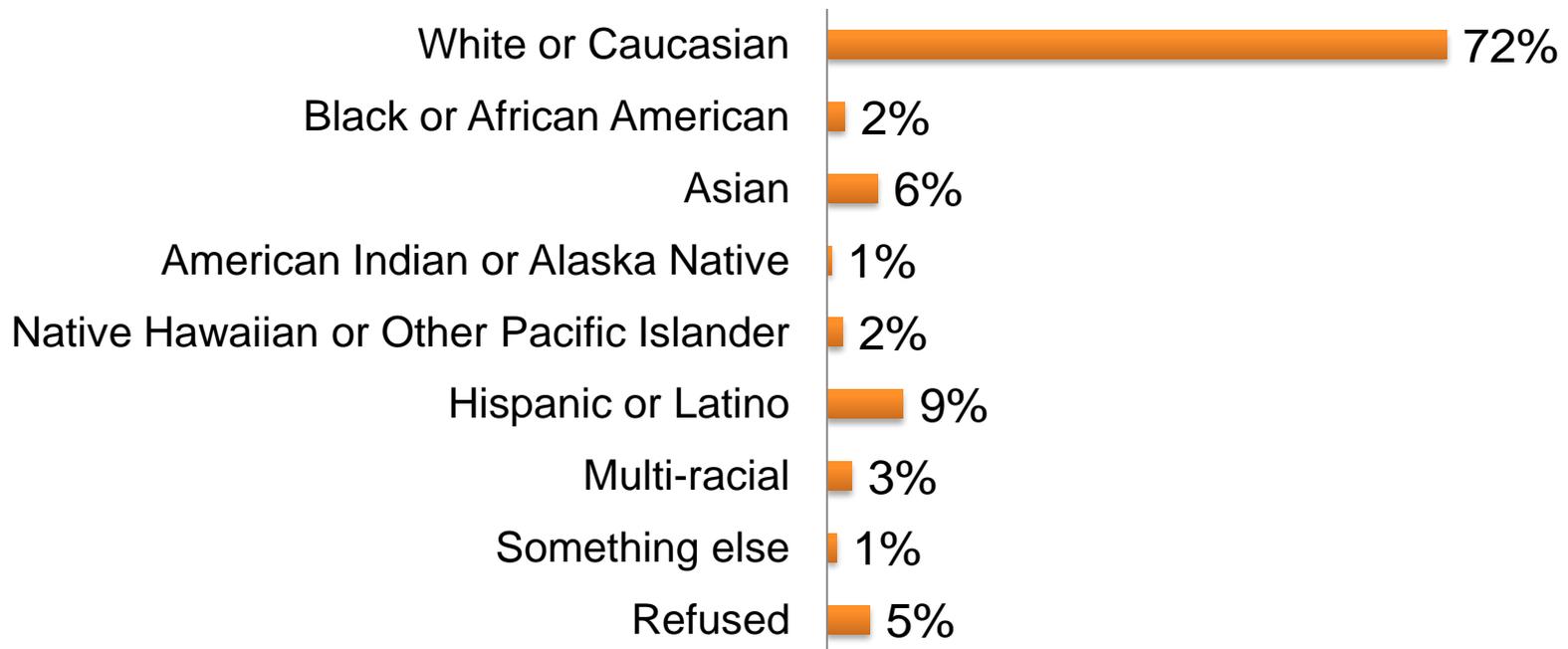
71% have some education beyond high school.

Q35. What is the highest grade or year of school that you have ever completed?

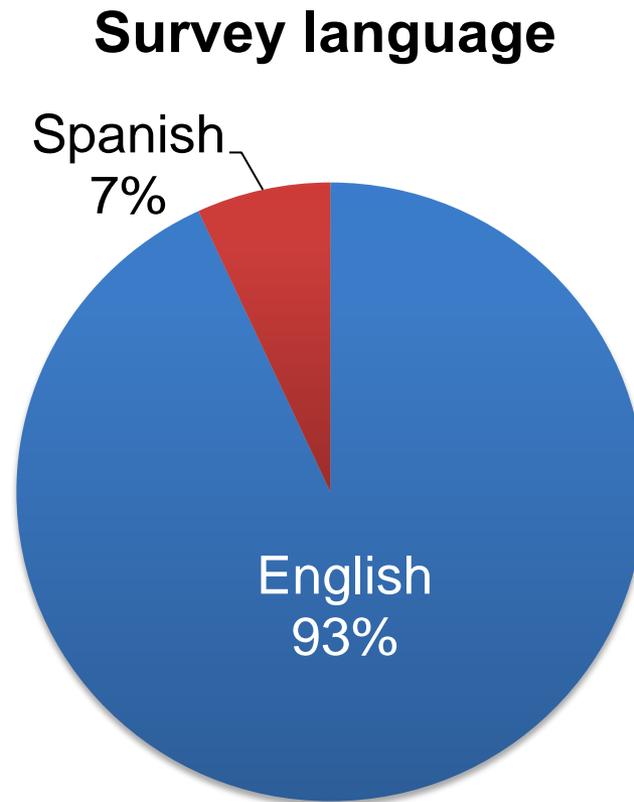


24% describe their race or ethnicity as something other than White/ Caucasian.

Q36. How would you describe your race or ethnicity?



33 interviews (7%) were conducted in Spanish.





King County

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Alternate Formats Available**