JEDC
Juneau Economic Development Council

2024 Glacial Lake Outburst Flood Survey Final Report

Photo courtesy of Richard Ross via Associated Press

Completed by the Juneau Economic Development Council

JEDC research efforts are supported by core funding from the City & Borough of Juneau

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

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Introduction

On August 6, 2024, the Mendenhall River experienced a surge of water due to a glacial lake outburst flood from Suicide Basin adjacent to the Mendenhall Glacier. A glacial lake outburst flood occurs when a basin that is dammed by the glacier suddenly gives way and releases a significant volume of water. The river crested at 15.99 feet, exceeding the previous record of 14.97 feet in 2023. Estimates show approximately 14.6 billion gallons of water were released from the basin into the river in 2024, directly affecting nearly 300 Juneau homes and businesses.

In May 2025, JEDC released a survey to better understand and quantify the level of economic devastation incurred by Juneau households and businesses that were directly affected by flooding in 2024. Six in-person interviews were later performed in conjunction with the survey tool to create an open-form space for affected individuals to share their feelings about continuing to live in the Mendenhall Valley and in Juneau, overall, and convey meaningful details which may have been outside the survey parameters. These interviews are summarized in the final section of this report and a full transcript of each will be included in a separate addendum. We have kept their identities anonymous out of respect for our interviewees who volunteered to tell their stories.

We would like to thank the Alaska Community Foundation for making this project possible with grant proceeds from their Social Justice Fund.

Methodology

Surveys were distributed to a list of 290 "flood-affected" addresses (obtained with assistance from CBJ) via a postcard describing the survey effort. Each postcard contained a written link and QR code directing recipients to the SurveyMonkey instrument. During the period of May through August 2024, two additional rounds of follow-up materials were distributed to all households that had not yet completed a survey in the form of a written letter and a flyer, each containing a link and QR code.

The sample size of 290 was reduced to 263 due to some addresses being undeliverable, either having no mail receptacle or appearing abandoned, and de-duplicating addresses. Additionally, JEDC received notices from certain individuals who had a survey distributed but were not directly affected by flooding in 2024. JEDC received 84 total responses to the survey instrument. Of 84 total responses received, 80 entered data. Of the 80 respondents who entered data, 76 (95%) reported that their property was directly affected by glacial outburst flooding in August 2024. This report uses the sample of 76 households that were directly affected by 2024 flooding: a total response rate of 28.9%, with a margin of error (95% confidence) of 8.6%.

Due to the sensitive nature of the topic being surveyed, respondents had the option to decline to answer any questions within the survey, only sharing information that they were comfortable with. This resulted in certain questions having larger sample sizes than others. Responses were anonymized upon closure of the survey, with the specific house number being removed from the address line for each respondent. Thus, question analyses may have slightly different margins of error depending on the number of respondents who chose to share information.

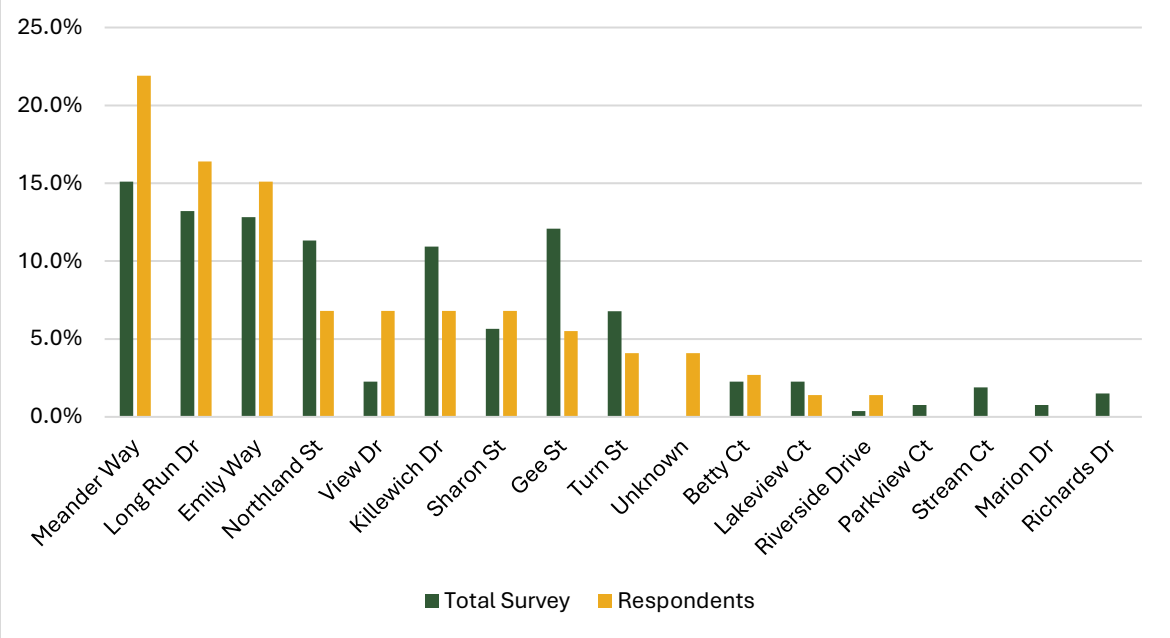
Demographics

In total, the demographic makeup of survey respondents corresponded closely with Juneau's overall demographic makeup. Slight deviations from Juneau-wide demographics included seeing an older-than-expected, whiter, and higher-earning population in the survey pool; however, the magnitude of these deviations was small.

Street

Figure 1 shows the proportion of responses received by street of residence. Meander Way, Long Run Drive, and Emily Way had the most representation, seeing higher response rates than expected. Northland Street, Killewich Drive, Gee Street, and Turn Street saw the lowest response rates relative to the entire survey pool. View Drive had the highest response rate relative to the entire survey pool, while Gee Street had the lowest.

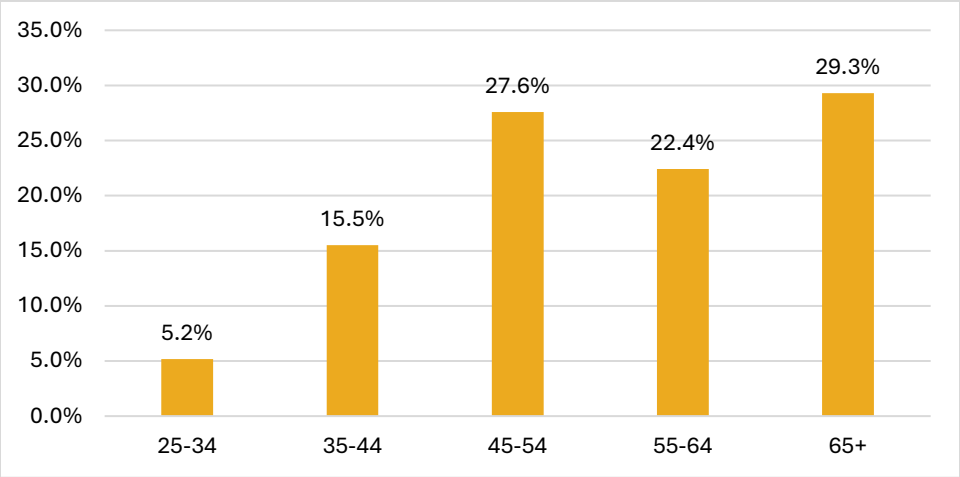
Figure 1: Expected vs. Actual Representation by Street of Residence



Age

Figure 2 shows the distribution of respondents by age group. The most represented age group was those aged 65+, contributing 29.3% of responses. The median age for Juneau's Census Tract 2 (west side of the Mendenhall Valley) was 37.8 in 2023 (Source: US Census Bureau). The higher-than-expected age of most survey respondents can be partially attributed to the fact that head-of-householders tend to be older in age. Additionally, retirees may have more time to participate in surveys, which could contribute to a higher response rate.

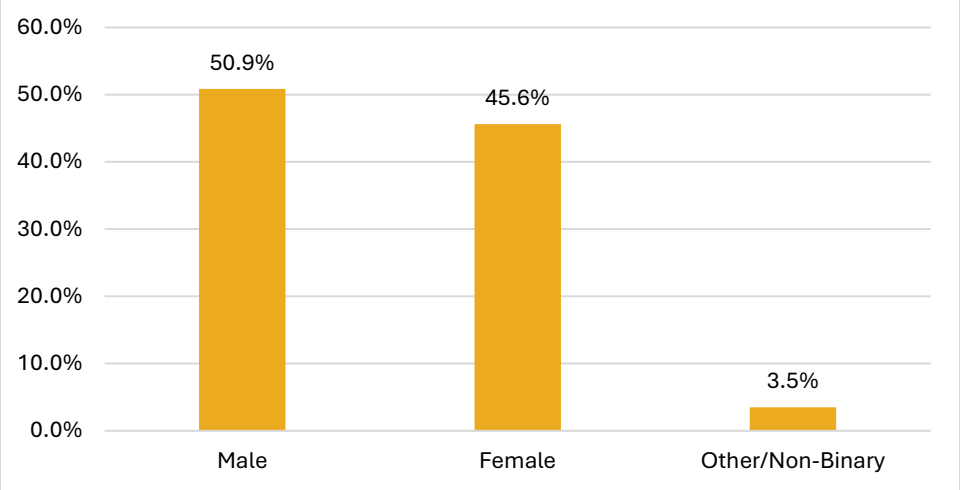
Figure 2: What age group do you belong to?



Gender

The gender distribution of respondents was relatively even, with 50.9% of respondents identifying as male, 45.6% as female, and 3.5% as non-binary or other gender identification (Figure 3).

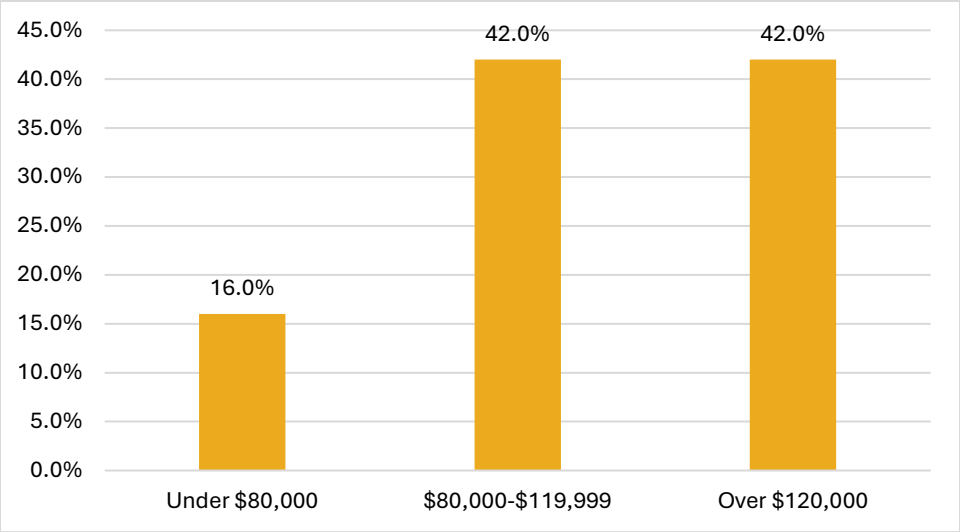
Figure 3: What is your gender?



Income

A minority (16%) of responding households earned under $80,000 per year, 42% earned between $80,000 and $119,999, and 42% earned over $120,000. Juneau's median household income for Census Tract 2 is estimated to be $106,250 (Figure 4).

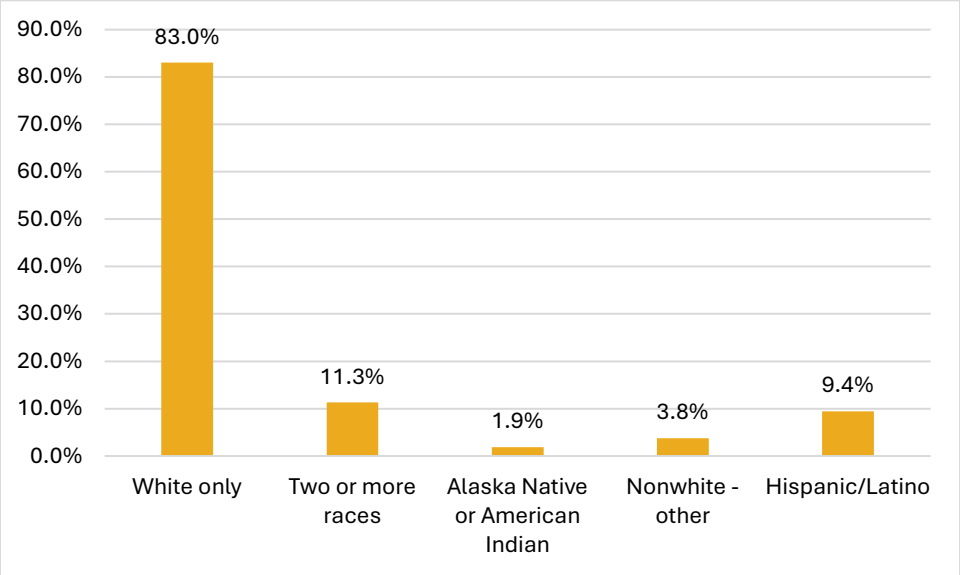
Figure 4: What is your gross annual household income (before taxes)?



Race & Ethnicity

An overwhelming majority of respondents (83%) were White only. 11.3% identified as two or more races, 1.9% as Alaska Native or American Indian, and 3.4% as a single race other than White or Alaska Native/American Indian. 9.4% of respondents identified as Hispanic or Latino.

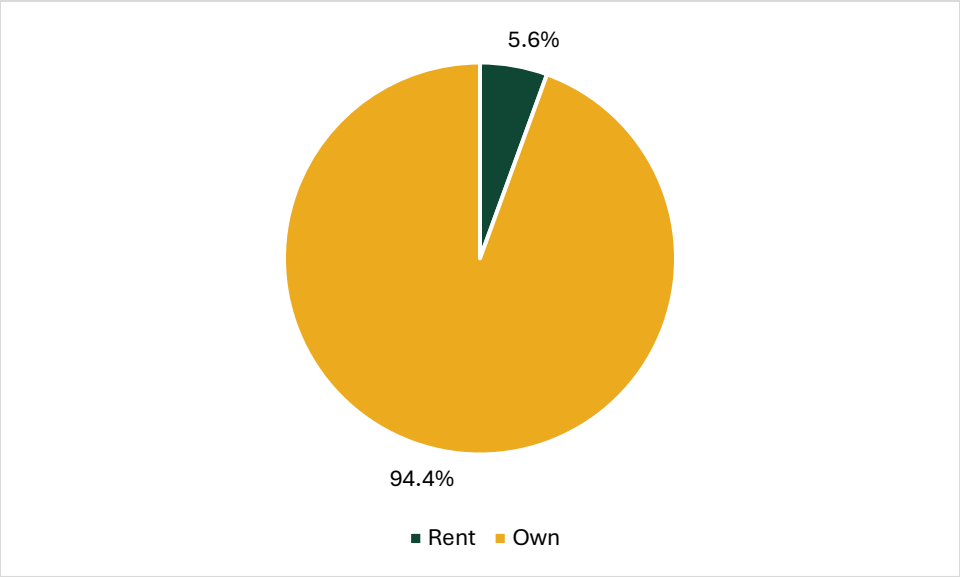
Figure 5: Which of the following best describes your racial or ethnic background? (Select all that apply)



Homeownership Status

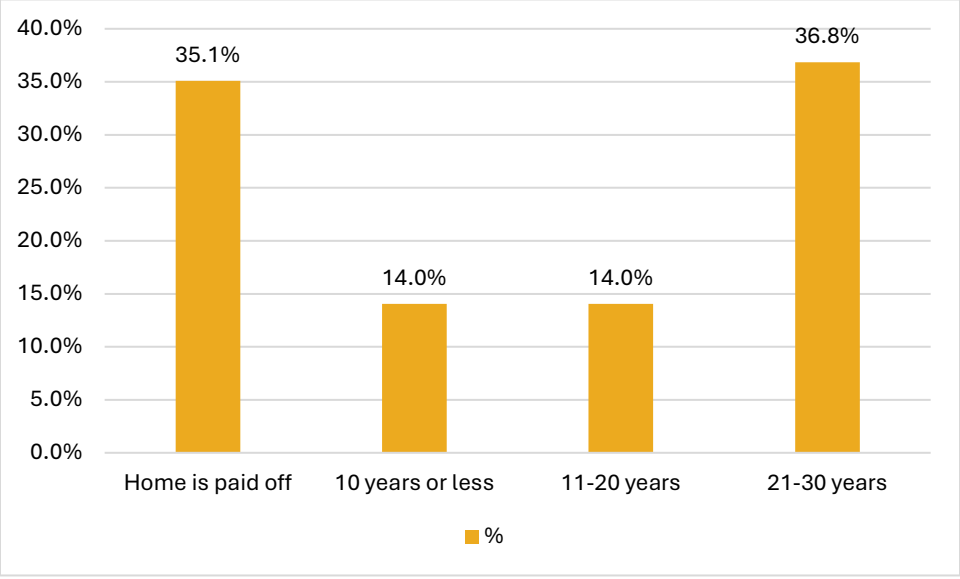
Ninety-four percent (94.4%) of respondents owned the property where damage occurred, making them responsible for their own repairs. 5.6% of respondents were renters.

Figure 6: Do you own or rent the space where the flooding occurred in 2024?



Among property owners, 35.1% had their home completely paid off, 14.0% had 10 years or less left on their mortgage, 14.0% had 11-20 years left on their mortgage, and 36.8% had 21-30 years left. Having a fully paid off home can alleviate some financial impact when dealing with catastrophic events like 2024's outburst flood.

Figure 7: If you have a mortgage on the affected property, approximately how many years do you have remaining per your amortization or repayment schedule?

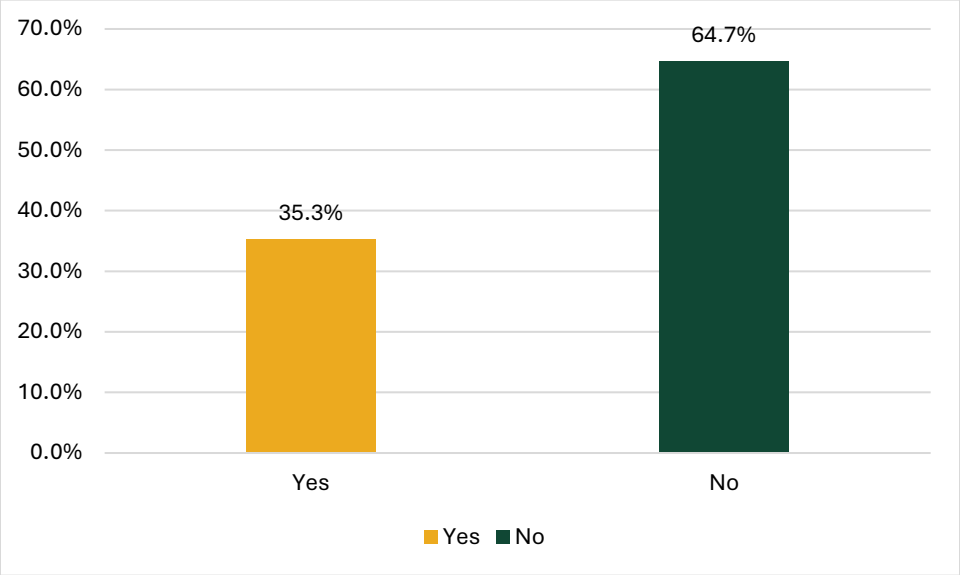


2023 Flood Event

While 2024 saw the most severe outburst flooding on record, many homes that were impacted were *also* affected by flooding the prior year, in 2023. 35.3% of respondents reported being affected both years.

Facing multiple, consecutive years of flooding can greatly exacerbate strain on finances, mental health, and desire to keep living in a flood zone.

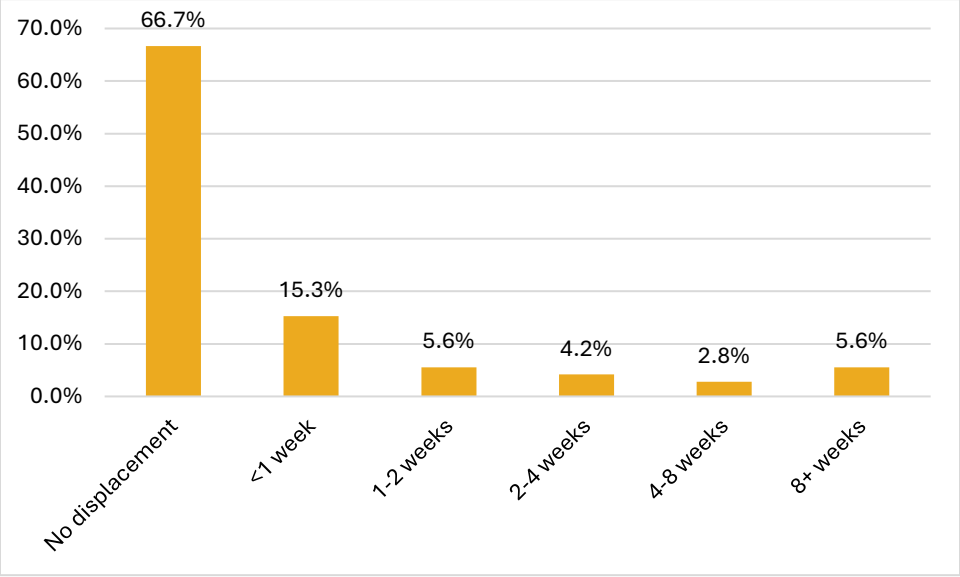
Figure 8: Were you also affected by outburst flooding in 2023?



Displacement

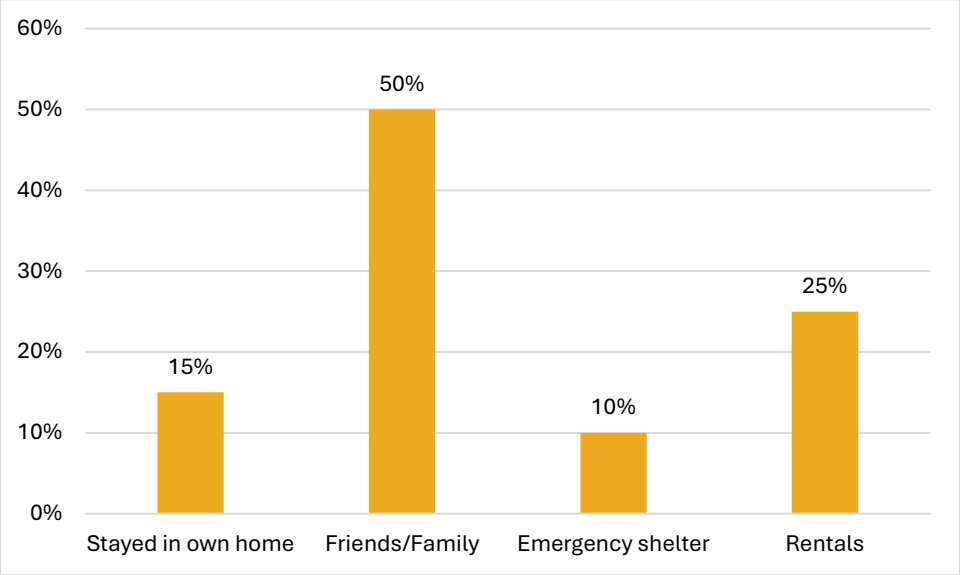
In the immediate aftermath of the 2024 flooding event, many individuals were displaced from their homes due to water inundation creating uninhabitable conditions. Survey results show that, while two-thirds of affected households did *not* experience displacement, many households were displaced for significant periods of time (Figure 9).

Figure 9: How long were you displaced from your home as a result of 2024 Glacial Outburst Flooding?



This displacement forced individuals and families to quickly find alternative housing until their homes could be repaired. Solutions for displaced individuals included short-term rentals, emergency shelter provided by aid organizations, or friends & family (Figure 10). Some respondents chose to remain in their own home despite it being deemed uninhabitable by outside organizations.

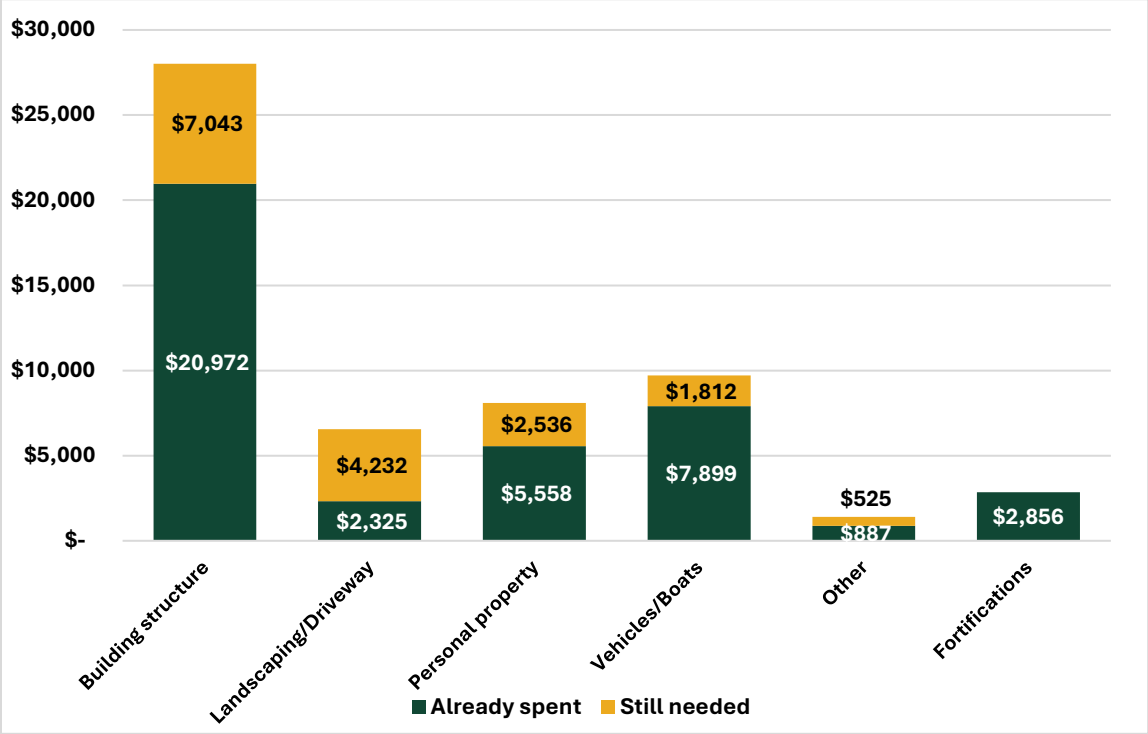
Figure 10: If you were displaced for any period of time, please describe your temporary housing arrangements (e.g., staying with family, hotel, rental property). (Open Response)



Financial Impacts

To estimate total amount of financial impact, respondents were asked to estimate the amount of money they have spent, and anticipate spending, to repair damage incurred within the following categories: Building structure, Landscaping/Driveway, Personal Property, Vehicles/Boats, and Other. Respondents were also asked to estimate spending on fortifications (excluding funds related to HESCO barriers). The highest reported costs were related to building structure damage, with an average of $28,015 needed for repairs in this category. The second-highest cost category was vehicles & boats, with an average of $9,711 worth of financial impact. Landscaping/driveway impact at $6,557 on average, personal property at $8,094, and “other” at $1,412. The average amount spent on fortifications (non-HESCO related) was $2,856. Figure 11 breaks down these costs by amount that had already been spent at the time of taking the survey (green), along with the amount respondents estimated still needing to complete repairs (yellow).

Figure 11: Please estimate the amount of money you have spent repairing damage within the following categories as of March 31, 2025.



Another disruption caused by 2024 flooding was the inability of flooding victims to work regular hours in the immediate aftermath. 62% of respondents reported missing some level of work due to the flooding event (Figure 12). Figure 13 shows the proportion of respondents by number of hours they lost (hours not covered by PTO). Figure 14 shows the amount of money lost due to missing work among individuals who missed work. Figure 15 shows the average number of hours lost among those who missed work, and the average number of those hours that were covered by paid time off (PTO).

Figure 12: Did any household members miss work as a result of the flooding event?

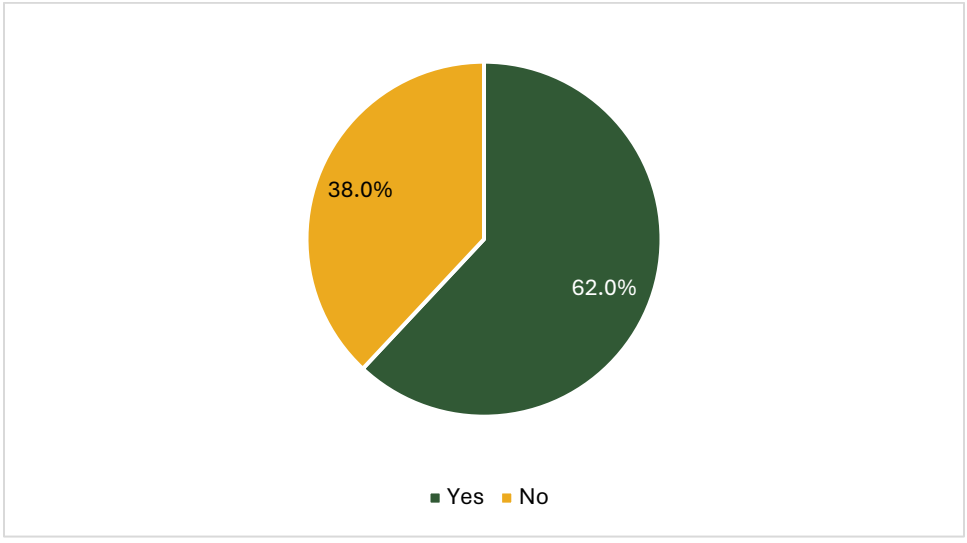


Figure 13: Please estimate the total number of hours that members of your household were not able to work as a result of the 2024 Mendenhall Glacier flooding.

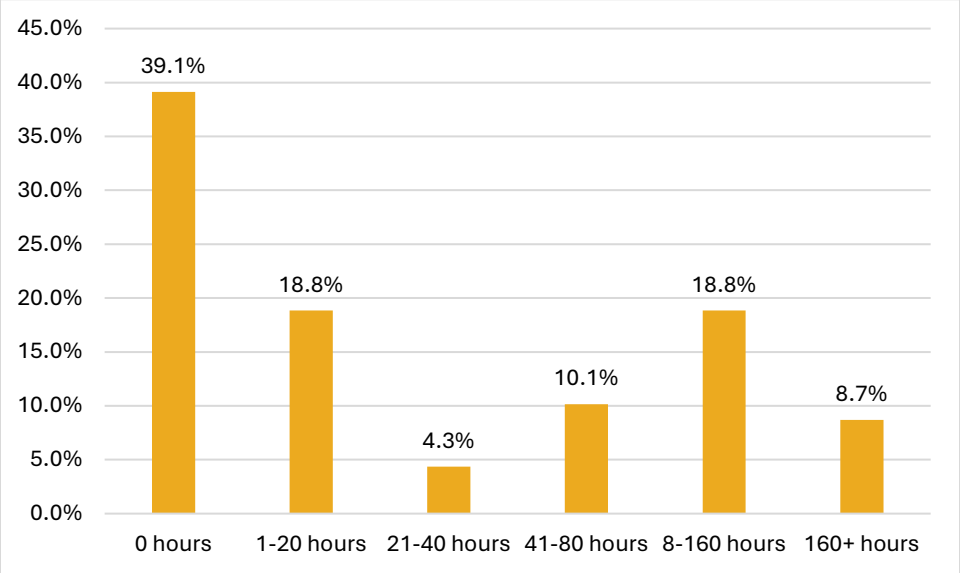


Figure 14: Please estimate the total wages lost by members of your household as a result of the 2024 Mendenhall Glacier flooding.

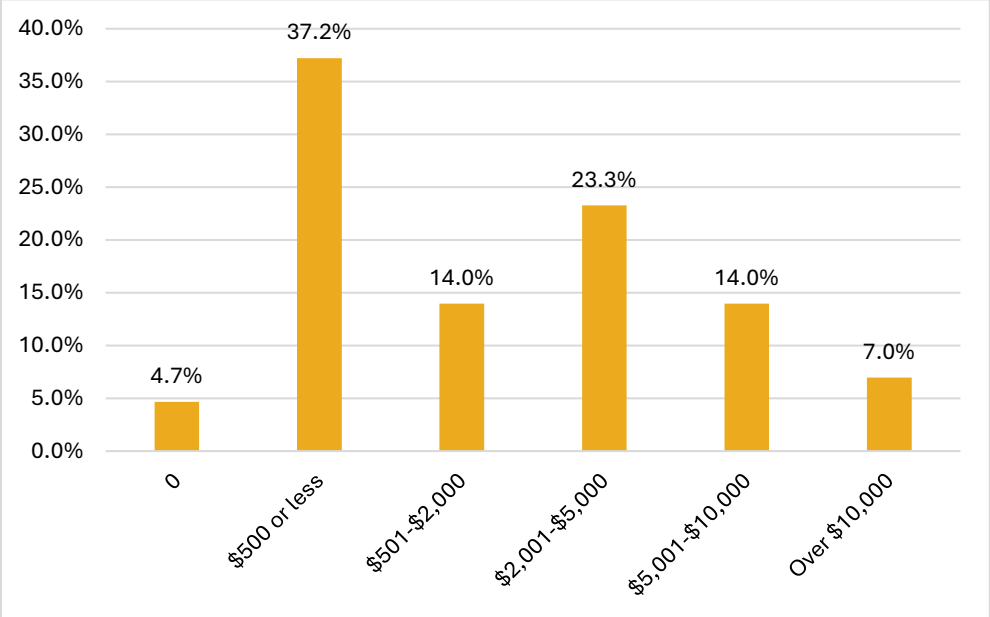
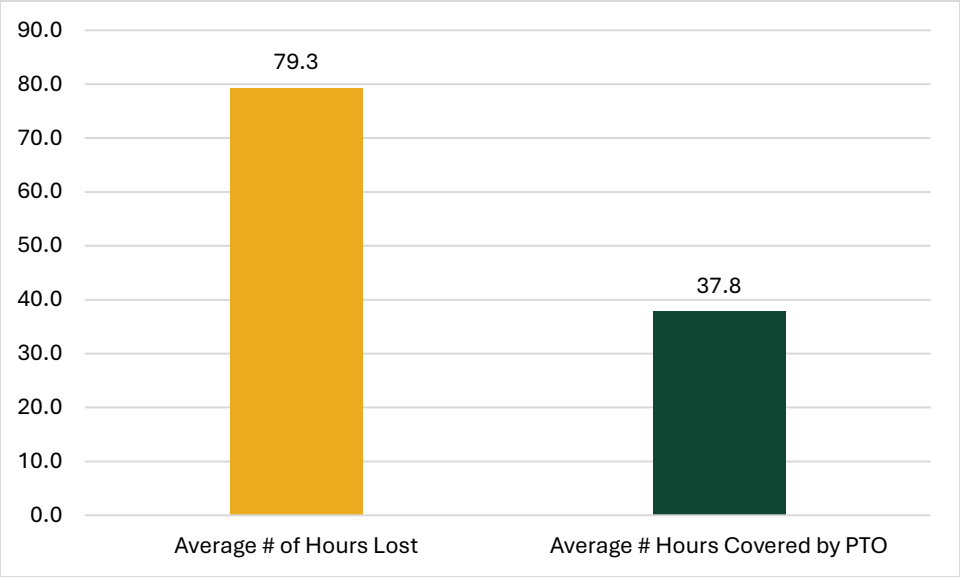
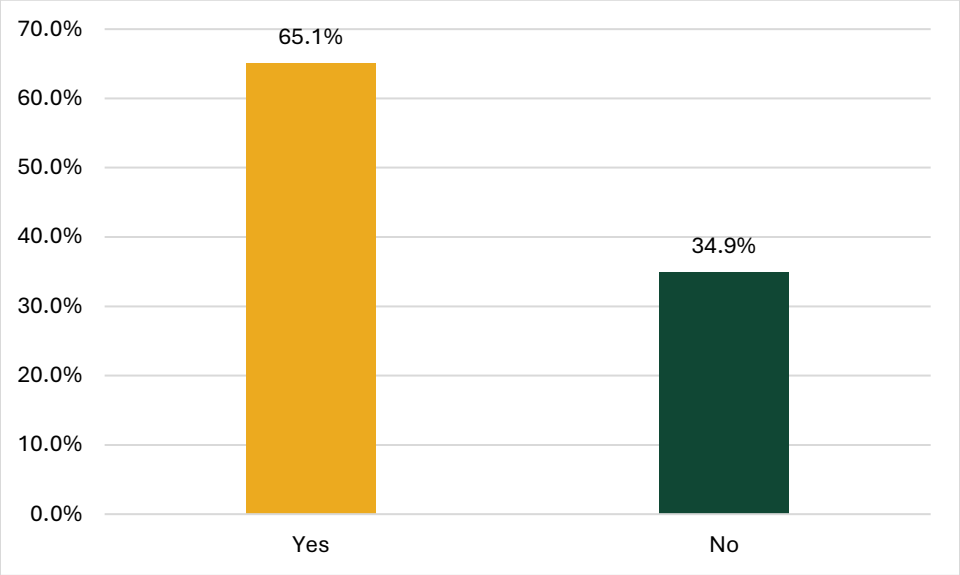


Figure 15: Of these lost work hours, how many were covered by paid time off (PTO)? Please provide your best estimate.



Most households had to procure services from a contractor to make repairs to damage incurred on their property. Almost two-thirds (65.1%) of households required the services of a contractor (Figure 16).

Figure 16: Did you require the services of a contractor to have your home repaired in a timely manner?



Due to the overwhelming demand for contractor services in the aftermath of 2024 flooding, many households faced difficulty finding labor at an affordable rate. Figure 17 displays the length of time that households had to wait before being able to procure contractor services, with the most common length of time being 1-2 months. Figure 18 shows the most common types of challenges faced by these households, with the cost and availability of labor/supplies being mentioned in 65.2% of responses.

Figure 17: How long after the flooding occurred were you able to have a contractor begin repairs?

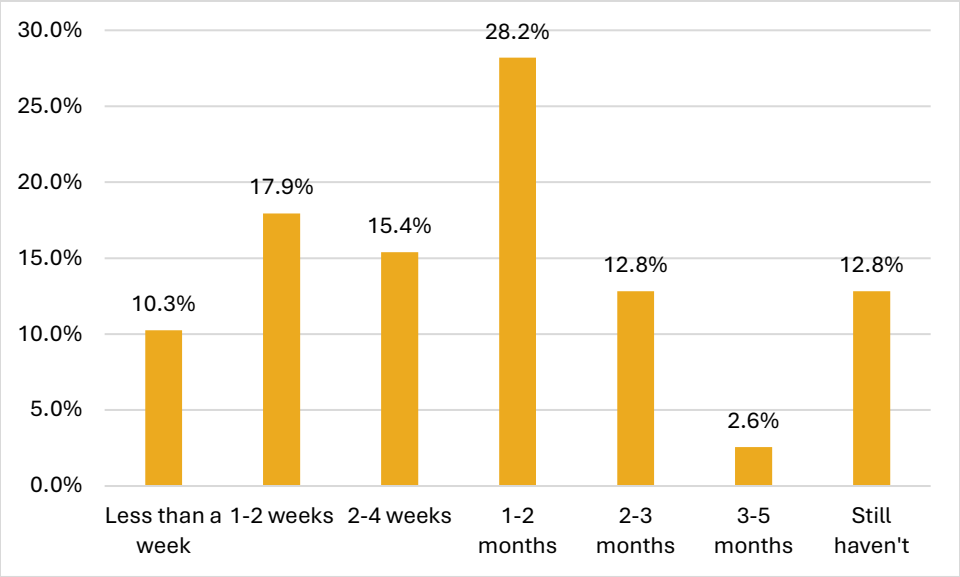
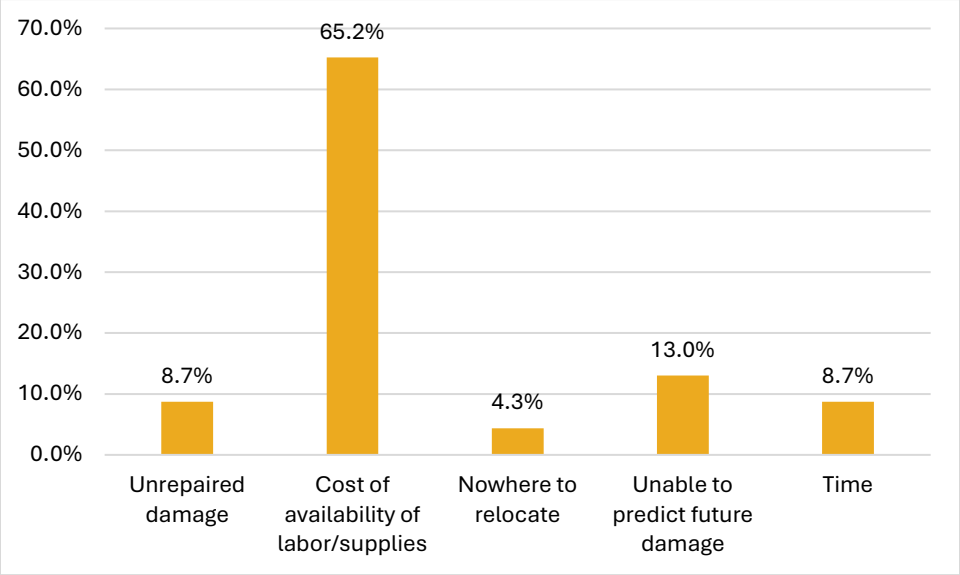


Figure 18: Please describe any challenges you've had with repairs to your property. (Open Response)



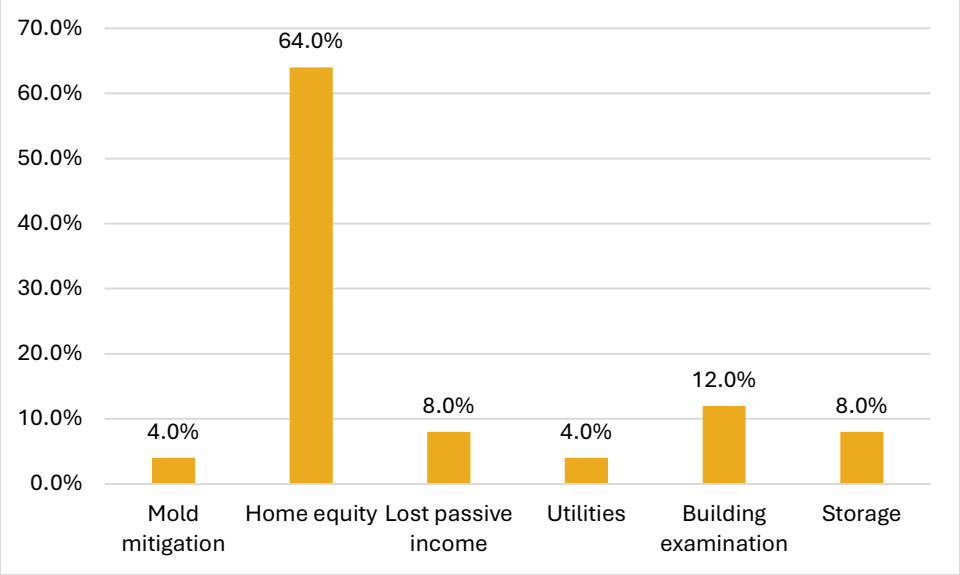
Examples

- *"Due to the costs of having a contractor work on my house after the 2023 flood, I used very little of their assistance in 2024. 95% of the work was done by myself, family and volunteers."*
- *Contractor availability was a huge issue. Paid predatory rates for drywall repair.*
- *Repairs are still not complete; master bath is still not functional. Don't want to proceed until we see what 2025 GLOF season brings. We'd just completed a house-wide renovation in 2023 & we've lost most of it.*
- *Availability of building supplies. Combination of limited options and prioritized projects for those available severely delayed progress. Still waiting to finish work started.*

- *Difficulty finding a contractor due to such a high demand.*

Figure 19 displays the frequency of mention related to other out-of-pocket costs that had not been addressed by a prior question. Declining home equity was by far the most mentioned factor. Other costs included mold mitigation, losing passive income from being unable to rent out a property, increased utility costs, paying for building examinations, and paying for storage of personal items while repairs were made to a property.

Figure 19: Please include other out-of-pocket costs that we haven't already addressed in the questions above and provide some details. Examples could include additional childcare costs, water/mold testing, moving costs, loss of equity, etc.



Assistance

One major source of compensation for affected households was flood insurance. The National Flood Insurance Program (NFIP) is the most common method of obtaining affordable flood insurance. However, only about a quarter (25.4%) were covered when 2024 flooding occurred (Figure 20). Among those who received flood insurance payouts, the average payout covered was **$84,921,** covering approximately **76%** of damage incurred by these covered households on average.

Figure 20: Was the affected property covered by flood insurance when the August 2024 flooding event occurred?

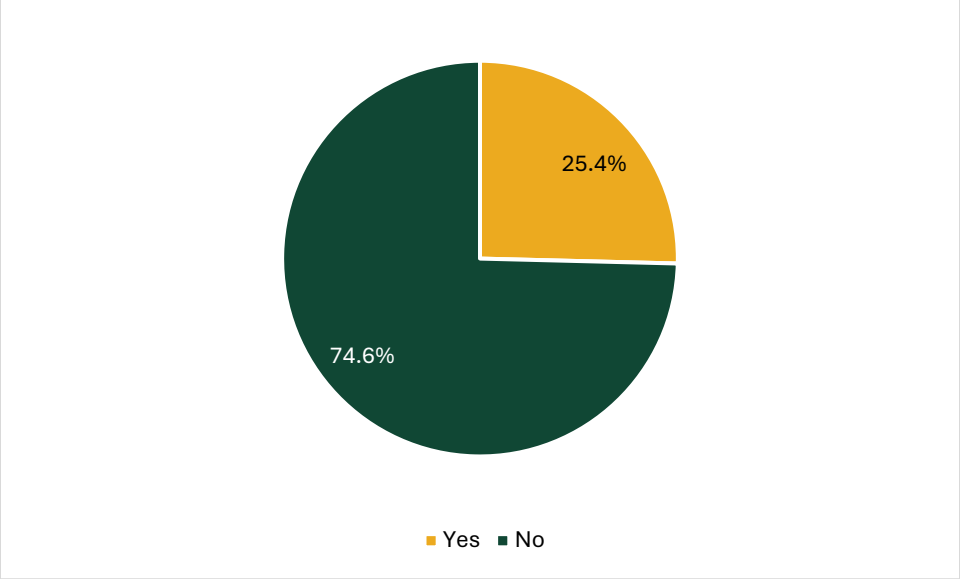
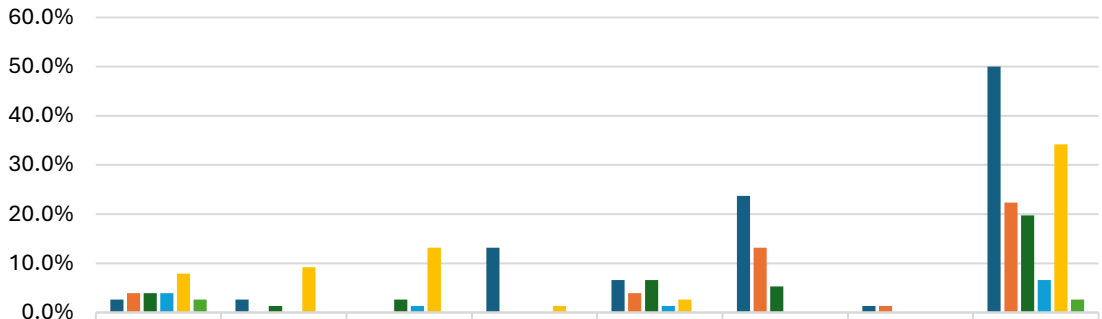


Figure 21 displays the amount of aid received by households and the source of aid. The most common form of aid received was from the Federal Emergency Management Agency (FEMA), with 50% of respondents receiving some level of assistance from FEMA. The most common level of aid for FEMA recipients was $20,001-$50,000. Other forms of aid were dispersed by Small Business Administration (SBA), State Government, Tribal or Local Government, Community Organizations (Churches, Non-profits, etc.), and financial institutions (the latter involving mostly loans). The total amount of aid received by 2024 flood victims is estimated to be around **$5,772,491**, not including flood insurance payouts.

Figure 21: Please list all financial assistance you received after the 2024 flooding. Include all Community, Tribal, State, and Federal assistance, or other. Do not include aid targeted toward businesses.



	$0-$1,000	$1,001-$2,500	$2,501-$5,000	$5,001-$10,000	$10,001-$20,000	$20,001-$50,000	$50,001-$100,000	Total
FEMA	2.6%	2.6%	0.0%	13.2%	6.6%	23.7%	1.3%	50.0%
SBA	3.9%	0.0%	0.0%	0.0%	3.9%	13.2%	1.3%	22.4%
State Government	3.9%	1.3%	2.6%	0.0%	6.6%	5.3%	0.0%	19.7%
Tribal Government	3.9%	0.0%	1.3%	0.0%	1.3%	0.0%	0.0%	6.6%
Community Organizations	7.9%	9.2%	13.2%	1.3%	2.6%	0.0%	0.0%	34.2%
Financial Institutions	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%

Business

Businesses being operated from properties in the 2024 flood zones, a key source of income for some households, also faced disruptions and forced temporary closures. Figure 22 shows that 17.2% of respondents operated a business that was disrupted due to 2024 flooding. The average level of financial impact on these businesses was $37,321 in total (Figure 23), including damage to work equipment/tools, inventory, and lost revenue from being unable to operate. The average length of closure for these businesses was **77 days**. These numbers may be skewed due to a small sample size of 11 affected businesses.

Figure 22: Do you operate a business from the affected residence that was disrupted due to the flooding on August 6, 2024?

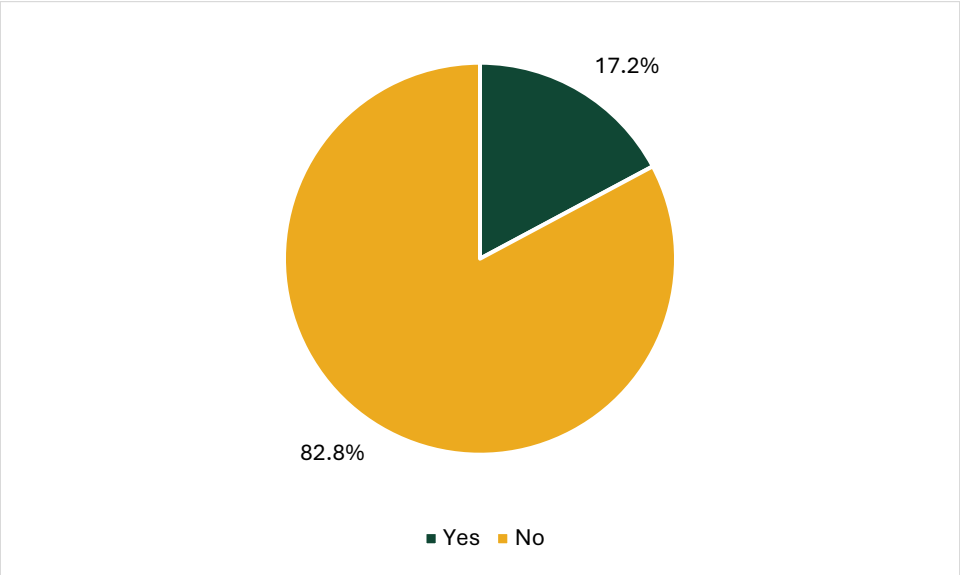
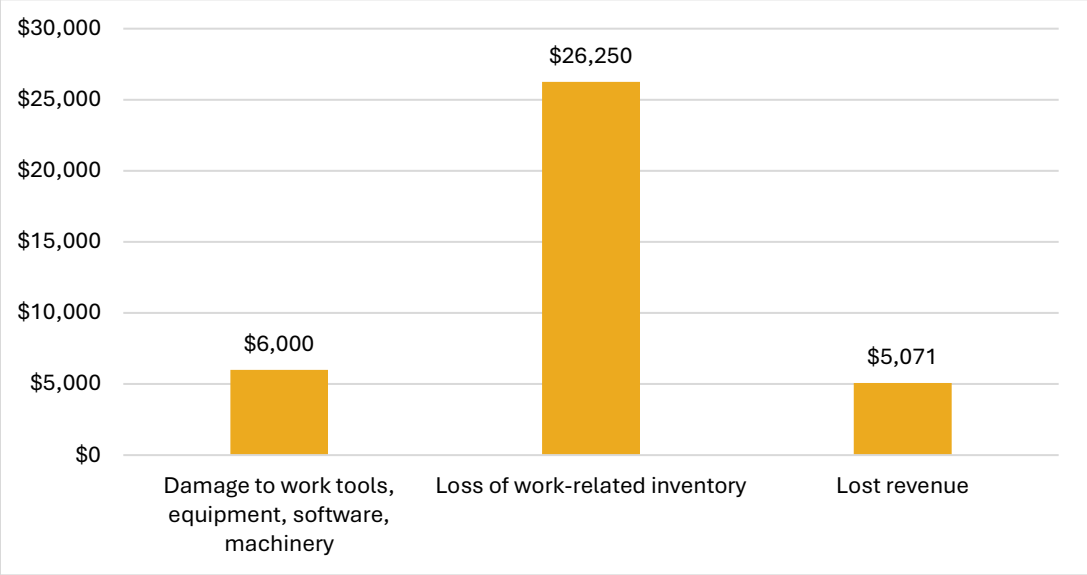


Figure 23: Please estimate the damage borne by your business after the 2024 Mendenhall flooding by category.



Open Responses

The final section of the survey asked respondents a series of open-response questions. Figure 24 shows the likelihood of moving away from Juneau in the aftermath of flooding, with 51.6% of households considering a move, 11.3% deciding to move, and 37.1% deciding to stay put. Figure 25 shows the factors behind these decisions to move/not move: 38% of responses mentioned increased financial pressure causing them to consider moving away, 28% mentioned dealing with stress due to in living in the flood zone, 16% mentioned wanting to move but having difficulty selling, 16% mentioned factors such as children or military commitments preventing them from an immediate move, 10% said the flooding had no effect on their desire to move, 8% mentioned some level of discontent with the political process of figuring out solutions, 6% mentioned taking measures to shore up home defenses to alleviate future flooding, and 6% mentioned some other factor.

Figure 24: Living in the flood zone, please indicate how likely you are to move outside of Juneau.

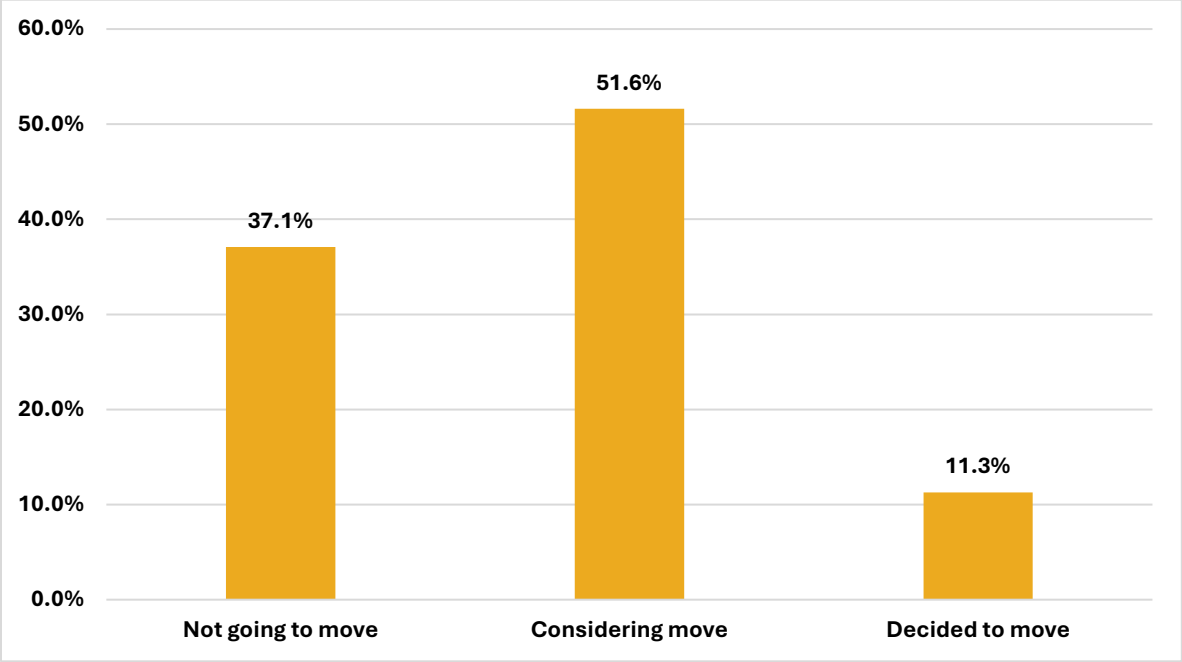
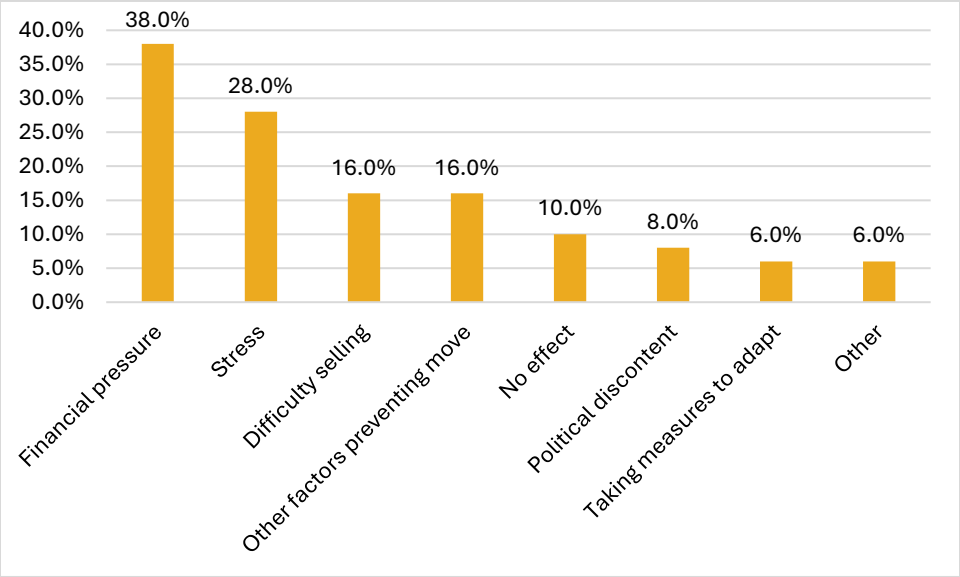


Figure 25: Overall, please describe how being impacted by the 2024 flooding affected your plans to continue living in Juneau.



The next open-response question asked respondents about their perception of the community response to 2024 flooding (Figure 26). Most respondents (74.1%) had a positive perception of the response, 7.4% had a negative perception (mostly relating to discontent with the political process/costs of barriers), and 18.5% had a neutral perception.

Figure 27 asks what Federal, State, Local, and Tribal leadership can do to improve future flood responses. Forty-nine percent (49%) of responses mentioned a desire for a general long-term solution. 14.3% of responses mentioned wanting better communication, 14.3% desired better on-the-ground assistance (debris removal, fortification, organizers, etc.), and 8.2% desired the same sort of mitigation strategy that was being formulated in 2025. 14.3% of respondents desired a specific long-term solution, with 10.2% wanting a levee and 4.1% wanting property buyouts.

Figure 26: Please describe your perception of the overall community response to the flooding event(s).

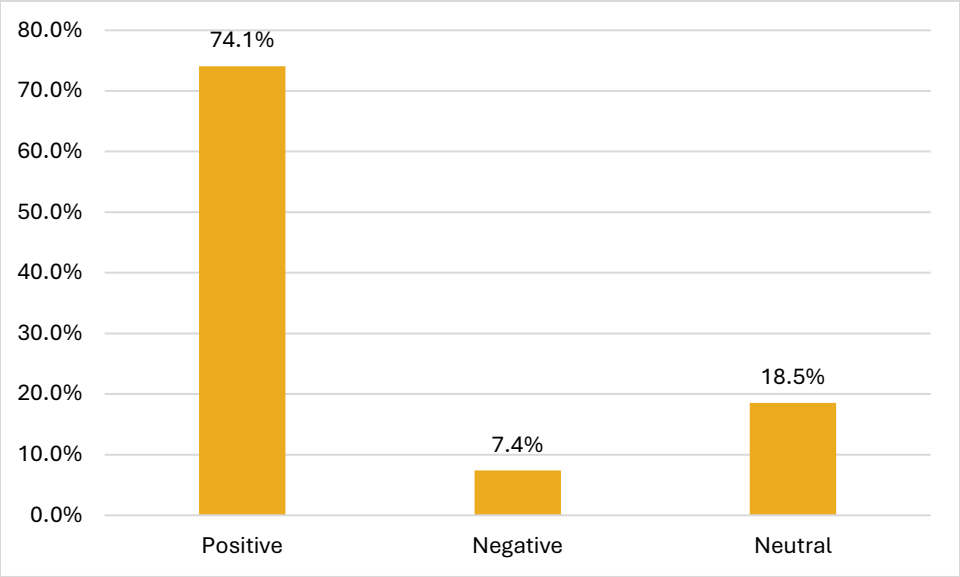
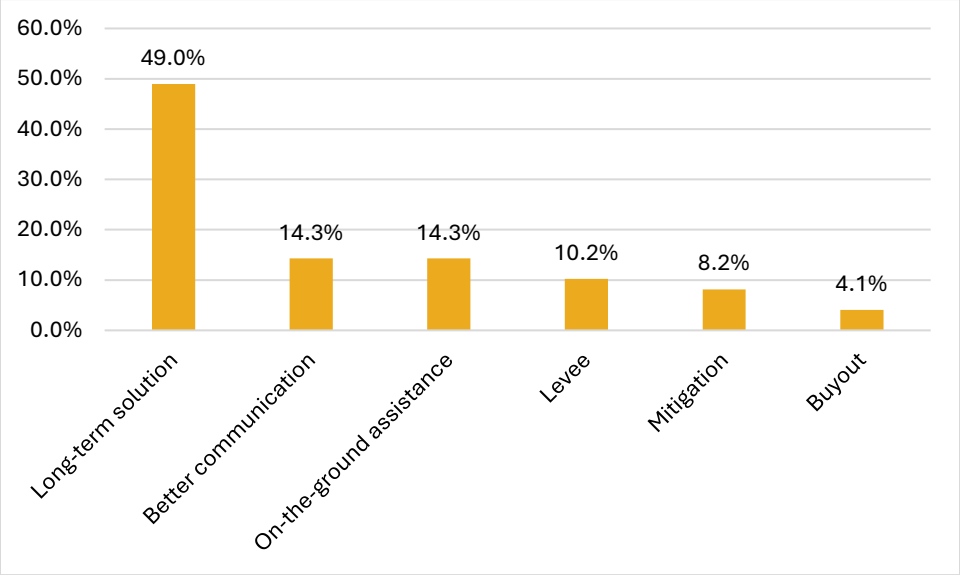
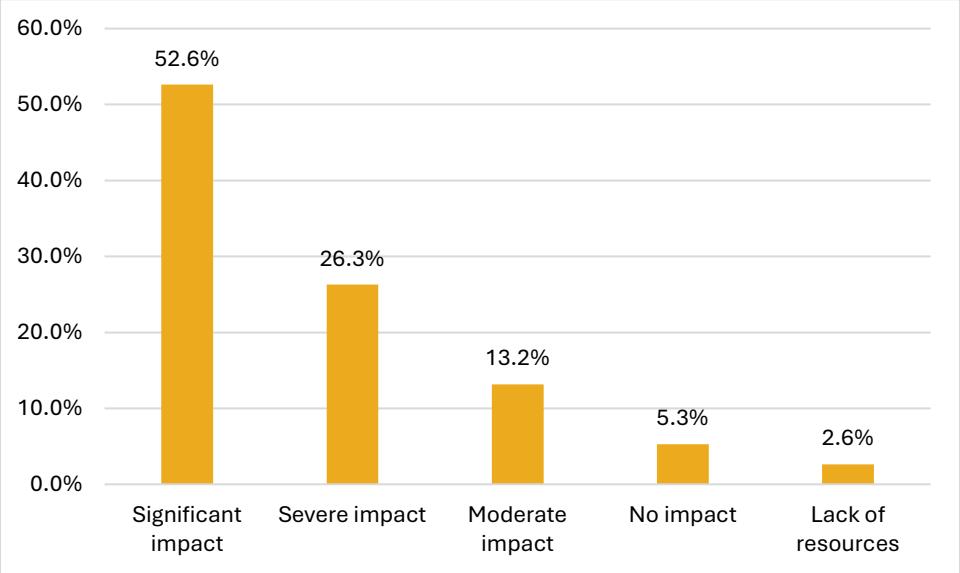


Figure 27: What can federal, state, and local or tribal governments do to help residents prepare for future flooding events?



Lastly, respondents were asked about the impact on their mental and physical health. While the economic effects were severe, so were the other non-financial impacts endured by flood-affected households. Almost all responses were related to mental health effects. 52.6% of responses reported significant effects on their mental health. 26.3% reported severe impact on their health, and 13.2% reported moderate impacts. 5.3% of responses reported no effect, and 2.6% noted a lack of available resources. These results illustrate the high level of psychological strain that comes with being affected by flooding and anticipating future events.

Figure 28: How has your experience being affected by the flooding event(s) affected your overall physical or mental well-being? Do you feel that you've received the support you need?



Total Economic Impact

To estimate total economic impact, survey results were extrapolated to the entire pool of 263 flood-affected addresses. A margin of error of 8.6% was calculated and applied to the estimate to get low and high ranges. In total, we estimate that 710 persons were affected (average of 2.7 persons per household), 237 persons experienced displacement, over $13.4 million in total property damage was incurred, about $750,000 in wages lost, $5.8 million in aid received, and $2.4 million received from flood insurance.

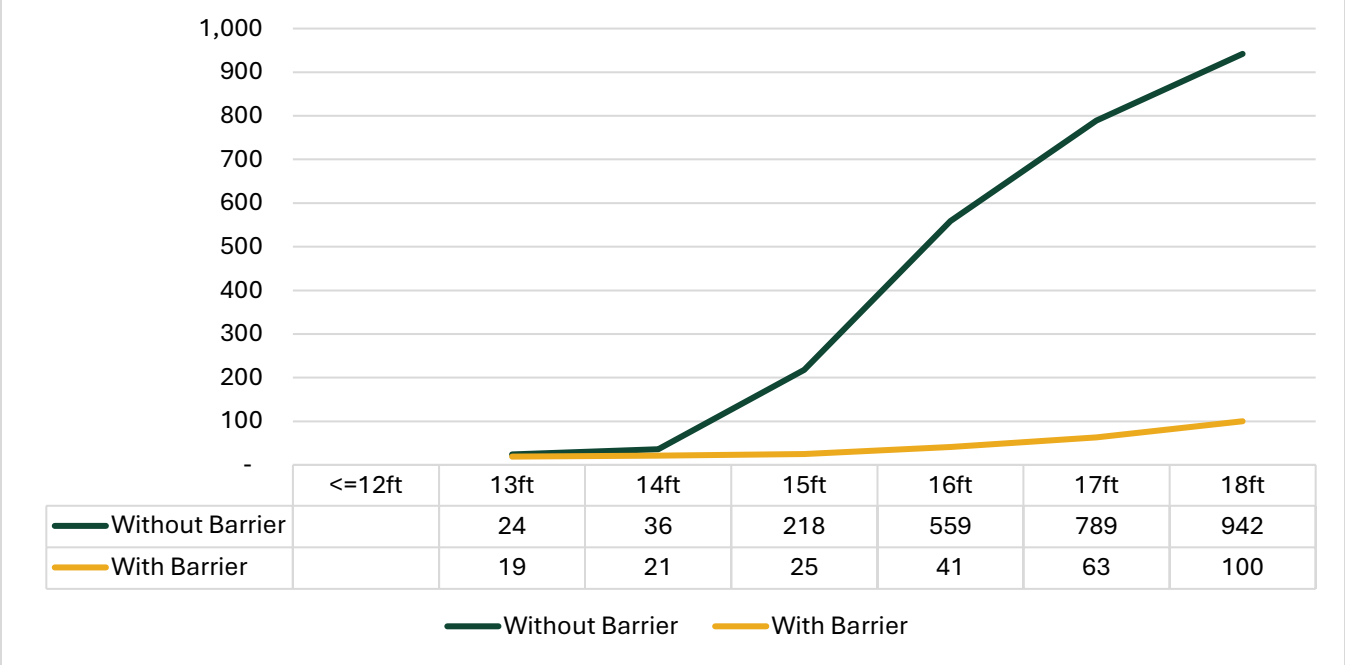
Figure 29: Estimated Total Economic Impact of 2024 Glacial Outburst Flood

	Estimate	Low Range	High Range
People directly affected	710	649	771
People displaced	237	216	257
Total damage incurred	$13,366,938	$12,217,381	$14,516,494
Total wages lost	$742,822	$678,939	$806,705
Total aid received	$5,772,491	$5,276,057	$6,268,926
Total flood insurance payouts	$2,350,754	$2,148,589	$2,552,919

Future Flooding Scenarios

To estimate the number of properties affected by flooding at various levels, JEDC filtered Juneau addresses to those within the UAS flood projection areas for various levels of flooding. Analysis found that a 16-foot flood would affect about 559 parcels, a 17-foot flood would affect 789, and an 18-foot flood would affect 942. HESCO barriers are shown to dramatically reduce the number of affected homes up to 18-foot levels based on these projections. It is important to note that these are based on imperfect hydrological projections. The August 2024 glacier outburst flood crested at 15.99 feet, and the August 2025 glacier outburst flood crested at 16.65 feet.

Figure 30: Cumulative Number of Homes Affected by Flooding at Various Levels



Finally, Figures 31 and 32 show projected economic impact for 16-, 17-, and 18-foot flood levels in the categories of property damage, lost wages, and their sum. Keep in mind that these projections do not include expected levels of aid or other expenses beyond the listed categories.

Figure 31: Total Economic Impact Estimates at 16, 17, 18 Foot Floods WITHOUT Barriers

Flood Stage	# Parcels Affected	Property Damage Total	Total Lost Wages	Total Damage + Lost Wages
16ft	559	$28,411,096	$1,578,850	$29,989,946
17ft	789	$40,100,813	$2,228,466	$42,329,279
18ft	942	$47,877,016	$2,660,602	$50,537,619

Figure 32: Total Economic Impact Estimates at 16, 17, 18 Foot Floods WITH Barriers

Flood Stage	# Parcels Affected	Property Damage Total	Total Lost Wages	Total Damage + Lost Wages
16ft	41	$2,083,819	$115,801	$2,199,620
17ft	63	$3,201,966	$177,938	$3,379,904
18ft	100	$5,082,486	$282,442	$5,364,928

Personal Interviews

JEDC partnered with Dr. Elizabeth Figus, a Juneau-based researcher with Figus Consulting Services, LLC, to conduct a set of in-depth, long-form interviews with residents who have been repeatedly affected by

flooding. These interviews were designed to document financial, physical, and emotional impacts that are not captured in survey checkboxes or short comment fields, and to illuminate how households are navigating ongoing risk, recovery, and uncertainty.

What follows is a thematic summary of those interviews, organized into five major areas:

1. Financial strain and housing (re)investment;
2. Insurance, aid, and institutional barriers;
3. Physical danger, health, and access to care;
4. Emotional toll, stress, and daily life disruption; and
5. Mitigation efforts, uncertainty, and views on future solutions.

1. Financial strain and housing (re)investment

Across the interviews, households describe major financial impacts from glacial lake outburst flooding, often over several years. Direct repair and replacement costs routinely reach into tens of thousands of dollars per event, even when insurance is in place. Several interviewees mention losing most of the contents of a garage or lower floor, while one interviewee with a detailed NFIP claim estimated over $100,000 in damage from a single event, plus roughly $20,000 of additional work to prepare for the next flood. One additional household described the flood as disrupting the business more than the home itself, creating zero income during closure and immediate cash-flow stress.

Insurance and disaster aid help but rarely close the gap. One homeowner notes receiving roughly half of the contractor's estimated rebuild cost from combined state and federal assistance, leaving them to cover the remainder out-of-pocket. Another explains that a federal grant in the mid–five figures still left them paying about the same amount from savings to finish repairs. A third described an initial NFIP payout of about $75,000 that still left substantial unreimbursed losses, especially for future-oriented mitigation. The interviews also show that even affordable flood insurance does not eliminate out-of-pocket mitigation costs, including several thousand dollars for heavy visqueen, sand, and sandbags.

The floods also reshape how people think about home equity and long-term housing decisions. Multiple interviewees say they are now "underwater" or close to it: the house may be owned outright or have a low mortgage, but its market value is so depressed by flood risk that selling would not yield enough to buy a comparable home elsewhere in Juneau. One participant described having one year to decide whether to refinance the house in their own name or sell so an ex-partner could take a share of the equity. Others describe flood damage and visible blemishes making a home harder to sell, even when similar houses moved more easily before the major flood.

Households continue to invest heavily in repairs and mitigation even when they doubt the long-term viability of staying. People pay to raise boilers and utilities, install pumps and backup generators, tie down fuel tanks and freezers, change siding and insulation, rebuild driveways washed out by new erosional channels, and add private barriers or protective landscaping around their homes. One interviewee described buying heavy plastic sheeting, hauling in large quantities of sand, and building a private flood barrier on their own property. These costs are usually not fully covered by insurance and often must be paid upfront to keep contractors working while insurance and mortgage processes catch up.

Finally, the floods disrupt broader financial planning: retirement timing, job choices, and the ability to maintain a stable household. One household that once envisioned "forever" retirement in their current home now sees early relocation or assisted living as the only feasible path in older age, given the physical and financial demands of annual reconstruction. Another describes shifting their planning horizon around potential buyout programs and trying to keep enough financial flexibility so that, if the house is ever completely lost, they could at least pay off the mortgage with the insurance payout. A retired interviewee notes that flood costs may represent on the order of 10 percent of their net worth, and that the experience has accelerated their desire to leave the state even as damage makes it harder to move.

2. Insurance, aid, and institutional barriers

Insurance—especially National Flood Insurance Program (NFIP) coverage—plays a central role in shaping experiences and outcomes, but many households encountered barriers and frustrations. Some were told at purchase that flood insurance was unnecessary, too expensive, or not available because the property was "not in the floodplain," only to discover later that coverage would have been both affordable and crucial. Others had NFIP before the first major event and describe how dramatically that changed their ability to recover compared with neighbors who did not. One interviewee recounted how seeing surface-water levels nearly reach their property in 2023 prompted them to research NFIP, speak with friends, and purchase a policy in time for 2024—something they viewed as a no-brainer that few neighbors had done.

Even when people are insured, the mechanics are difficult. Several describe slow, confusing adjuster processes that delayed payouts for months, sometimes pushing them past state deadlines for deductible assistance and forcing them toward disaster loans instead. Others, however, report highly professional experiences: one NFIP adjuster produced a 20-page room-by-room report that the homeowner later used as a template when negotiating with contractors. The interviews also emphasize that homeowners may estimate losses themselves, but NFIP rules do not necessarily treat the homeowner as the licensed contractor for payout purposes.

Mortgage servicers add another layer of complexity. Some interviewees have relatively cooperative lenders who release funds quickly and charge no extra fees, which they describe as helpful in making the insurance payout usable. Others must document that a high percentage of the work is already completed before the mortgage company will release any insurance funds, forcing owners to front large costs themselves. One homeowner explained that their lender refused to endorse an NFIP check jointly made out to the homeowner and the bank—even though only about $15,000 remained on the mortgage—unless the lender could oversee and approve all repairs. Faced with the risk of delays and administrative fees, they chose to pay off the mortgage early, which they saw as a kind of scam. This sequencing creates a cash-flow squeeze at the exact moment when rapid repairs are needed to prevent mold, further damage, or unlivable conditions.

State and federal aid programs are perceived as valuable but inconsistent and uncertain. Interviewees express gratitude for grants that helped cover deductibles or portions of repairs, but they also note that such programs can change from year to year, may depend on whether a federal disaster declaration is issued, and sometimes encourage loans rather than grants. Several say the current federal administration's approach and the long-term stability of FEMA and NFIP are now key factors in their

financial planning, because future assistance cannot be taken for granted. One participant explicitly worries about the national future of FEMA and NFIP, arguing that local or state-scale programs cannot substitute for a well-funded national safety net.

There is also a sense of bureaucratic fragmentation: city, state, federal agencies, and relief organizations each have narrow roles, leaving households to navigate a patchwork of applications, inspections, and requirements while also managing physical cleanup and emotional shock. Interviewees mention filling out forms for the Army Corps of Engineers, attending local assembly meetings, testifying about flood mitigation plans and temporary barriers, and trying to reconcile official messaging with what actually happened on their streets. One transcript adds a distinct critique of the HESCO-related local improvement district and the idea of charging victims or residents for protective infrastructure through their mortgage or property bill.

3. Physical danger, health, and access to care

All of the interviews include vivid descriptions of physical danger during flood events, as well as longer-term health impacts. Several interviewees recount wading or driving through fast-rising, cold, opaque water at night, tripping over unseen obstacles, and nearly being swept away. One person describes evacuating in a car as water rose to about a foot deep on their street, the clutch began slipping, and they realized that if the car stalled they would have to step into 32-degree water in the dark, with no way to see how deep it was; they emphasize that a fall in those conditions can be fatal. Another account describes the flood as starting almost imperceptibly, then shifting suddenly into a bore-tide-like surge that rushed across the street and into yards.

The interviews also highlight the unpredictability and infrastructural vulnerability that amplify risk. People mention power outages, damaged communication systems, and the difficulty of knowing when and where water will move next. Some households deliberately move vehicles and even boats to higher, off-site parking areas in advance to ensure they retain some mobility if their neighborhood becomes inaccessible. Others describe relying on shelters when local lodging was fully booked, and on NOAA radios and online dashboards to monitor emerging hazards. One interviewee emphasized waking neighbors early so they would not be asleep if conditions turned into a real emergency.

Health and medical access are threaded through several narratives. One interviewee's spouse had just been discharged from the hospital before the flood and has ongoing heart and mobility problems; flood damage and reconstruction make it difficult for him to navigate the home, and the household must travel out of town for specialized care while still managing ongoing repairs and flood risk. Another person describes herniating spinal disks during deconstruction work after the flood and undergoing months of physical therapy. One interview also notes that flood cleanup worsened an already injured back, and that most of the work was done personally with only limited help from friends.

Repeated exposure to flood threats affects mental and physical well-being: sleepless nights during forecasted peaks, hyper-alert monitoring of river gauges and basin projections, and chronic stress that manifests in fatigue, difficulty focusing, or a sense of being cold and in shock long after an event. In contrast, one interviewee described being far less emotionally reactive to flood risk, while still acknowledging strong financial anxiety.

Emergency management messaging and residents' practical realities sometimes diverge. Official guidance strongly encourages evacuation, especially for those near temporary barriers, due to the risk of sudden breaches. Yet many interviewees feel they must stay to protect their homes by running pumps, adjusting barriers, and dealing with unanticipated leaks or failures; they argue that leaving would essentially be saying goodbye to the house. In contrast, one household described preparing extensively and then evacuating once the flood threat became imminent, relying on advance mitigation rather than staying through the peak.

4. Emotional toll, stress, and daily life disruption

The emotional burden of repeated flooding is one of the strongest common threads. Interviewees repeatedly use words like horrid, overwhelming, devastating, shock, and depressing to describe both the events themselves and the ongoing recovery. Several speak candidly about feeling deeply depressed or hopeless heading into a new flood season, especially after multiple years of damage. One person says they were very depressed after the first major flood, expecting it to happen "the year after that and the year after that," with no visible way out. Another describes living in a state of near-constant hypervigilance, with flood risk on their mind day-to-day. A retired homeowner notes that they lost over a year of life to repairs and mitigation work and that the experience practically changed their whole world.

This stress reshapes daily routines and long-term rhythms. Many households effectively give up summer travel or camping, blocking out large portions of late July and August so they can stay near home on call for flood response. People rearrange work and community commitments, build backup plans for youth programs or professional trips, and warn clients or partners that they may have to cancel or switch meetings at short notice if flood conditions escalate. One interviewee describes checking flood-related websites and social media nearly every day leading up to 2025, then scaling back only temporarily once that season passed, with the expectation that their attention will ramp up again before 2026.

Home itself becomes emotionally complicated. For some, lower levels that once housed bedrooms, studios, or family gathering spaces now carry strong associations with chaos, loss, and fear. One artist talks about losing her entire studio and spending a year with little creative work. In another interview, the homeowner said the flood did not create the same kind of ongoing psychological fixation and that they generally do not dwell on what is not immediately in front of them.

There is also collective stress and group misery at the neighborhood level. People worry about neighbors who face similar or worse damage, about families whose children are now afraid of rushing water, and about households with fewer financial or physical resources to recover. Some describe late-night scenes of lights on in every house, neighbors screaming, or streets filled with debris and volunteer vehicles. Interviewees highlight powerful moments of community care and solidarity. One household also noted being surprised by how well the city handled the aftermath, including free dump pickup and improved cleanup logistics.

5. Mitigation efforts, uncertainty, and views on future solutions

A final shared theme is the mixture of intense personal mitigation effort, skepticism about broader solutions, and deep uncertainty about the future. At the household level, people are remarkably proactive:

raising utilities and appliances; adding pumps with non-return valves; installing backup generators; tying down tanks, freezers, and boats; experimenting with different flooring and wall systems that can better withstand soaking and be more easily cleaned or replaced. Some consciously rebuild with materials like concrete slabs, treated lumber, or finishes that can tolerate getting wet and drying, even if they are less aesthetically pleasing. One interviewee described building their own private flood defenses with heavy plastic and large quantities of sand, while also noting that they had little choice but to do the work themselves.

Yet there is a pervasive sense that individual mitigation has limits. Several interviewees describe how new erosional channels destroyed drives or yards well above prior flood levels, or how water reached depths far beyond official predictions, flipping shelves and floating heavy appliances despite careful preparation. Others note that each year's flood behaves differently because of changing river morphology, upstream bends, and infrastructure, making it impossible to rely on past patterns. One participant described a belief that earlier attempts to straighten the river were blocked by the city, contributing to current flood vulnerability.

At the community and policy level, views diverge but share common concerns. Many residents appreciate that local leaders acted quickly to install temporary barriers and explore structural solutions; others feel steamrolled by processes that seemed to treat decisions as predetermined, with public testimony as a formality rather than real input. Some worry that barriers like HESCOs create a false sense of security, encouraging people to rely on them rather than maintain personal preparedness, and point out that barrier performance was uneven, with seepage, sand boils, and near-overtopping in some spots. One interviewee was especially critical of charging residents for the barrier system and of the way the Assembly interpreted public comments.

Several interviewees explicitly endorse the idea that, in the long run, the safest solution may be managed retreat—voluntary buyouts and allowing the river more room—rather than attempting to hold the line indefinitely. They note that the land wants to flood, and that trying to live in its way is becoming less tenable. However, buyouts are not simple: people worry about whether valuations would be high enough to purchase a safe alternative home, about leaving beloved neighborhoods and schools, and about what would happen to residents who cannot or do not wish to move. Others stress that strong national programs like NFIP and FEMA remain essential, arguing that local or state-scale mechanisms alone cannot adequately spread risk or finance recovery for events of this scale.

Ultimately, interviewees describe living with layered uncertainty: about hydrology, about infrastructure, about policy and aid, and about their own capacity to keep adapting as they age. Many are not actively trying to move, either because they cannot afford to or because they still love their homes and communities, but they keep relocation and retreat on the table as possibilities. Others are actively planning to sell and leave the state but feel the floods have made that transition slower and more complicated. One interviewee stands somewhat apart in expressing less day-to-day flood anxiety, but the interview still shows how much mitigation, money, labor, and planning the flood has forced into ordinary life.