

Kane and Kennedy Brook Watershed Area Storm Drainage Analysis Update

Survey Summary Report



By: **CDM
Smith**

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1.0 Overview

The Kane and Kennedy Brook Watershed Area Storm Drainage Analysis is a collaborative effort between the City of Hartford and the Town of West Hartford to study flooding and stormwater drainage issues within the Kane and Kennedy Brook watersheds, tributaries of the South Branch of the Park River. The study is fully funded by a Connecticut Department of Energy and Environmental Protection (DEEP) Climate Resilience Fund grant and is being conducted by the consulting firm CDM Smith. The analysis began in summer of 2025 and is anticipated to be completed in fall of 2026.

The primary objective of the study is to evaluate and develop alternatives that can reduce flooding and improve storm drainage infrastructure in the area. The assessment focuses on issues related to public drainage systems including clogged or undersized storm drains, roadway flooding, and other system-level concerns, rather than drainage problems occurring solely on private property. The study involves evaluating the existing stormwater infrastructure, identifying areas where drainage performance is insufficient, and gathering community input to better understand localized flooding experiences.

Public engagement is a key component of the study. A survey was distributed to more than 5,500 owners and renters in the watershed area to gather information on property details, flood and drainage experiences, associated impacts, resident concerns, and priorities for improvement. The survey focuses on four key areas: Property Information to understand land use and infrastructure; Flood & Drainage Experience to capture local issues with water management; Impacts & Concerns to identify how these challenges affect daily life; and Improvements & Priorities to guide future actions based on community needs. Detailed survey findings are presented in subsequent sections of this report.

2.0 Survey Advertisement

To promote broad community participation in the Kane and Kennedy Brook Watershed Area Storm Drainage Analysis, the study team implemented a comprehensive outreach strategy to advertise the public survey. The objective was to reach as many residents and property owners within the watershed as possible by providing multiple, accessible avenues for engagement. This outreach effort was essential to collect accurate, representative, and diverse feedback regarding flooding experiences, drainage concerns, and priorities for future improvements.

The outreach campaign utilized a variety of communication methods, including direct mail, posters in public places, online outreach, and partnerships with community-based organizations. As part of this effort, the study team also met with two community organizations and their members to share information about the study and encourage survey participation. These combined efforts helped ensure that diverse representations had the opportunity to learn about the survey and contribute their perspectives to the study.

Postcard Mailers

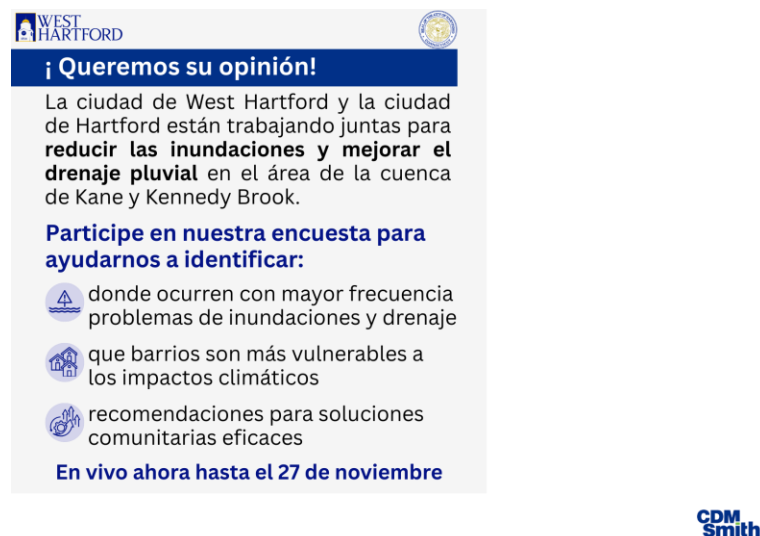
One of the primary methods for advertising the survey was through direct mail. Over 5,500 bilingual

(English and Spanish) postcards were sent to owners and residents within the Kane and Kennedy Brook watershed area, covering approximately 2,618 properties in West Hartford and 371 in Hartford. These postcards included clear instructions, in English and Spanish, on how to access and complete the survey, to inform residents and property owners about the opportunity to provide feedback. This direct outreach approach was designed to reach individuals where they live and encourage participation from those most affected by flooding and drainage issues.

Figure 1: Front side of postcard in English



Figure 2: Back side of postcard in Spanish



Municipal Websites

The survey was also promoted through the Town of West Hartford and the City of Hartford's official websites, specifically within the Engineering Department sections. In addition to posting survey information online, both communities placed alert banners on their websites to prominently notify residents about the survey opportunity. This online presence provided easy access for individuals who prefer digital platforms and allowed for quick participation without waiting for mailed materials. By

leveraging the municipal websites, and using high-visibility alerts, the study team provided awareness to community members about the survey's availability, including those who may have missed the mailed postcards.

Community-Based Organizations

To further expand outreach, the study team provided digital paper versions of the survey to both municipalities, which then shared them with local libraries and community-based organizations. These materials, including English and Spanish printable version, offered additional access points for residents who may not have reliable internet service or who prefer in-person engagement.

In addition, the study team met with two community organizations, the Park Road Association in West Hartford and the Parkville Neighborhood Revitalization Zone (NRZ) in Hartford, to present an overview of the study, discuss local flooding and drainage concerns, and distribute surveys to their members. These meetings helped broaden participation to include community voices directly into the study. Making the survey available through these organizations and community spaces supported greater inclusivity by reaching individuals who rely on local networks for information and resources.

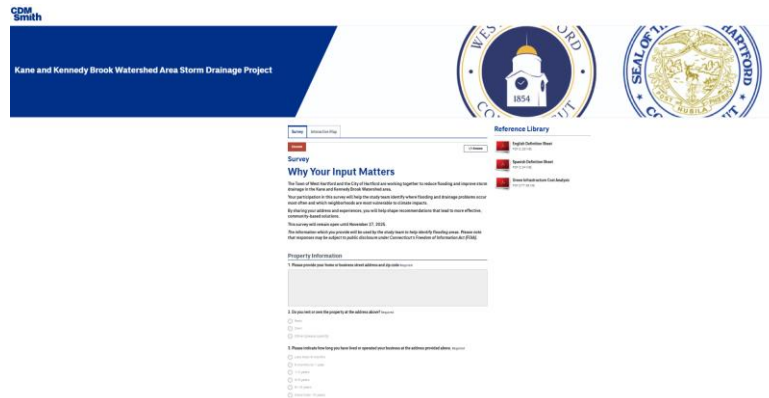
3.0 Social Pinpoint Survey Participants

The study utilized Social Pinpoint, an interactive online engagement tool, to gather location-specific feedback from residents within the watershed. Through this tool, 89 contributors provided their submissions, including five interactive map markers. These markers identified flood-related concerns such as basement flooding, standing water in backyards, and vacant areas that frequently flood after storms.

Participants also submitted comments offering potential solutions, including the installation of rain gardens, increased tree planting, and other strategies to improve stormwater management. The survey questions focused on pinpointing where flooding occurs, understanding the nature of drainage problems, and gathering ideas for improvements.

This interactive approach enabled the study team to visualize problem areas and prioritize conceptual solutions based on real-world input from the community.

Figure 3: Social Pinpoint Survey Site



4.0 Comment Responses

4.1 Survey Respondents

The survey received 89 responses, representing a response rate of approximately 1.7% from 5,132 postcards mailed to residents and property owners in the study area. The vast majority (approximately 78 individuals) of survey responses came from West Hartford, while 11 responses were from the City of Hartford. This distribution reflects the larger residential footprint of West Hartford within the Kane and Kennedy Brook watershed area. Ownership status was a defining characteristic of the respondent group, as 89 percent reported owning their property, while only 10 percent were renters. This rate suggests that most participants have a vested interest in long-term solutions for stormwater management and flood mitigation.

Figure 4: Distribution of Commentors by Municipality

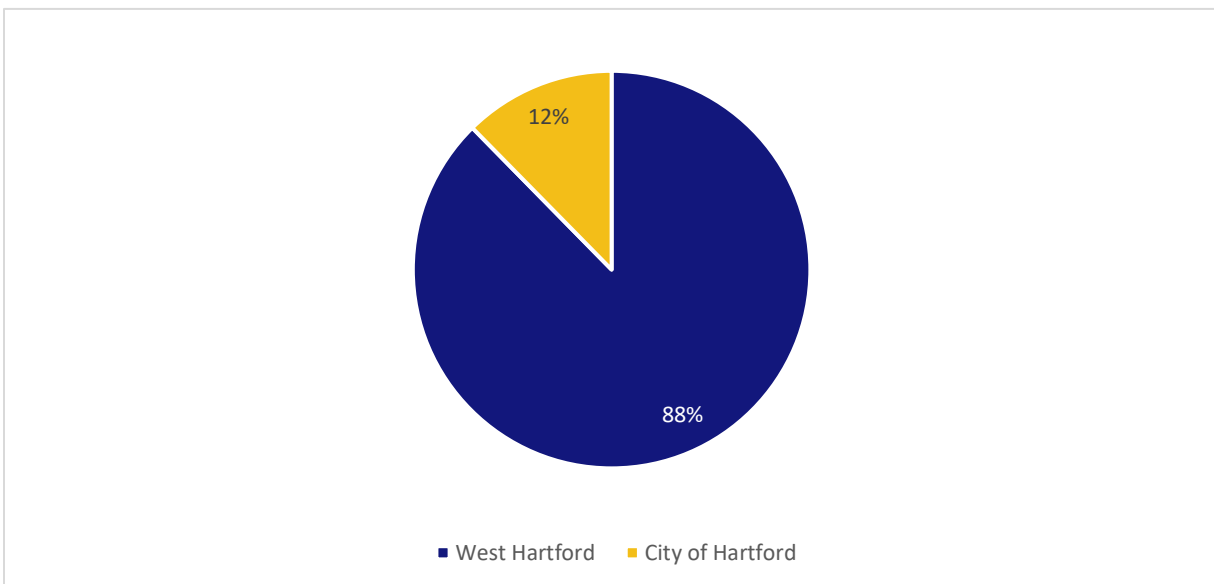
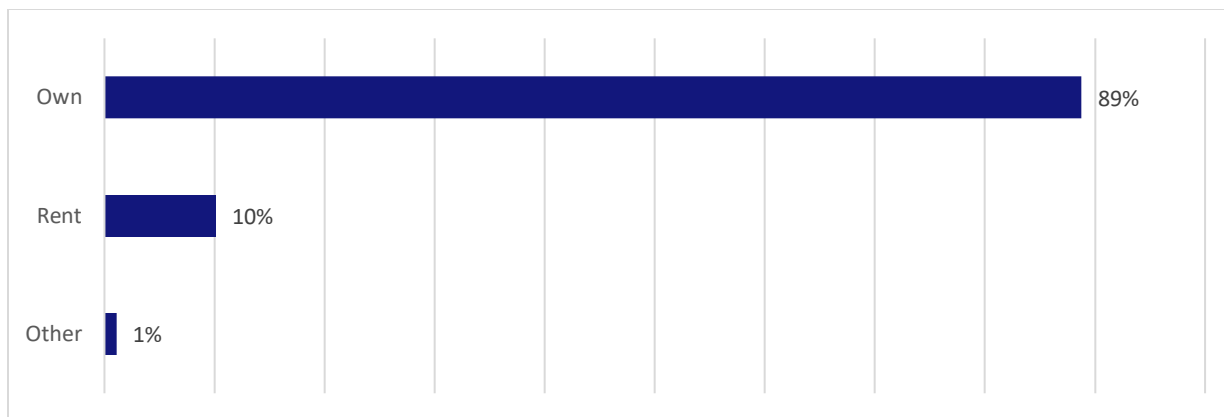


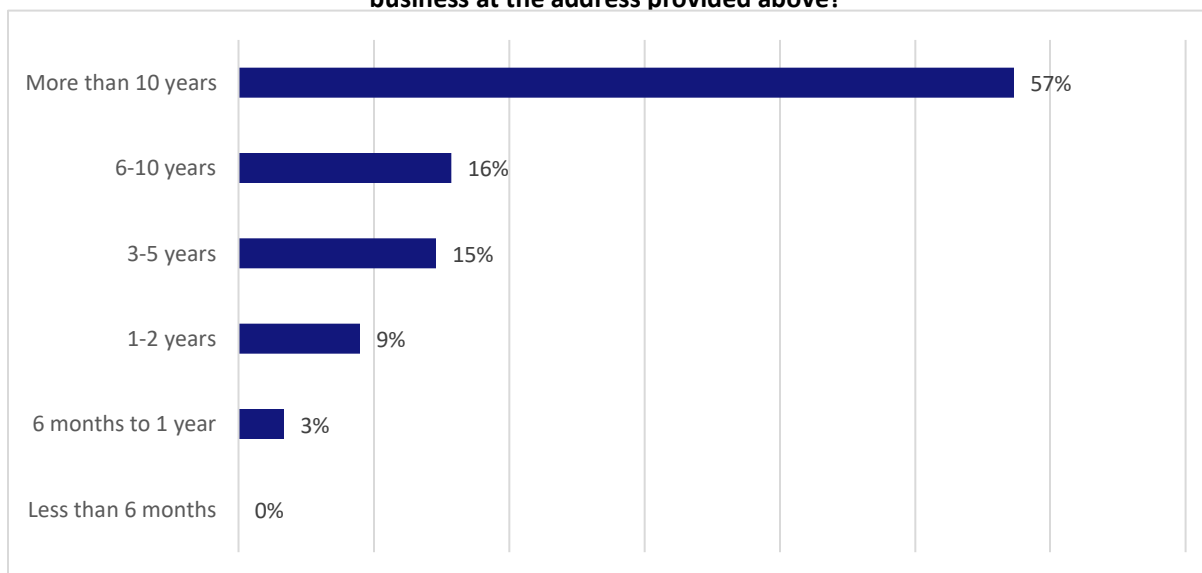
Figure 5: Survey Responses to Question “Do you rent or own the property at the address above?”



In terms of tenure, the data reveals that respondents are predominantly long-term residents. Over half of the participants, about 57 percent, have lived at their current address for more than ten years, indicating deep familiarity with local flooding patterns and infrastructure challenges. Another 15 percent have resided in their homes for six to ten years, and 14 percent have resided in three to five years. Shorter durations were less common, with only 9 percent reporting one to two years and 3 percent less than one year. This trend underscores that the feedback collected is largely informed by years of firsthand experience, making it particularly valuable for identifying persistent drainage issues and evaluating the effectiveness of past interventions.

The combination of high homeownership and long-term residency suggests that respondents are not only aware of the flooding problems but are also highly invested in finding sustainable solutions. Their perspectives provide critical insights into recurring issues, areas of concern, and priorities for improvement, which will guide the development of conceptual alternatives in the next phase of the study.

Figure 6: Survey Responses to Question: “Please indicate how long you have lived or operated your business at the address provided above?”

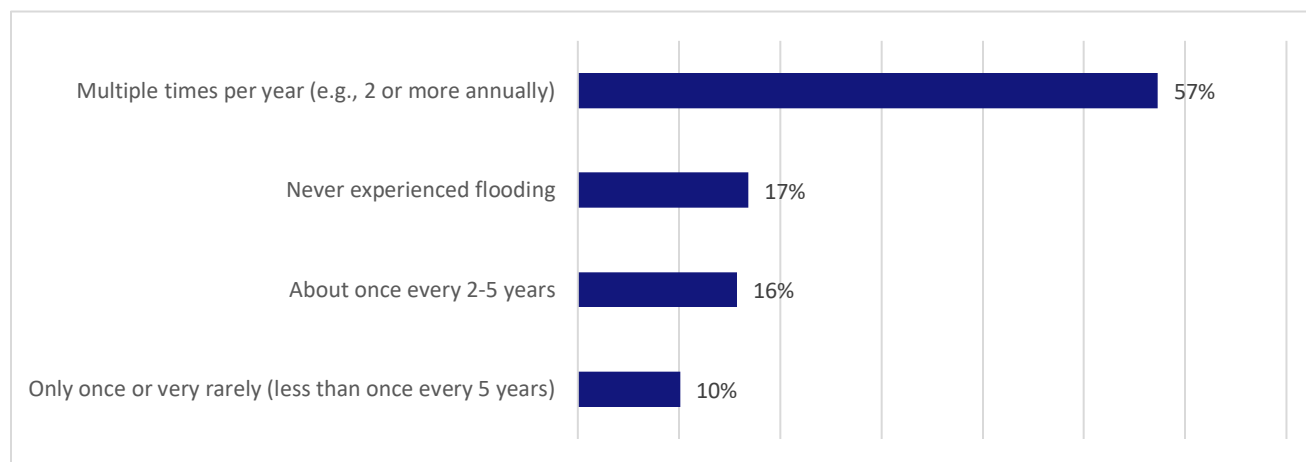


Survey respondents represented a diverse demographic profile. Most participants were between the ages of 41 and 80, with the largest group falling in the 61–80 range. English was the primary language for many respondents, though a small number reported Spanish or Portuguese. In terms of gender, responses were balanced, and the majority identified as White or Caucasian, with smaller representation from Hispanic or Latino and other groups. Household income varied widely, but most respondents reported earnings between \$50,000 and \$149,000 annually, with some below \$30,000 and others above \$200,000. Only a small percentage (16%) indicated that they own or operate a business within the study area. This demographic context helps frame the perspectives shared in the survey and highlights the predominance of long-term homeowners in the watershed. Detailed charts for the distribution can be found in .

4.2 Flooding and Drainage Experiences

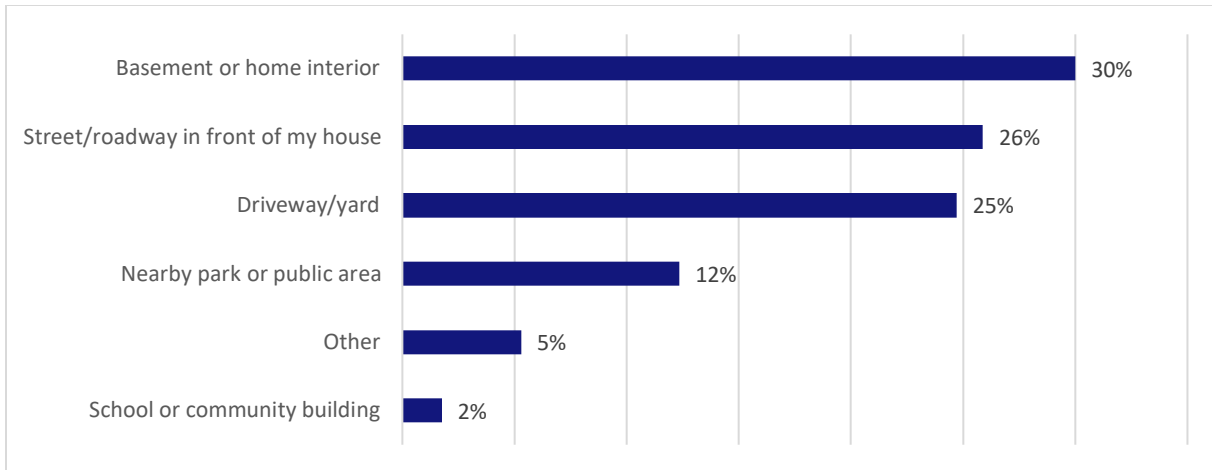
Flooding and drainage experiences reported in the survey provide a detailed picture of how residents are impacted during heavy rainfall events. Most respondents (83%) indicated that they have experienced street or property flooding, with many reporting that these events occur multiple times per year. Others noted that flooding happens only occasionally, such as once every few years, while a smaller group (17%) stated they have never experienced flooding on their property. This variation suggests that while some areas are consistently vulnerable, others face intermittent or minimal risk.

Figure 7: Survey Responses to Question: “Have you experienced street or property flooding during heavy rainfall events?”



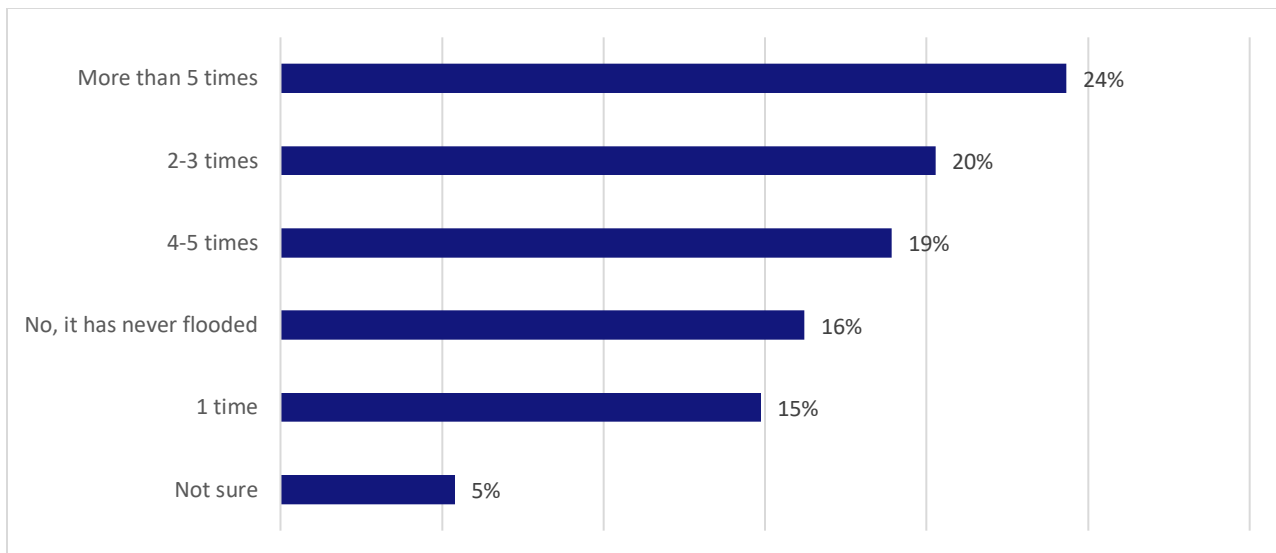
When asked where flooding typically occurs, respondents most frequently identified basements and home interiors as problem areas, followed by streets and roadways in front of their homes. Driveways and yards were also commonly mentioned, and some participants noted flooding in nearby parks or public spaces. These responses highlight that flooding is not confined to private property but also affects public infrastructure, creating broader community challenges.

Figure 8: Survey Responses to Question: “Where have you seen flooding?”



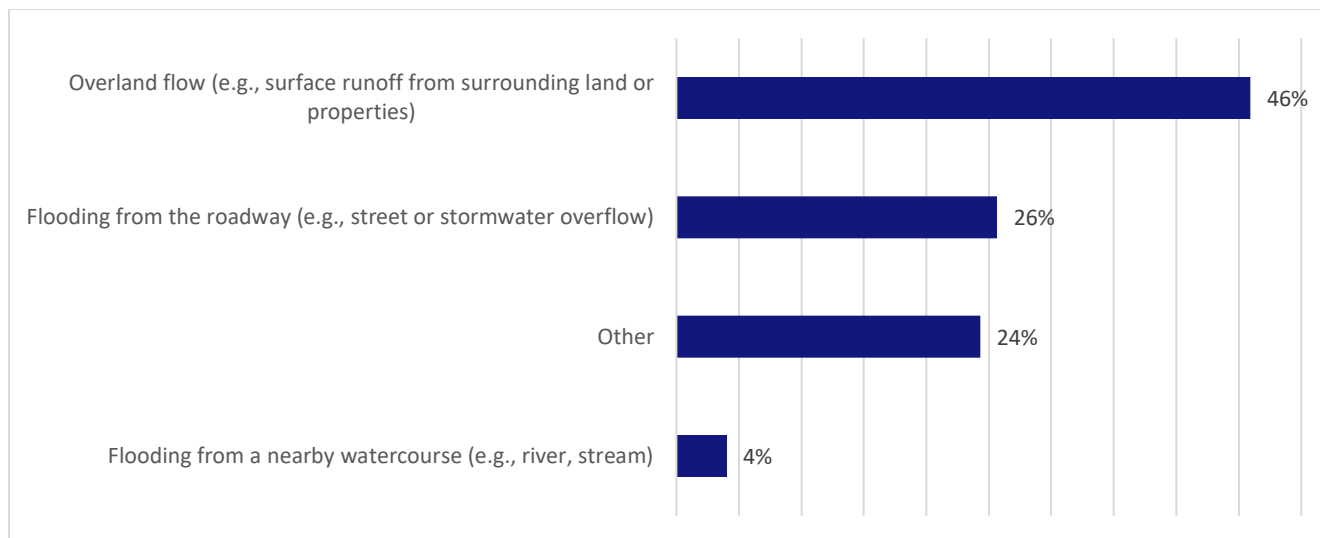
The survey inquired about the number of times basements or homes have flooded, revealing a wide range of experiences. Some households reported isolated incidents, while others experienced repeated flooding, with several respondents indicating more than five occurrences. This pattern underscores the severity of the issue for certain properties and the cumulative damage that repeated flooding can cause.

Figure 9: Survey Responses to Question: “If your house or basement has flooded, how many times has this occurred?”



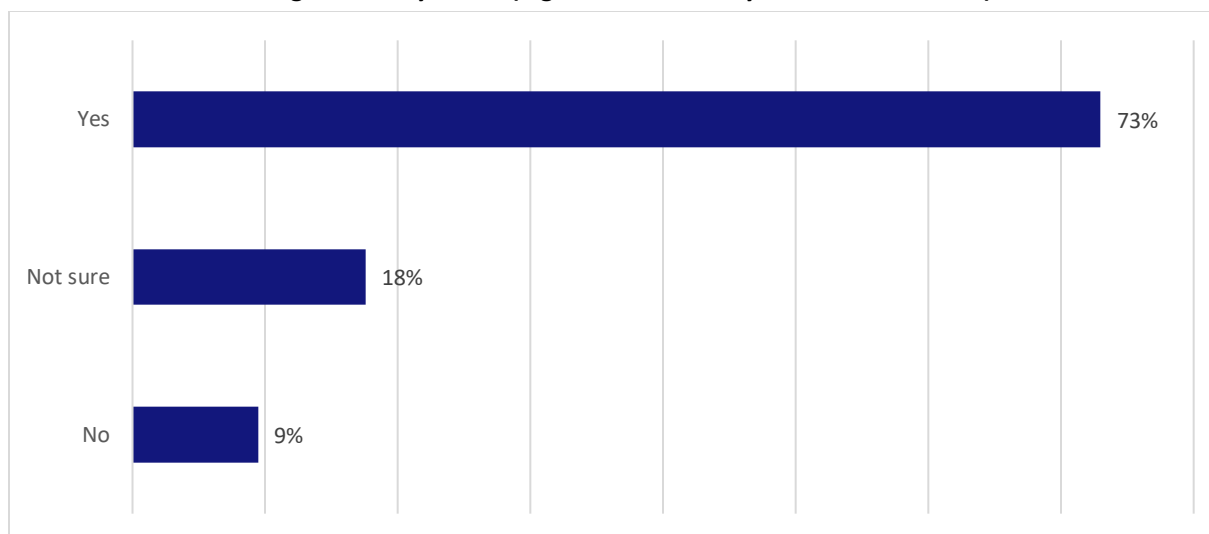
Participants were also asked about the primary source of flooding on their property. Overland flow (e.g. surface runoff from surrounding land) was cited as the main response, followed by flooding from roadways and stormwater overflow. A smaller number of respondents attributed flooding to nearby watercourses or other causes such as sewer backups or groundwater intrusion. These findings point to multiple contributing factors, both natural and infrastructure related.

Figure 10: Survey Responses to Question: “What is the primary source of the flooding on your property?”



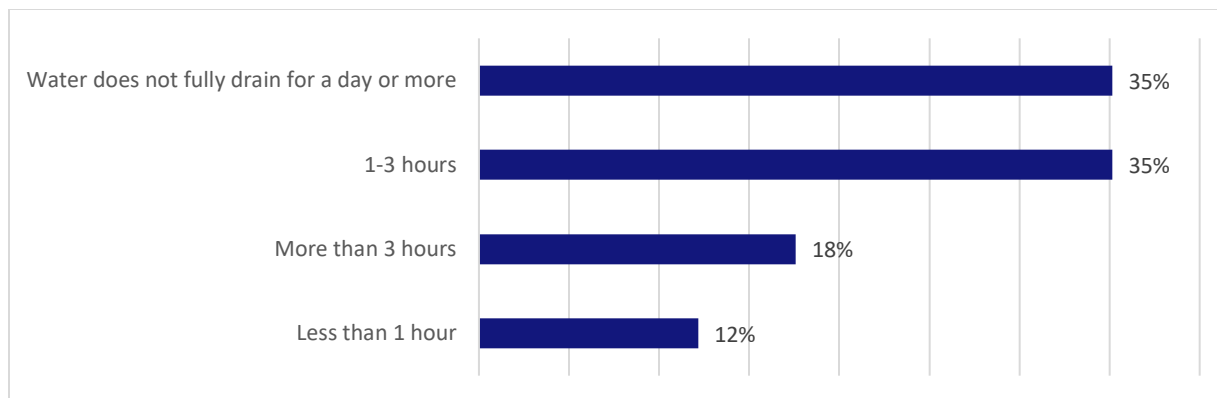
High-intensity storms were identified as a major trigger for flooding events. Seventy-three percent of respondents confirmed that short but heavy rainfall episodes, such as cloudbursts, were responsible for flooding on their property or street. This aligns with broader climate trends showing an increase in extreme precipitation events, which can overwhelm existing drainage systems.

Figure 11: Survey Responses to Question: “Was the flooding event(s) on your street or property caused by a high-intensity storm (e.g., short but heavy rainfall, cloudburst)?”



The survey also asked respondents to provide the study team with their experience on the duration of flooding within the study area. While 12 percent of residents reported that water drained within an hour, 35 percent stated that flooding typically lasts one to three hours, and another 35 percent noted that water does not fully drain for a day or more.

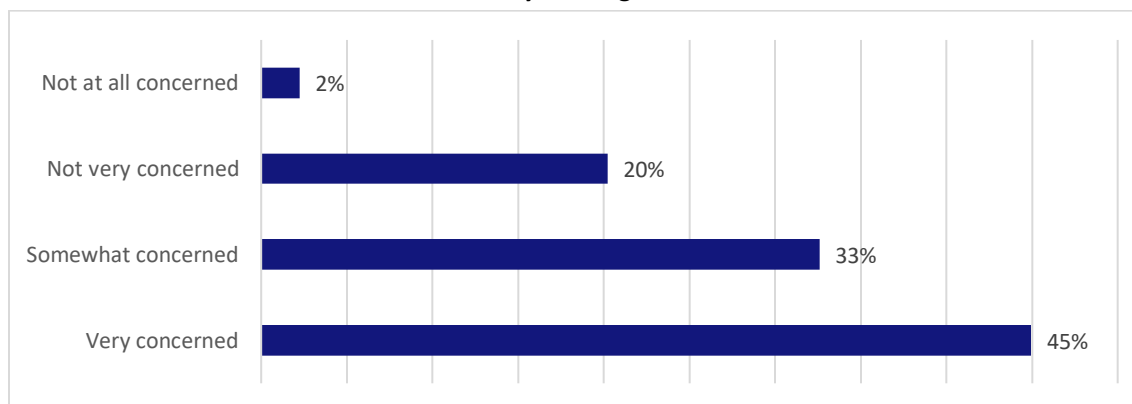
Figure 12: Survey Responses to Question: “How long does flooding usually last in your area?”



4.3 Impacts and Concerns

Within the survey section focused on impacts and concerns, respondents reported varying levels of worry about flood-related risks. Nearly half of the participants (45%) reported being “very concerned,” reflecting the seriousness of the issue for many households. Another substantial portion (33%) indicated as “somewhat concerned,” suggesting that even when flooding is not severe, it still poses a notable inconvenience and potential safety issues. A smaller percentage reported being “not very concerned” or “not at all concerned,” which may correspond to those living in areas less prone to flooding or who have not experienced significant impacts. Overall, the responses demonstrate that flooding is perceived as a major risk by most residents, influencing their priorities for stormwater improvements.

Figure 13: Survey Responses to Question: “How concerned are you about the risks associated with flooding in your neighborhood?”

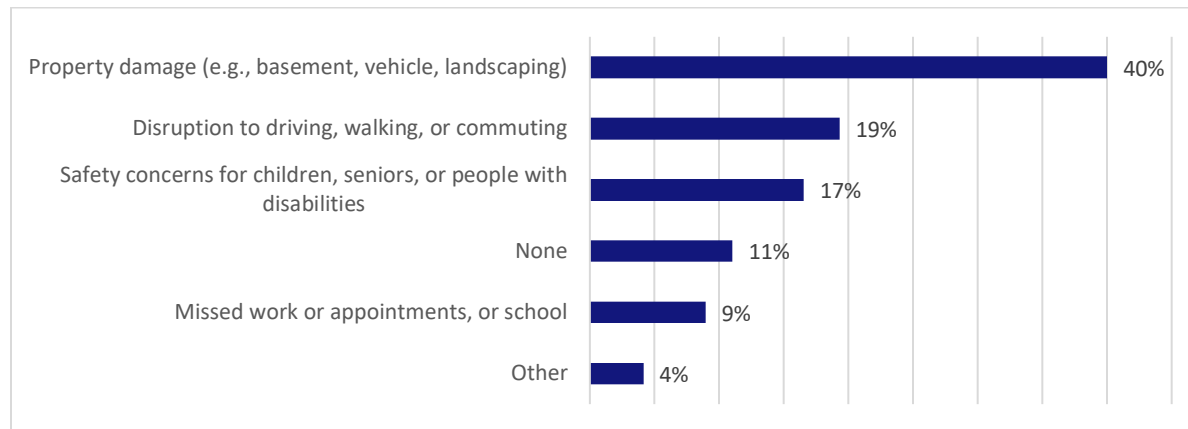


The survey results reveal that flooding and poor drainage have significant impacts on households and neighborhoods within the area. Property damage emerged as the most common concern, with many respondents (40%) reporting damage to basements, vehicles, and landscaping as a direct result of flooding. Beyond property damage, respondents highlighted disruptions to daily life, including missed work or school and difficulties with driving, walking, or commuting during and after storm events.

Safety concerns were another recurring theme, particularly for vulnerable populations such as children, seniors, and individuals with disabilities. Standing water and flooded streets were seen as hazards that limit mobility and increase the risk of accidents. Some respondents (9%) also expressed worry about

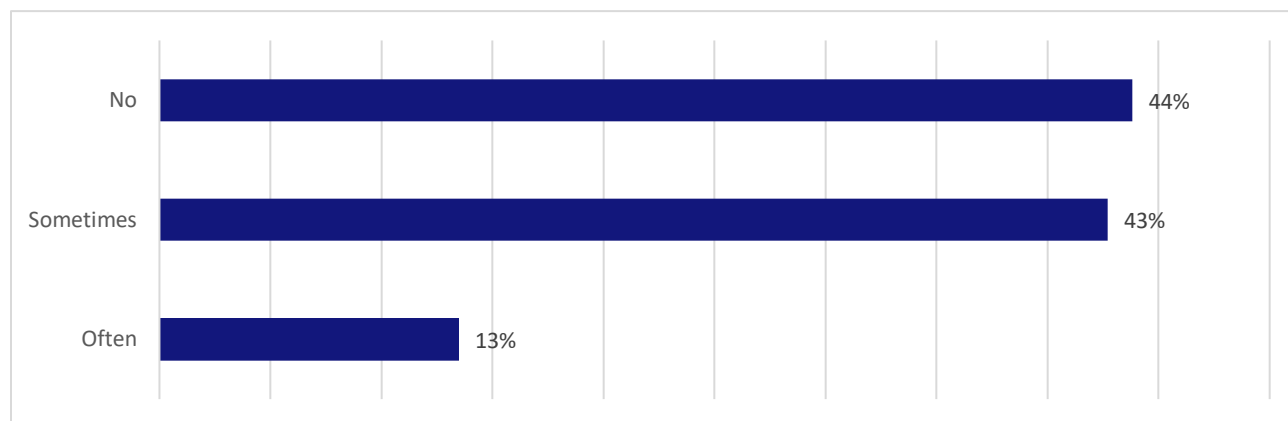
emergency access, noting that flooding can block routes used by school buses, commuters, and other essential appointments.

Figure 14: Survey Responses to Question: “What impact has flooding, or poor drainage had on your household or neighborhood? (Select all that apply)”



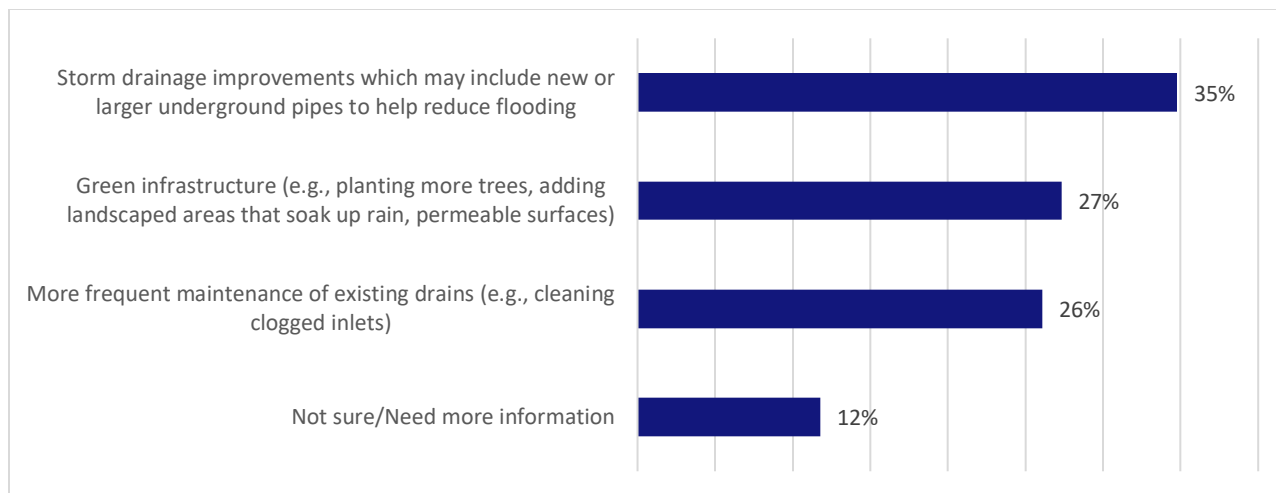
When asked about stormwater drainage performance, responses varied. While some participants (56%) reported noticing clogged or non-functioning drains often or sometimes, others indicated they rarely observe such issues. This suggests that maintenance problems may be localized but still contribute significantly to flooding where they occur.

Figure 15: Survey Responses to Question: “Have you noticed storm drains in your neighborhood clogged or not working properly?”



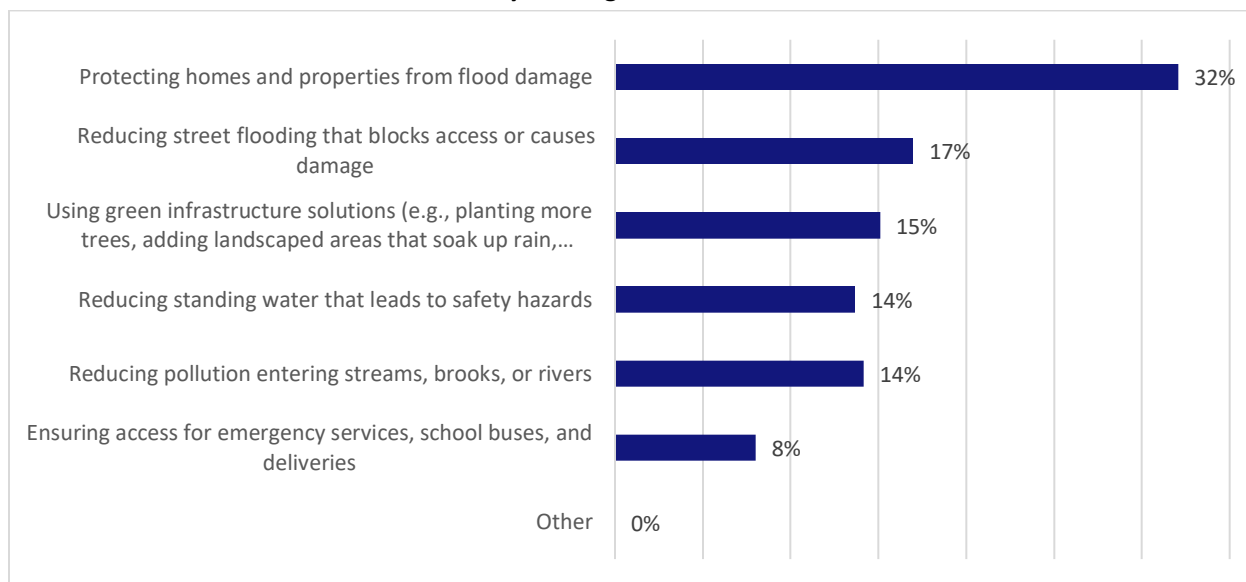
When asked about preferred improvements, respondents prioritized infrastructure upgrades and maintenance. The most common response being installing new or larger underground pipes to reduce flooding. Green infrastructure solutions were the second most common response which includes tree planting, rain gardens, and permeable surfaces. Additionally, some respondents (26%) emphasized the need for more frequent maintenance of existing storm drains to prevent clogging and ensure proper function during heavy rainfall. These preferences indicate that residents value both traditional engineering solutions and nature-based strategies to address flooding.

Figure 16: Survey Responses to Question: “What types of flooding or drainage improvements would you most like to see in your neighborhood?”



Thirty-two percent of respondents identified protecting homes and properties from flood damage as their highest priority, underscoring the importance of safeguarding personal investments and reducing costly repairs. Reducing street flooding that blocks access or causes damage ranked second, highlighting concerns about mobility and emergency access during storm events. Other priorities include reducing standing water that creates safety hazards and using green infrastructure solutions to improve drainage and environmental quality. These responses suggest that residents want a balanced approach that combines flood prevention with ecological benefits.

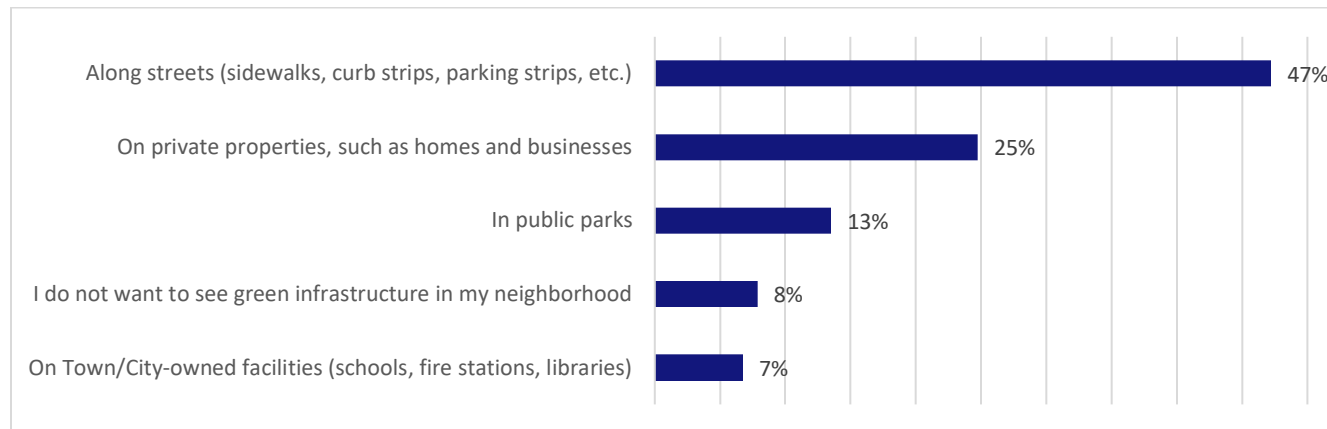
Figure 17: Survey Responses to Question: “What are your top priorities for stormwater improvements in your neighborhood?”



Preferences for green infrastructure locations varied, but 47% respondents favored installations along streets, such as sidewalks and curb strips, where they can intercept runoff before it enters storm drains. Private properties were the second preferred location, followed by public parks and town or city-owned facilities like schools and libraries. A small number of respondents indicated they did not want green infrastructure in their neighborhood, suggesting that while support is strong overall, outreach and

education may be needed to address concerns or misconceptions. These findings highlight opportunities to integrate green infrastructure into both public spaces and residential areas for maximum impact.

Figure 18: Survey Responses to Question: “Where would you prefer to see green infrastructure projects in your neighborhood?”



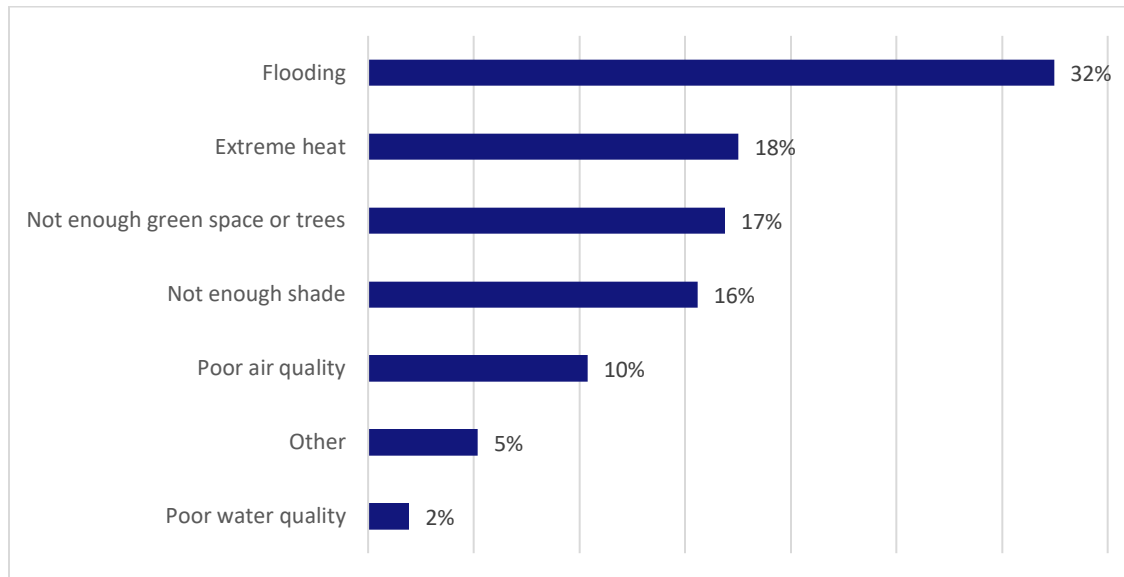
Respondents were asked to rank green infrastructure types as preferred nature-based solutions. Respondents demonstrated strong support for nature-based solutions, with rain gardens and tree planting consistently ranked as the top priorities. These options were favored for their ability to absorb stormwater, reduce runoff, and improve neighborhood aesthetics. Porous pavement and subsurface storage followed closely, reflecting interest in practical measures that enhance drainage while reducing impervious surfaces. Right-of-way bioswales and green roofs were also included in rankings, though they generally appeared lower on the list, suggesting that while residents value engineered solutions, they prioritize visible and accessible green features. Overall, the rankings indicate a clear preference for interventions that combine flood mitigation with environmental and community benefits.

Figure 19: Survey Responses to Question: “Please drag and drop the following green infrastructure project types into the order of importance to you.”

Green Infrastructure Project	Rank (6 being your highest priority and 1 being your lowest priority)
Rain gardens	5
Tree planting	6
Porous pavement	3
Subsurface storage	4
Right-of-way bioswales	2
Green roofs	1

Climate-related concerns were prevalent among respondents, with extreme heat identified as the most common issue. Many participants (33%) also reported a lack of shade and insufficient green space or trees, highlighting the need for urban greening to combat heat and improve livability. Other impacts included poor air quality and poor water quality, though these were mentioned less frequently. These responses align closely with the interest in green infrastructure, as tree planting and vegetated areas can help mitigate heat, improve air quality, and enhance resilience to climate stressors. Collectively, these findings underscore the importance of integrating climate adaptation strategies into stormwater management planning.

Figure 20: Survey Responses to Question: “What types of climate-related impacts are you currently experiencing in your neighborhood?”



Appendix A

Figure 21: Survey Responses to Demographic Question: “What is your age?”

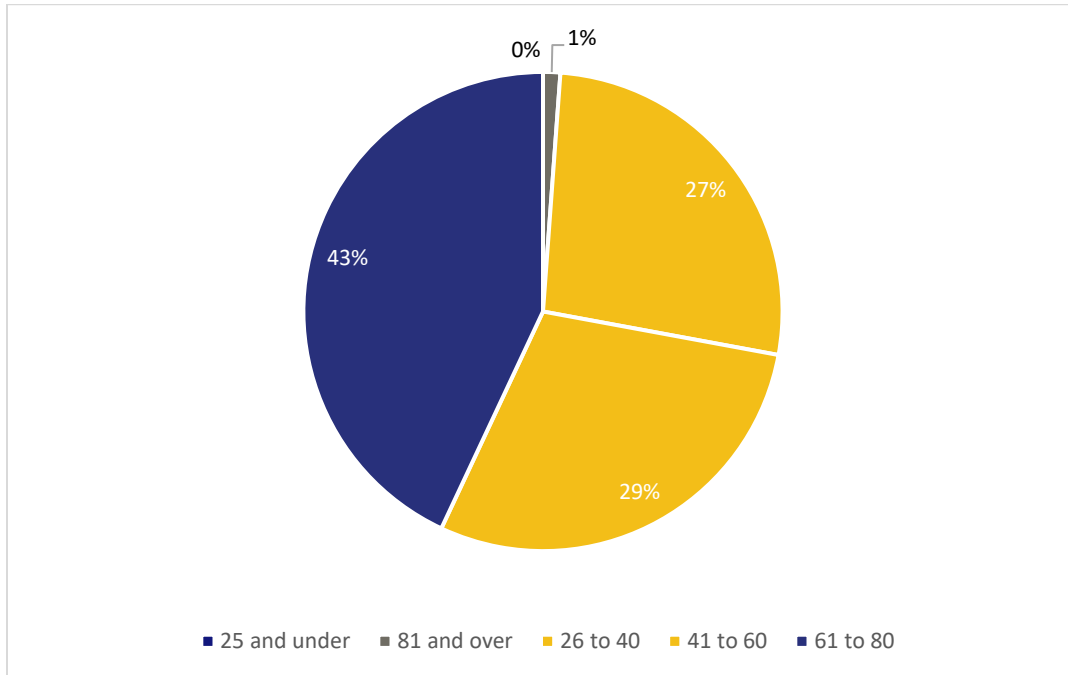


Figure 22: Survey Responses to Demographic Question: “How would you describe your gender?”

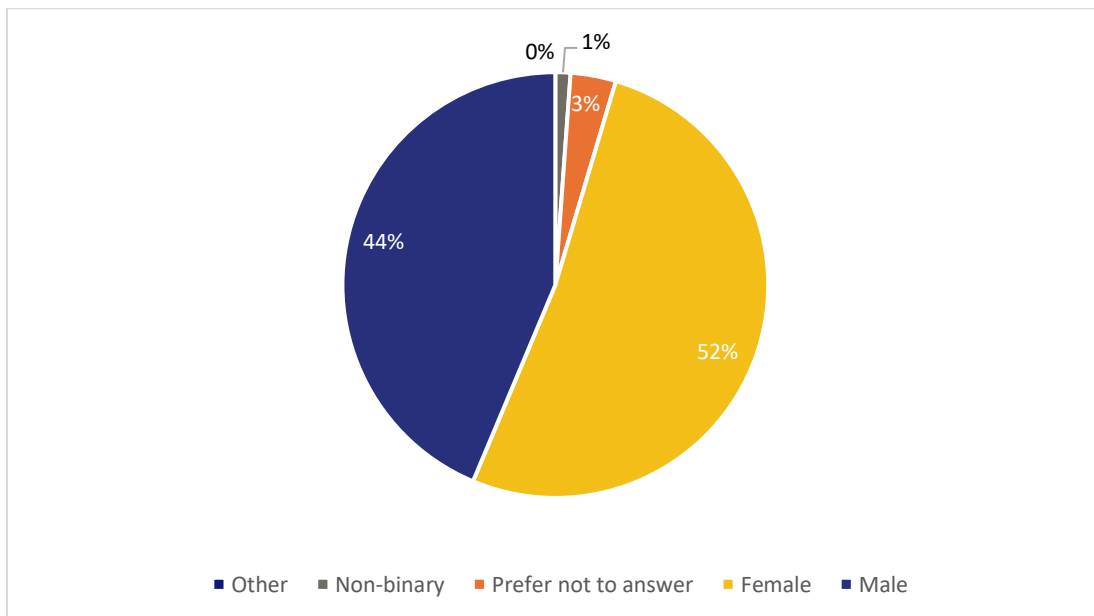


Figure 23: Survey Responses to Demographic Question: “What is your ethnicity?”

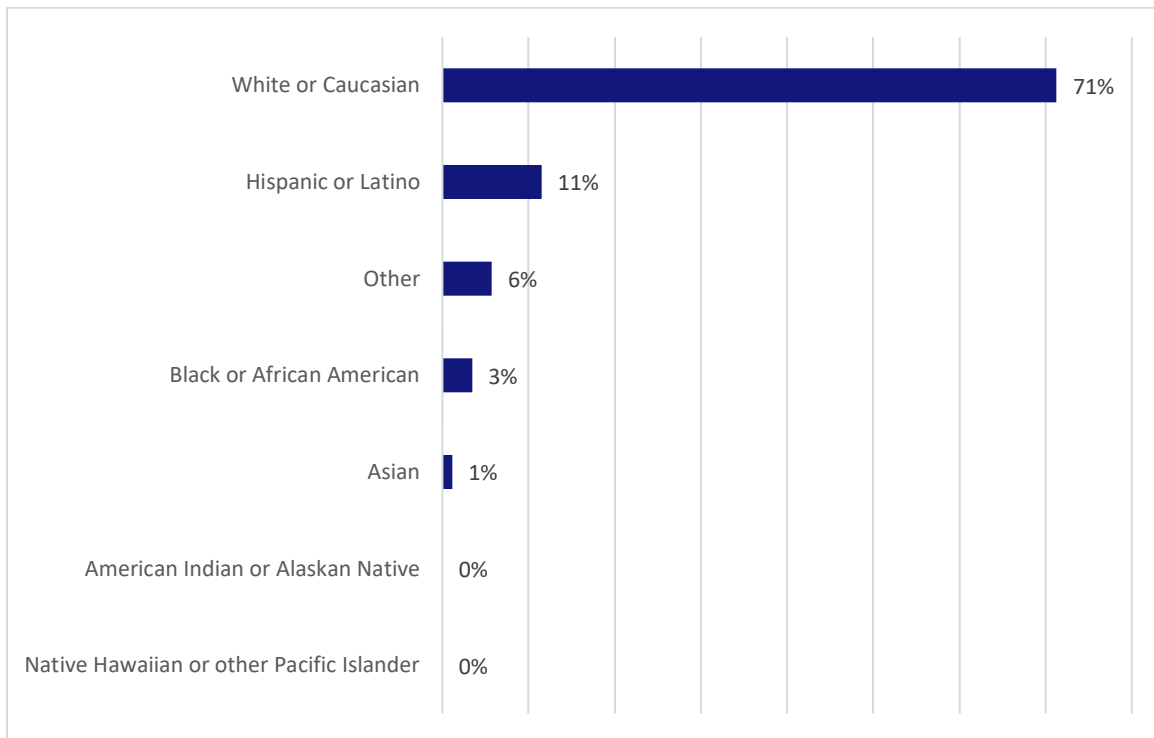


Figure 24: Survey Responses to Demographic Question: “What is your primary language?”

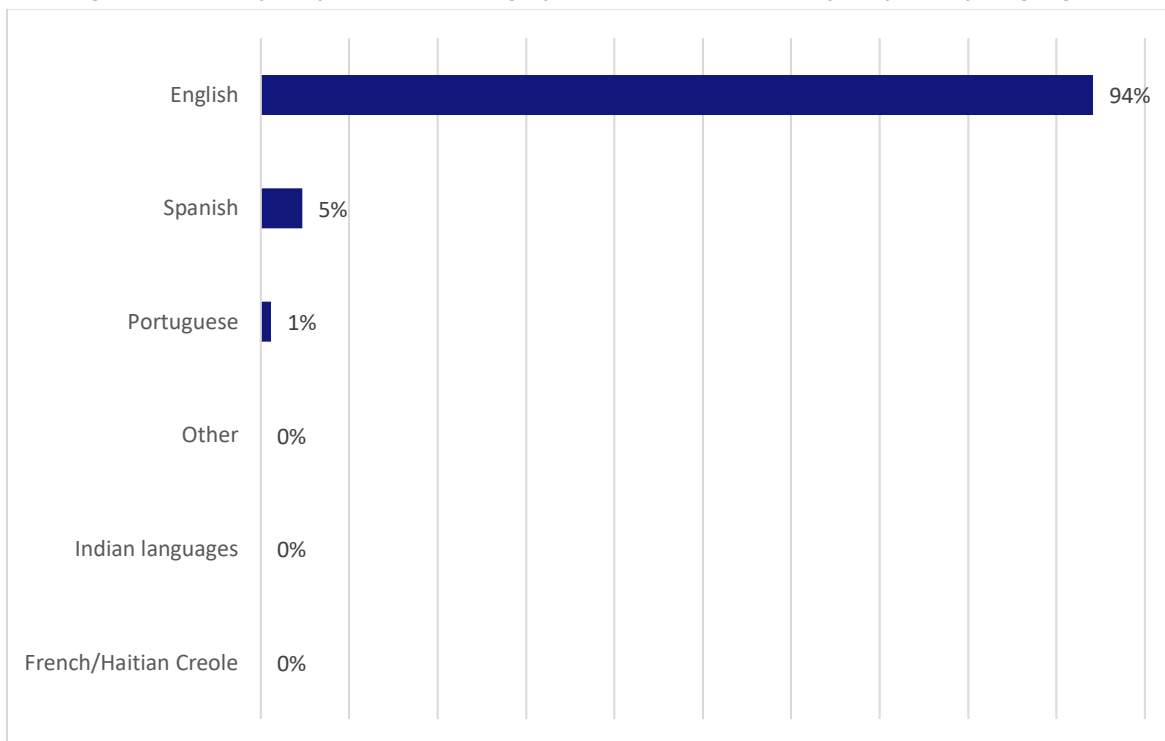


Figure 25: Survey Responses to Demographic Question: “What is your household income?”

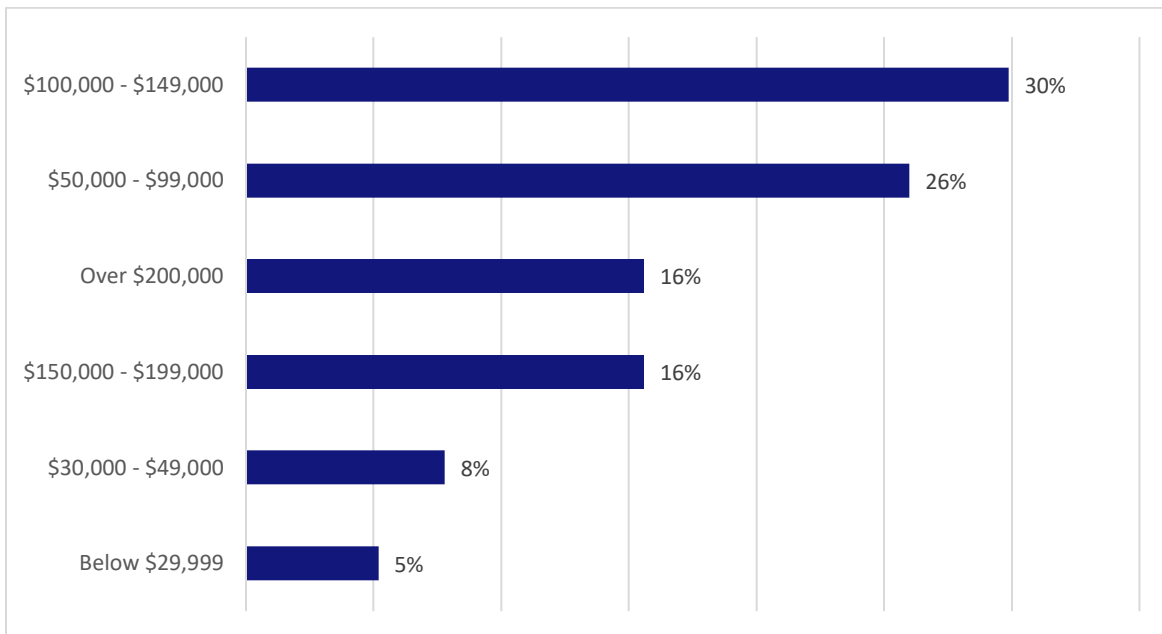


Figure 26: Survey Responses to Demographic Question: “Do you own or operate a business within the study area?”

