

# Perceived Risk of Flooding in the North End of Newport Rhode Island

A Report by the Eastern Rhode Island Conservation District and  
The Newport Health Equity Zone





## **Introduction**

The data in this report were collected in an outreach survey performed by community members in partnership with the Eastern Rhode Island Conservation District (ERICD) and the Newport Health Equity Zone. The ERICD is a non-profit organization aimed founded in 1944 that strives to promote and improve long-lasting and environmentally-friendly practices that protect natural resources. It works primarily in outreach, education, and financial aid for natural resource concerns. The Newport Health Equity Zone (HEZ) is one of nine zones identified by the Rhode Island Department of Health (RIDOH) as places in need of public health investment and community-based public health initiatives.

The survey process, data analysis, and final reporting were assisted and supervised by Sara Churgin, district manager of ERICD and Lauren Carson, head of stormwater outreach and implementation. This report was written by Charis Edwards, an intern for ERICD through the Brown University iProv Signature internship program.

This survey served as the background assessment for implementing green stormwater infrastructure projects on the North End of Newport, which will be partially funded by Partners for Places, (<https://www.fundersnetwork.org/partners-for-places/>) a matching grant program aimed at improving communities in the US and Canada in partnership with local funding groups, to produce a vested, local interest in sustainable community development. The matching partners for this grant are the Rhode Island Foundation, the van Buren Charitable Foundation, and Price Charitable Trusts.

The data from this survey were analyzed and collated by a research group of students at the University of Rhode Island for their final capstone project; Maguire Bennett, Molly Flagg, Sean Hunt, Jennifer McDonnell, and Jefferson Pun under the direction of Professor Emi Uchida in the Department of Environmental and Natural Resource Economics.

## **Background**

This project focuses on the North End of Newport, Rhode Island, a city located on Aquidneck Island, on the eastern edge of the state. The North End is a neighborhood which has historically received less municipal attention and funding than more tourist-oriented parts of Newport. According to Data USA, the North End has the lowest median income of all neighborhoods in Newport as of 2018. The North End, as with many coastal neighborhoods, is subject to flooding due to sea-level rise and is uniquely affected by flooding due to stormwater runoff and poor drainage.

The Rhode Island Department of Transportation (RIDOT) is undertaking a major infrastructure project in realigning the Pell Bridge, the major corridor to and from Aquidneck Island, which will significantly impact North End residents.

The ERICD and Newport Health Equity Zone were awarded a Partners for Places grant, financially matched by three local charitable organizations, to implement green stormwater infrastructure in the North End. A central aim of this grant is to encourage and strengthen relationships between affected residents, funding partners, and city government.

## Goals

The purpose of this survey was to ensure that North End residents' voices were heard and utilized in decision making about ongoing infrastructure improvements. This survey collected basic information about the respondents and focused on their perceived risks of flooding in their own neighborhoods.

This data will be used in conjunction with community discussions and planning sessions to determine the best use of the Partners for Places grant money and to inform future projects on community needs and perspectives.

## Methodology

The survey consisted of thirteen questions about the residents and their perception of flood risk in their neighborhood. The survey was conducted by community members working with for Newport HEZ in partnership with ERICD. The surveys were available both online and on paper and available in both English and Spanish. A copy of the survey questions can be found in Appendix I.

## Results

### *Survey Responses*

A total of 102 survey responses were collected, 86 in English and 16 in Spanish. Eight of those were online surveys via the SurveyMonkey platform and 94 of them were paper surveys.

### *Respondent Information*

66% of survey respondents reported that they rent their house versus only 14% of respondents who reported

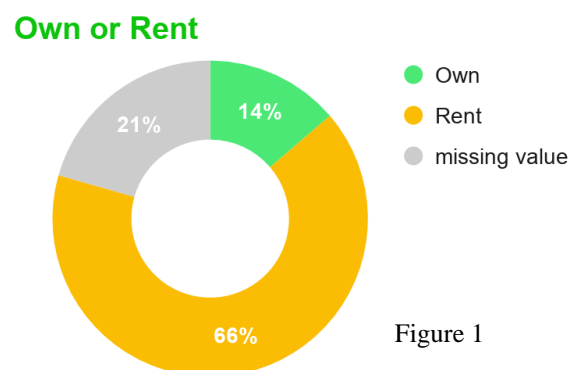
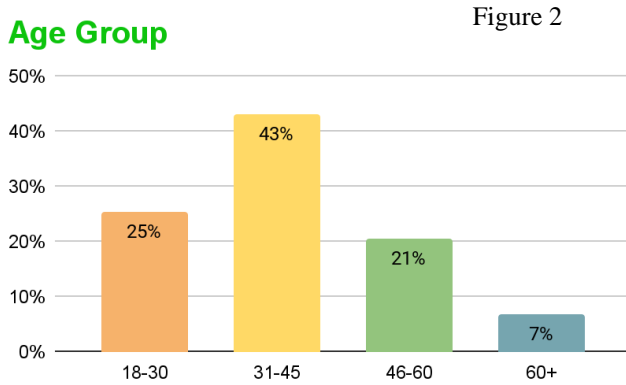


Figure 1

owning their houses (Figure 1). Age groups represented varies widely with the largest proportion of responses (45%) coming from residents between the ages of 31 and 45 years old (Figure 2).



*Frequency and Prevalence of Flooding*

74 respondents (73%) said that there was flooding in their neighborhoods after it rained and a small majority of 51% said that flooding happened every time that it rained. A full 80% of

survey respondents reported flooding at a frequency of at least once per year if not more often.

*Location and Source of Flooding*

30% of respondents reported that the general area of flooding was within private yards which, while likely indicative of larger infrastructure issues, do not fall under the domain of potential locations for physical projects funded by the ERICD’s existing grants. On the other hand, 53% of respondents reported severe street flooding (Figure 3). Since this is municipal property it is directly eligible for improvements and focus from the ERICD grant money currently available. While the cited origins of flooding varied, the most common source, cited by 38 residents, was the lack of drains available for stormwater. 24 respondents cited that the source of was just general flooding in the area and 24 respondents cited their neighbor’s property as the source of the flooding. In the space provided to cite other sources of flooding four residents mentioned Pell school, specifically the recent construction, and others mentioned “blocked drains,” “Storm drain overload,” and a “lack of drains.” 70% of respondents said that their neighbors also experienced flooding, likely indicating that similar responses would be expected from a larger sample in these same neighborhoods.

### *Other Perceptions of Flood Consequences*

38% of respondents reported that their children walked through flooded areas on their way to school after it rained and a few other residents commented that they watched children in the neighborhood walk through flooded areas even if they did not have children or school-age children themselves. One younger respondent reported walking through flooded areas in order to catch the bus to school and another resident reported that they struggled as an adult to navigate the neighborhood and get to the store due to flooding.

**Flooding in General Area**

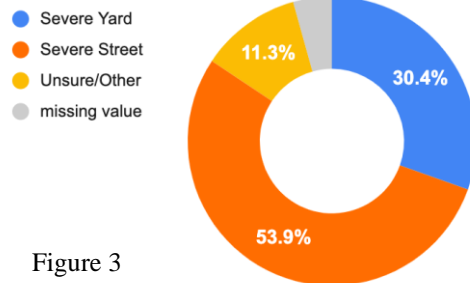


Figure 3

When asked “If there was a flood tomorrow would you feel prepared to handle it?” only 24% of residents responded that they would feel prepared and know what to do. A majority, 55%, reported that they would not know what to do and an additional 22% reported being unsure. Respondents who rented their homes were significantly more likely to report not knowing what to do in the event of an imminent flood.

### *Other Environmental Concerns*

77% of respondents described themselves as very concerned or somewhat concerned about pollution in the bay and several residents mentioned concerns that flooding was increasing bay pollution or that street pollution made flooding a bigger concern. 59 residents marked that garbage and waste in the streets was an environmental issue they were concerned about and 49 marked air pollution. Other

environmental concerns listed by residents included not having a neighborhood recycling program, new construction taking up open space, excessive neighborhood crowding, not having a composting program, and a general lack of public or open spaces, especially for outdoor activities.

### *Next Steps*

The ERICD is working with community members, regional industry partners, and local government to identify areas for potential improvements in stormwater management and identify appropriate funding sources for these projects.

# Appendix I. Survey Questionnaire (English)

Is there flooding on the North End of Newport where you live? We want to know because....  
We want your opinion on making the North End Green and healthy for all residents

**1. Tell us about yourself:**

So that we know how to reach you, please provide the following information... (this is only for internal purposes - we will not share your information). Optional.

Name \_\_\_\_\_ Neighborhood \_\_\_\_\_

Email Address \_\_\_\_\_ Phone Number \_\_\_\_\_

Do you own your home or rent? \_\_\_\_\_

Your age group:

18-30 \_\_\_\_\_ 31-45 \_\_\_\_\_ 46-60 \_\_\_\_\_ Over 60 \_\_\_\_\_

**2. Are there floods in your neighborhood after it rains?**

Yes \_\_\_\_\_ No \_\_\_\_\_

**3. How often does this happen?**

every time it rains \_\_\_\_\_ only once a year \_\_\_\_\_

several times a year \_\_\_\_\_ once every 2-5 years \_\_\_\_\_

I don't know/other \_\_\_\_\_

**4. If yes, where?:**

Severe yard flooding \_\_\_\_\_ Severe street flooding \_\_\_\_\_

I don't know/other \_\_\_\_\_

**5. Do you know where the flooding comes from? (tick all that apply)**

off your roof \_\_\_\_\_ neighbor's property \_\_\_\_\_

general flooding in the area \_\_\_\_\_

drain running through your property \_\_\_\_\_

off the road \_\_\_\_\_

blocked or no drains \_\_\_\_\_ new construction \_\_\_\_\_

I don't know/other \_\_\_\_\_

**6. Where does it flood? (tick all that apply)**

comes inside the house \_\_\_\_\_ under the house \_\_\_\_\_

inside the garage or other building \_\_\_\_\_

under garage or other building \_\_\_\_\_ driveway under water \_\_\_\_\_

backyard \_\_\_\_\_ front yard \_\_\_\_\_

street \_\_\_\_\_ I don't know/other \_\_\_\_\_

**7. Did your neighbors or others in your area experience flooding?**

Yes \_\_\_\_\_ No \_\_\_\_\_ Where do they live? \_\_\_\_\_

**8. If you have children, do they walk in floods on the way to school after it rains?**

Yes \_\_\_\_\_ No \_\_\_\_\_

**9. If there was a flood tomorrow would you feel prepared to handle it?**

Yes, I know what to do \_\_\_\_\_

No, I don't know what to do \_\_\_\_\_

I have a plan but I would not feel prepared \_\_\_\_\_

**10. How concerned are you about pollution in the bay?**

Very concerned \_\_\_\_\_

Somewhat concerned It doesn't bother me \_\_\_\_\_

Unsure \_\_\_\_\_

**11. What does environmental justice mean to you?**

**12. What environmental issues are of concern in your North End Neighborhood?**

Air pollution \_\_\_\_\_ Lack of open space \_\_\_\_\_

Garbage and waste in the streets \_\_\_\_\_ Too many cars \_\_\_\_\_

Other \_\_\_\_\_

**13. Would you be interested in getting involved with a project to make our community more environmentally green and healthy?**

Yes \_\_\_\_\_ no \_\_\_\_\_

If yes, name and Phone number \_\_\_\_\_

Thank you for your time and feedback.