

Coryell County Hazard Mitigation Plan Public Survey Results



On behalf of Coryell County, Natural Resources Solutions designed and distributed a public survey to **obtain public input regarding natural hazards in Coryell County**. The survey was designed to broadly assess [1] public experiences and **level of concern** regarding the natural hazards included in the Hazard Mitigation Plan (HMP); [2] public perception of their personal **level of preparedness** in the event of impacts from these hazards; [3] public preference for means of **communication and emergency notifications** regarding the natural hazards included in the HMP; and [4] general public interest in a range of **mitigation and preparedness actions**, or projects, a County might choose to undertake.

The survey was designed using an **online** platform to enable user-friendly online access, as well as in a **hardcopy** form to ensure that a broad and representative array of citizens were able to participate, regardless of internet or computer access. The survey was **deployed on 1/12/2023 and active through 2/12/2023**. Hardcopy surveys were available at the following locations:

- All public meetings;
- Gatesville: City Hall, Public Library, Tax Office, and County Annex;
- Evant: City Hall;
- Oglesby: City Hall; and
- Copperas Cove: Council Chambers, Public Library, and Utility Authority.

A total of 367 surveys were submitted, including 302 online and 65 hardcopies.

Survey Respondents expressed the **highest levels of concern about Drought, Wildfire, Winter Storms, and Tornadoes**. Regarding whether they had experienced impacts due to each hazard (e.g., injury/fatality, damage or loss of property, loss of work/school days, etc.), 69% of Respondents indicated experiencing impacts due to Winter Storms, the highest rate of all hazards. Further, 50% of Respondents reported having experienced impacts due to Thunderstorms (Hail, Lightning, and Straight-line Wind, collectively), followed by 46% from Drought. By and large, Respondents sought to have access to communication (both information and emergency) through modern means, including text message, social media, and internet websites. Other more conventional forums included local newspaper and television. **Please see below for more detailed analyses.**

Data and information obtained was used to inform the development of Coryell County's HMP. The survey responses provided key information regarding the vulnerabilities and impacts associated with each hazard, as well as the comprehensive mitigation actions. Public input was key to ensuring the HMP is tailored to Coryell County and its residents.

Thank you for your participation and interest in Coryell County's HMP public survey.

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Zip Codes:

Table 1 provides the set of zip codes and a count number of surveys from each zip code. A total of 350 out of 367 surveys indicated the zip code the respondent was from. It is clear that some zip codes are more highly represented than others. It is important to note that Coryell County has 13 total zip codes that are fully or partially in the county. The survey responses indicate that 9 of those 13 zip codes were represented in the survey. Of the 350 responses, 340 (97%) were from zip codes in the HMP Planning Area. There were an additional 8 zip codes that that contributed 10 surveys located outside of the Planning Area, for a total of 17 zip codes represented in the survey responses.

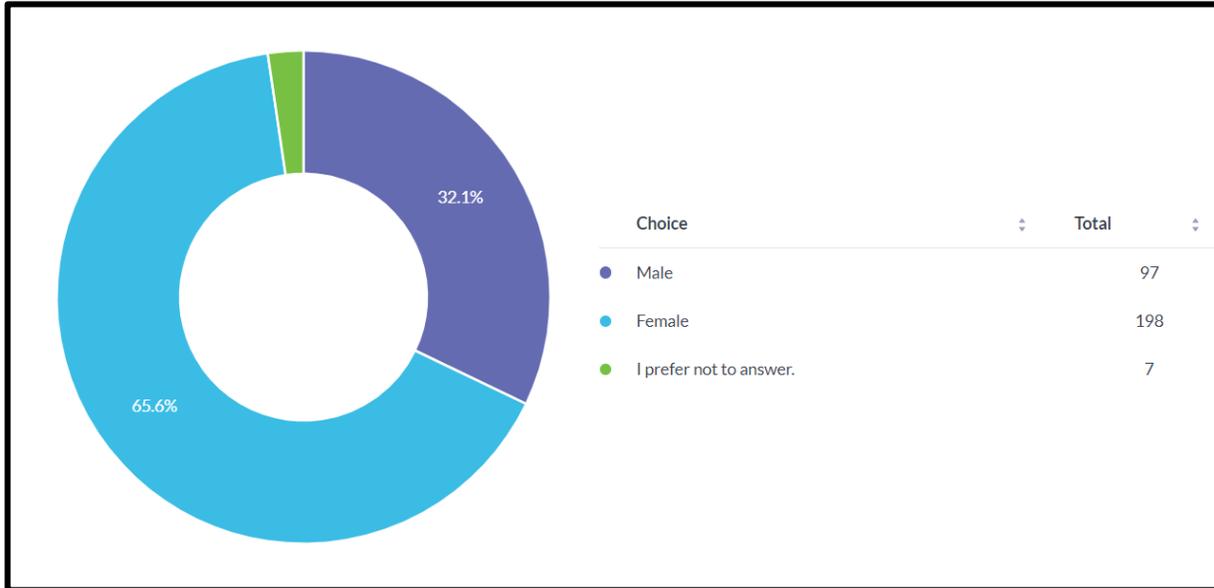
It is important to note that zip codes were not provided by 17 Respondents.

Table 1. HMP Survey Responses by Zip Code.				
Zip Code	Community	County	Count	% of Total
76528	Gatesville	Coryell, Bell	199	54%
76522	Copperas Cove	Coryell, Lampasas	73	20%
76538	Jonesboro	Coryell, Hamilton	26	7%
76525	Evant	Coryell, Hamilton, Lampasas	16	4%
76561	Oglesby	Coryell, McLennan	14	4%
76566	Purmela	Coryell	5	1.3%
76539	Kempner	Lampasas, Coryell, Burnet	5	1.3%
76523	Davilla	Milam	2	≤ 0.5%
76502	Temple	Bell	2	≤ 0.5%
76712	Woodway	McLennan	1	≤ 0.5%
76689	Valley Mills	Bosque, Coryell, McLennan	1	≤ 0.5%
76657	McGregor	McLennan, Coryell	1	≤ 0.5%
76638	Crawford	McLennan	1	≤ 0.5%
76622	Aquilla	Hill, McLennan	1	≤ 0.5%
76531	Hamilton	Hamilton	1	≤ 0.5%
76504	Temple	Bell	1	≤ 0.5%
76501	Temple	Bell	1	≤ 0.5%

Gender:

Respondents were primarily female, representing 65% of survey responses (Figure 1).

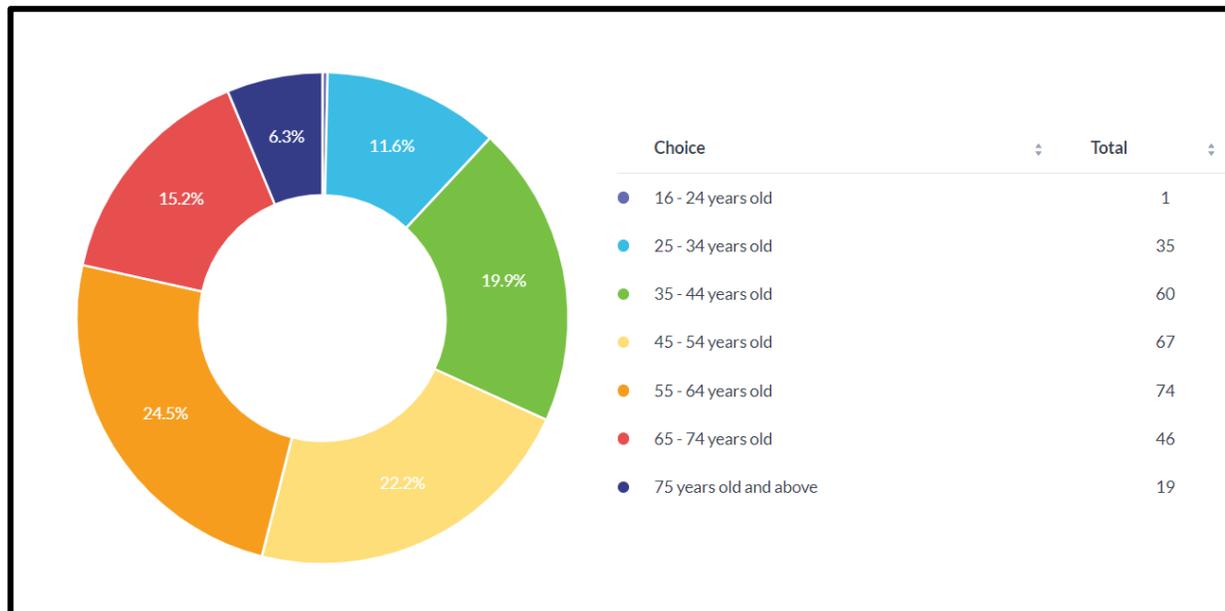
Figure 1. HMP Survey Responses (%) by Gender.



Age:

Survey responses captured a reasonably representative sample of working age adults (Figure 2). The most represented age category was 55-64 years of age, comprising 24.5% of Respondents. Age categories 35-44 (20%) and 45-54 (22%) were also well represented.

Figure 2. HMP Survey Responses (%) by Age.





Level of Concern:

Table 2 presents the mean *level of concern* on a scale of 0-10. The hazards are in descending level of concern. Responses indicate that Drought ranks the highest level of concern, with responses indicating a mean concern of 7.32, nearly 6 times higher than the hazard of least concern, Dam Failure. In addition to Drought and Wildfire, Winter Storms and Tornados also showed levels of expressed concern (>6 on the 10-point scale). It also provides the percentage of Respondents who answered yes to the question “Have you experienced impacts, including physical impacts to yourself or others in your household, damage to personal property, or other impacts such as lost work days or school?”

Please note that in Table 2 Hail, Lightning, and Straight-line Wind are collectively referred to as Thunderstorms. The Flood hazard is also closely related to Erosion.

Table 2. Levels of Concern and Respondent Percentage Answered Yes to: “Have you experienced impacts, including physical impacts to yourself or others in your household, damage to personal property, or other impacts such as lost work days or school?”		
Hazard	Mean Concern Score	% Answered Yes
Drought	7.32	46.3%
Wildfire	6.38	23.3%
Winter storm	6.16	69.6%
Tornados	6.04	15.1%
Extreme heat	5.83	29.5%
Thunderstorm	4.73	50%
Flood	3.44	18.9%
Dam Failure	1.5	1.4%

There are three primary hazards that are associated with thunderstorms (excluding Flood, an independent category), *Hail, Lightning, and Straight-Line Wind*. Respondents were asked to identify which thunderstorm-related hazard(s) they were concerned about, with an option to choose all that apply. Table 3 summarizes the results, indicating that the majority of concern is focused on Hail and Wind impacts.

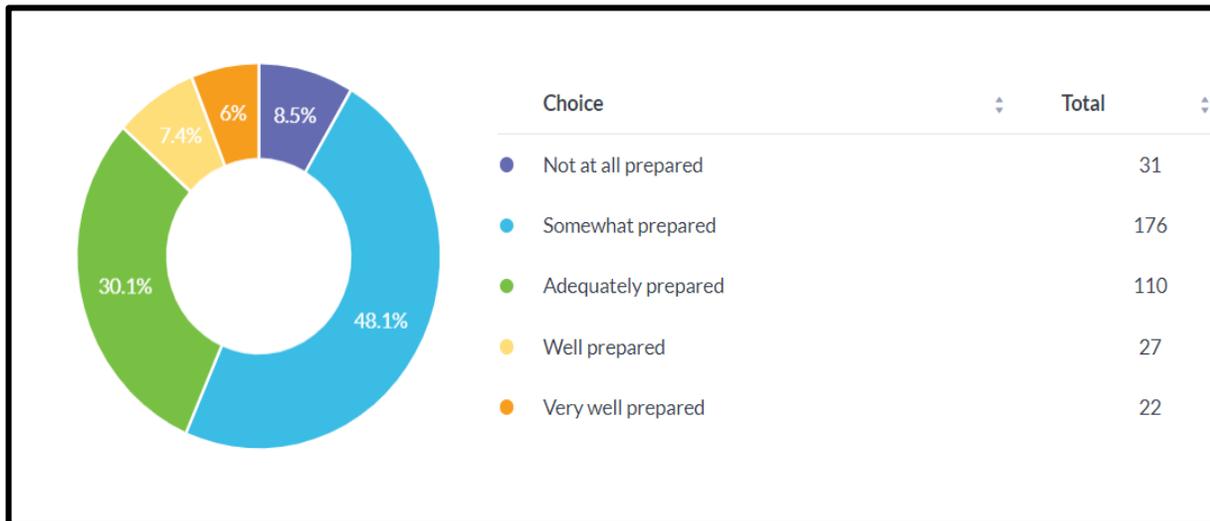
Table 3. Concern for Thunderstorm-Related Hazards.	
Thunderstorm-Related Hazard	Total # Expressing Concern
Hail	278
Wind	227
Lightning	159

Level of Preparation:

The majority of Respondents indicated that they did NOT have flood insurance, with 73% indicating no flood insurance, 10% with flood insurance, and 16% indicating uncertainty about whether they had flood insurance.

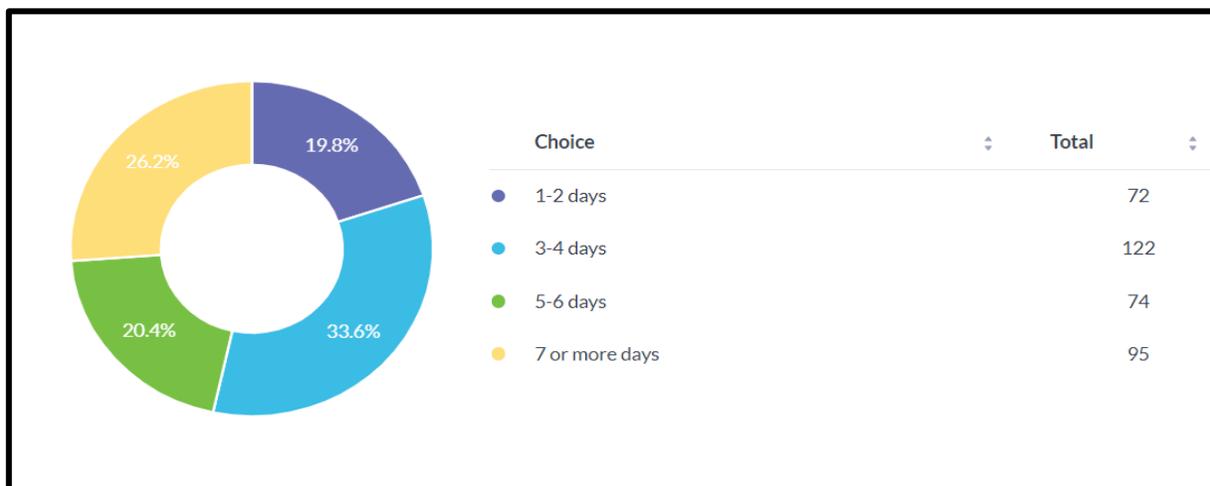
While approximately 43% of Respondents indicated they felt *adequately prepared, well prepared, or very well prepared* for a natural hazard, the majority of Respondents (~57%) indicated they were *somewhat prepared or not at all prepared* (Figure 3).

Figure 3. HMP Survey Responses (%) by Preparedness.



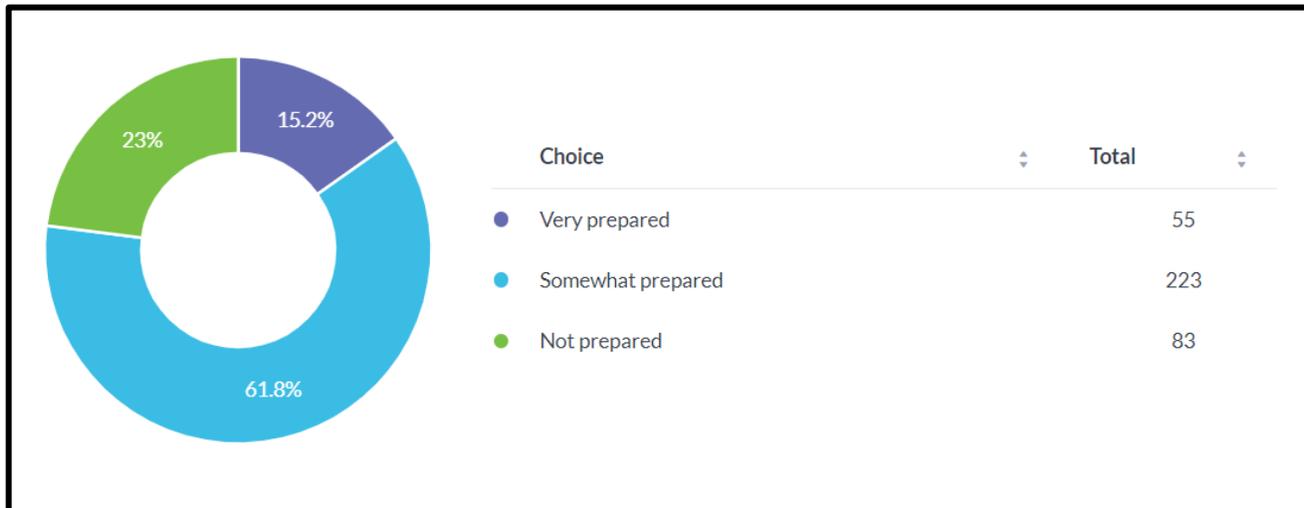
In Figure 4, Respondents indicated their level of household preparedness regarding amount of food, water, and vital supplies available on hand in the event of a natural disaster. Nearly 20% of households indicated less than 3 days of supplies on hand.

Figure 4. HMP Survey Responses (%) by Food/Water/Supplies Preparedness.



While the majority (77%) of Respondents indicated that they were *somewhat prepared* or *very prepared* to manage basic household needs in the event of loss of electricity or natural gas, approximately 23% indicated they were not *well prepared* for such an event (Figure 5).

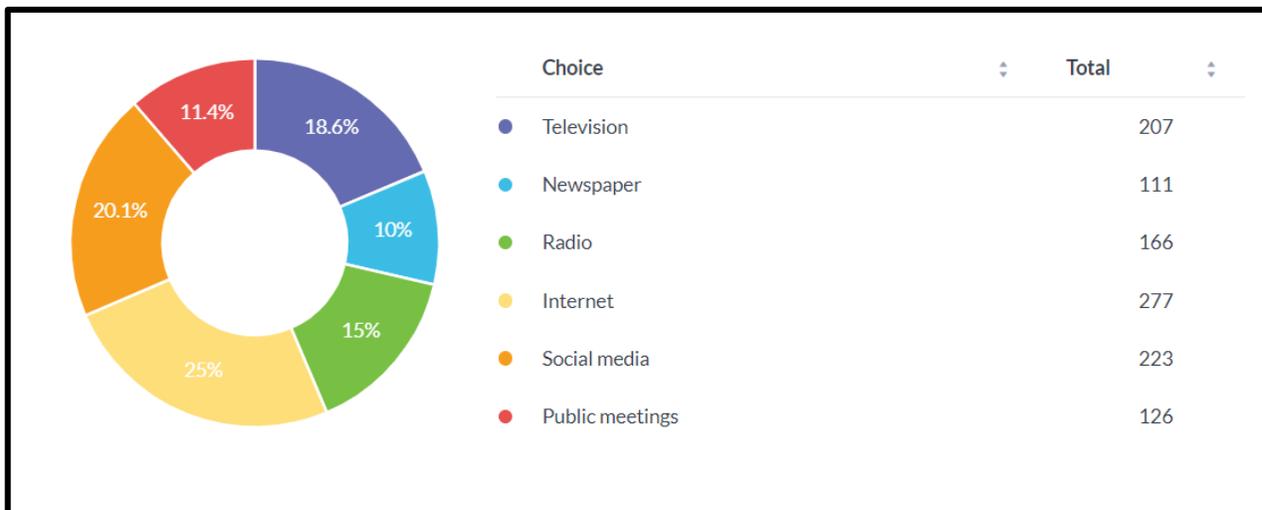
Figure 5. HMP Survey Responses (%) by Electricity/Gas Preparedness.



Preferred Communication and Notification Platforms:

In Figure 6, Respondents indicated an array of preferred sources for receiving useful information about hazards, preparations, etc. The largest proportion of responses indicated preferred *communication* through internet websites (25%) or social media (20%). Followed by television (19%) and radio (15%).

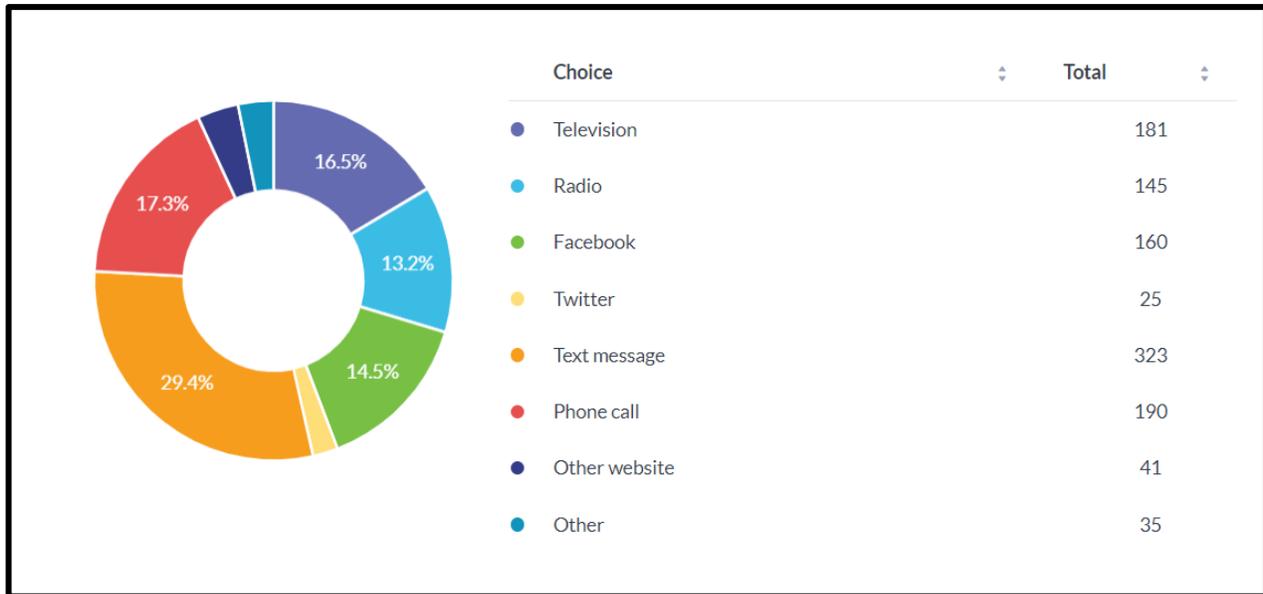
Figure 6. HMP Survey Responses (%) by Preferred *Communication* Platforms.



In Figure 7, Respondents similarly indicated an array of preferred platforms for *notification* regarding imminent hazards or threats, with a strong 30% of Respondents preferring text

message notifications. Followed by phone calls (17%), television (16%), and Facebook communications (15%).

Figure 7. HMP Survey Responses (%) by Preferred *Notification* Platforms.



Mitigation Measures:

We asked Respondents to indicate if they would support proposed mitigation measures among a specified list, selecting all that apply. Table 4 below details the number of Respondents who indicated support for mitigation measures of each type. The Table lists proposed measures in *descending* order of support with the first listed item being the *most* supported.

Proposed Mitigation Type	Total Number of Respondents Expressing Support
Improve damage resistance of utilities such as electricity, communications systems, etc.	283
Improve roadways	235
Repair or replace bridges and low water crossings	217
Improve emergency response providers and facilities such as police, fire, EMT, ambulance	205
Improve access to information about hazards, risks, and strategies to limit risk	197

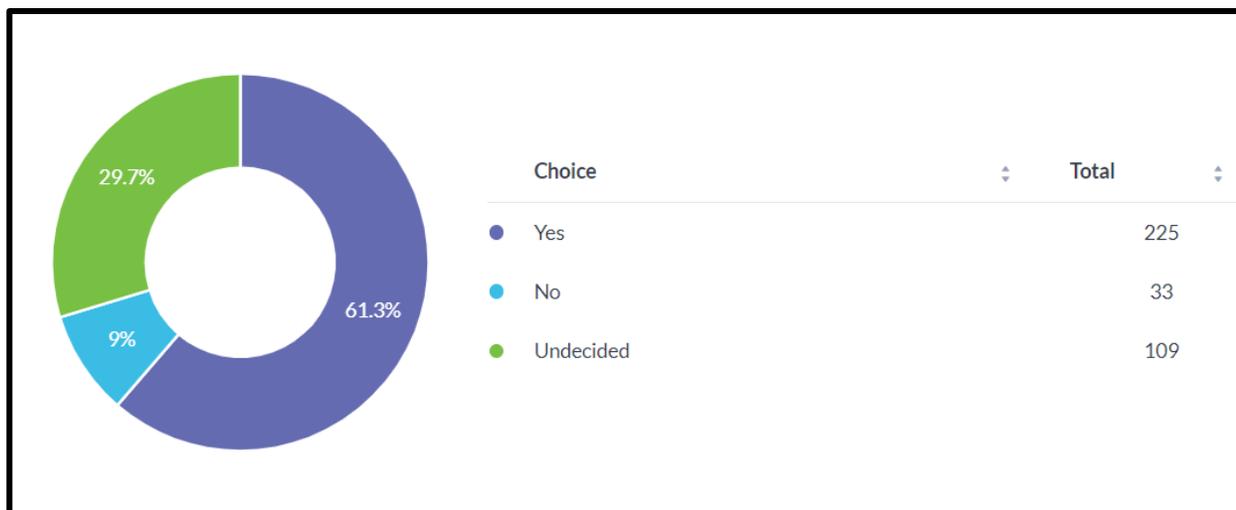
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Provide educational and information resources to help residents better prepare for natural hazards	176
Create a stream and weather monitoring system that is better able to detect, predict, and communicate risks	164
Improve protective measures such as dams, levees, firebreaks	140
Enhance river/stream health and restoration programs	139
Support research to better understand and predict flood risks and other threats to guide effective mitigation	119
Assist with management of flood prone lands in ways that mitigate flood impacts	114

We asked Respondents whether they would support policies that manage or limit certain types of development in hazard zones in order to reduce risks. The majority (61%) of Respondents indicated support for such policies.

Figure 8. HMP Survey Responses (%) In Favor of Policies that Manage Development.



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Conclusion:

Respondents expressed the highest levels of concern about Drought, Wildfire, Winter Storm, and Tornados. Regarding whether they had experienced impacts (e.g., injury/fatality, damage or loss of property, loss of work/school days, etc.) due to each hazard, 69% of respondents indicated experiencing impacts due to Winter Storms (highest rate of all hazards). Respondents sought to have access to communication, both information and emergency, through modern means, including text message, social media platforms, and internet websites.

Please note that a final Public Survey Analysis will be included in the final HMP document as an Appendix. Once finalized, the HMP will be made available to the public through <https://www.coryellcountyhmp.com/>

Thank you again for your support and participation in Coryell County's HMP public survey. Your input is invaluable and will help ensure the HMP is tailored to Coryell County and the concerns of its residents.