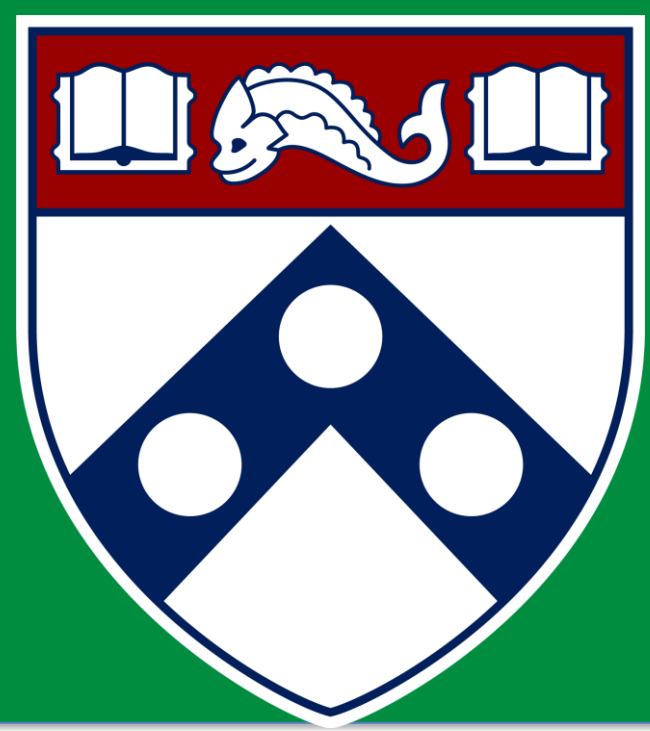


# Effectiveness of PFAS Communication in Willingboro New Jersey



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## Abstract

PFOS is one type of a larger group of synthetic chemicals called PFAS (EPA, 2017). PFAS are known as ‘forever’ chemicals because their hydrophobic and lipophobic nature makes them hard to break down in the environment (Buttle, et al, 2023). They are also bad for human health, causing reproductive, developmental, and immune effects (EPA, 2023). PFAS are used in numerous industries and can enter the water system through runoff or waste (New Jersey Department of Public Health, 2024). When Willingboro Municipal Utilities Authority (WMUA) found PFOS in one of their wells in November 2021, they mailed series of letters and public notices to community members over the course of the next few years (Willingboro Municipal Utilities Authority, 2024). To determine the effectiveness of this communication, interviews on both Willingboro community members and WMUA employees were conducted. The interviews demonstrated the division of knowledge between the New Jersey Department of Environmental Protection (NJDEP), WMUA, and Willingboro community members. However, these results are not generalizable because my sample size was only two.

## Background

- Every state in the United States has PFAS in their water system (Smalling, et al, 2023).
- The EPA is expected to implement a national maximum level of PFAS allowed in the water system in July 2024, some states, including New Jersey, already have PFAS regulations (NJDEP, 2023).
- Willingboro, which is a town of around 33,000 people, was the first town in New Jersey to find PFAS in their water system (US Census Bureau, 2022; Kummer, 2023).
- The majority of Willingboro’s residents are Black, making up 66.4% of its population, as compared to 15.4% of NJ residents (US Census Bureau, 2022).

## Methods

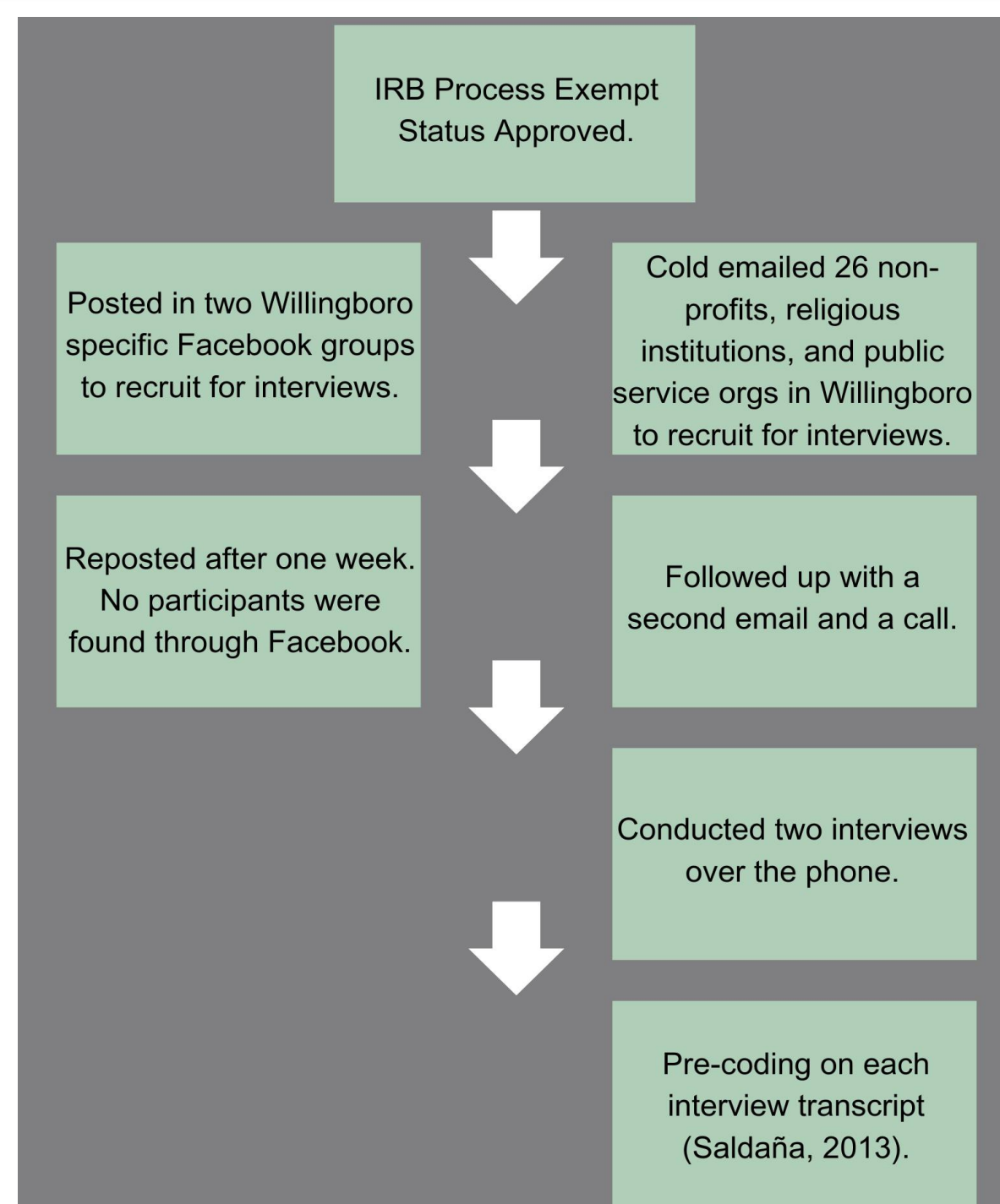


Figure 1 – This is a flowchart demonstrating the methods for the data collection and analysis of this study.

## Figures and Results

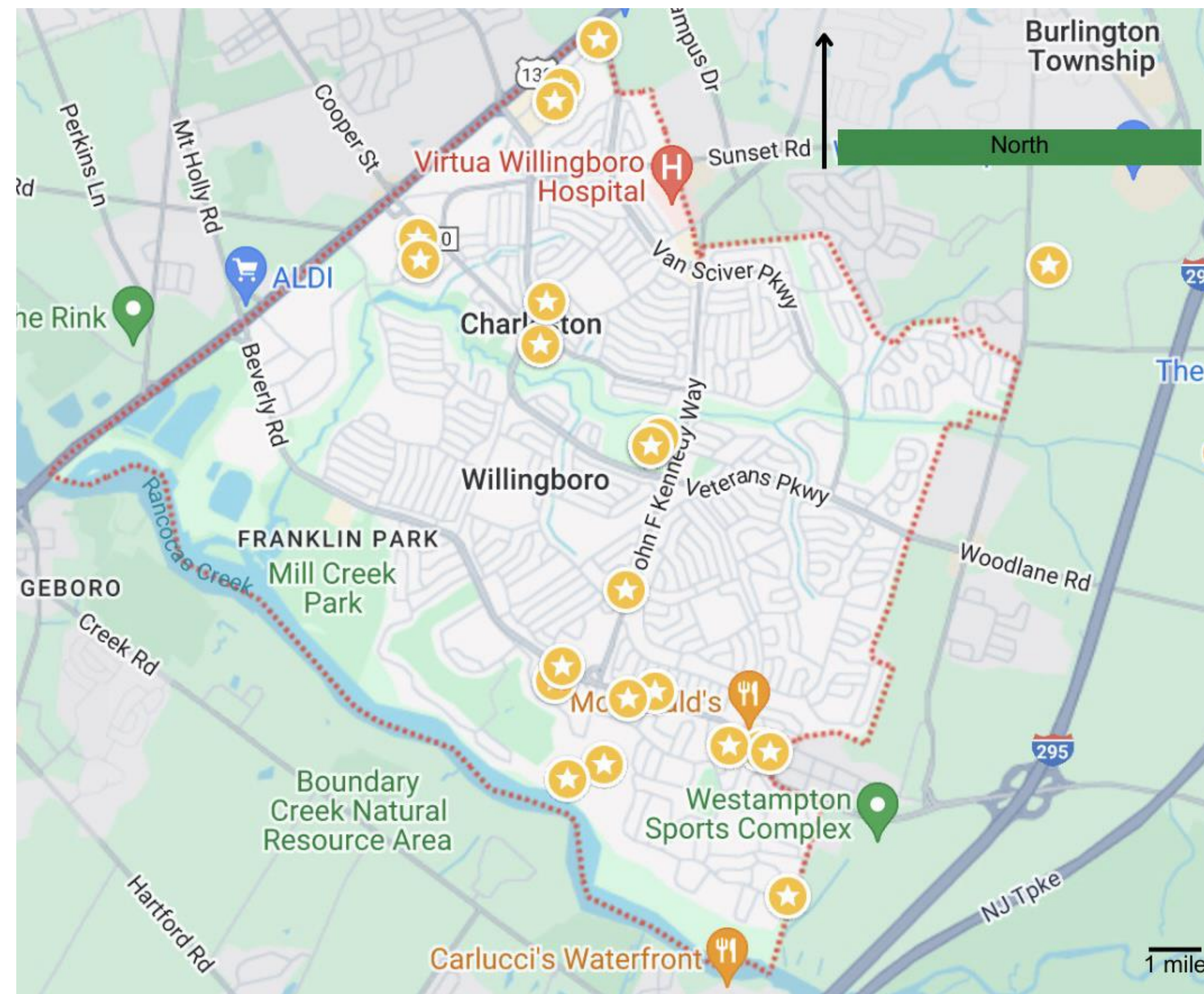


Figure 2 – Map of Willingboro, New Jersey. Every starred place is somewhere that was emailed to recruit for interviews. Not every place that was emailed was included on this map because they do not appear on Google Maps.

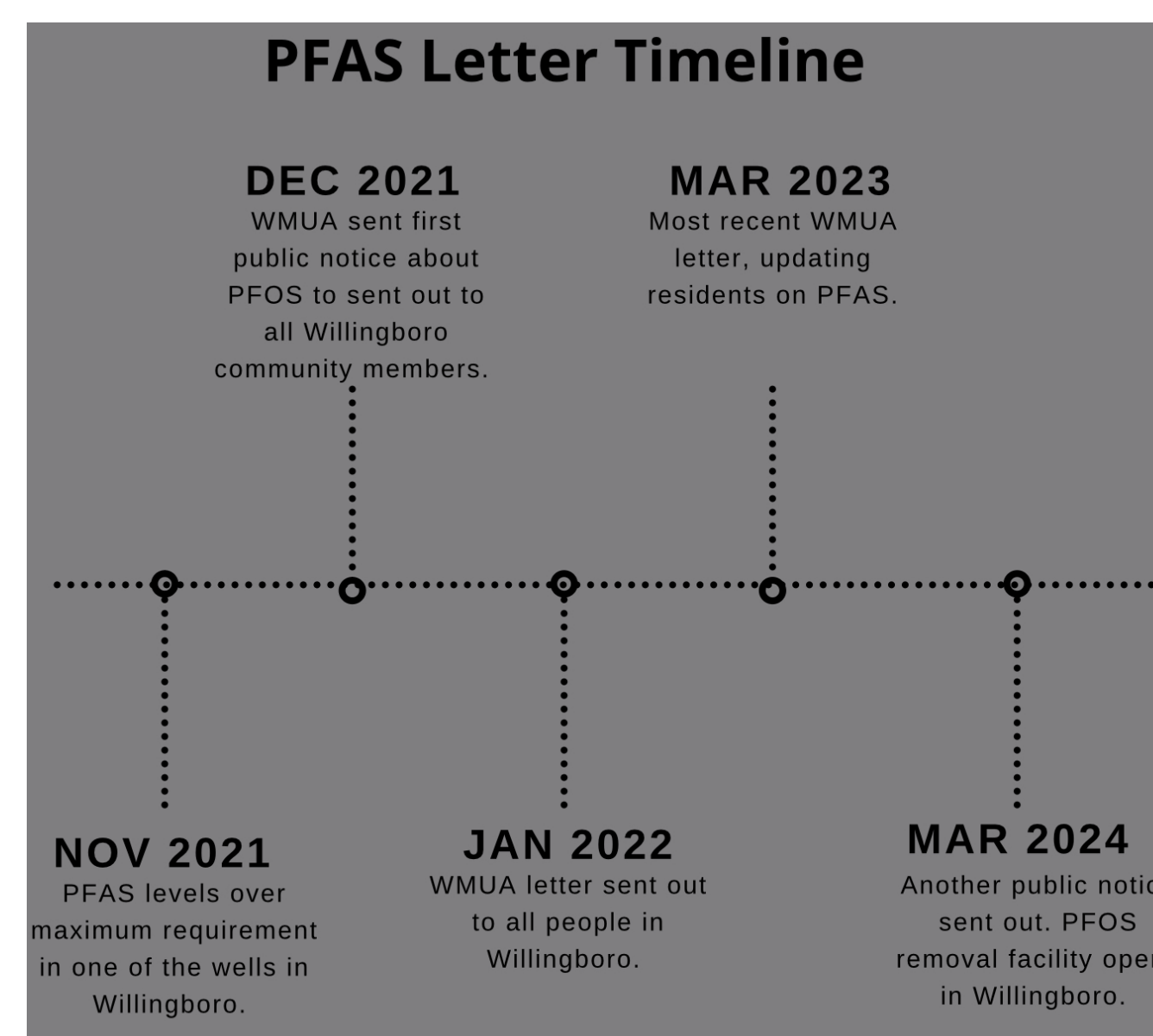


Figure 3 – Timeline of mailers sent out to Willingboro community members.

Demographic Information	Interviewee 1	Interviewee 2
Affiliation	Willingboro Community Member	WMUA worker / board member
Gender they identified with	Male	Male
Race	Asian	White

Figure 4 – This figure shows the demographic information collected about the two participants. Zip code is not included in this table because that information was only received from participant 1.

## Figures and Results Cont.

PFOS Communication Information	Interviewee 1
Received all three mailers?	Yes
Communicated with others after receiving the mailers?	Yes
Took some form of action after receiving the mailers?	Yes – switched to using bottled water.
Different forms of action as there was new communication from WMUA?	Yes – influenced his Mosque to switch to using bottled water.
Trust in WMUA (with 1 being the least trust and 10 being the most trust)?	7
Understanding of current PFOS situation in Willingboro?	N/A – does not keep up with PFOS news because of his switch to bottled water.
Suggested changes for communication?	Yes – suggested virtual communication for the future.

Figure 5 – This table contains the information provided by interviewee one about their experience with PFOS communication in Willingboro.

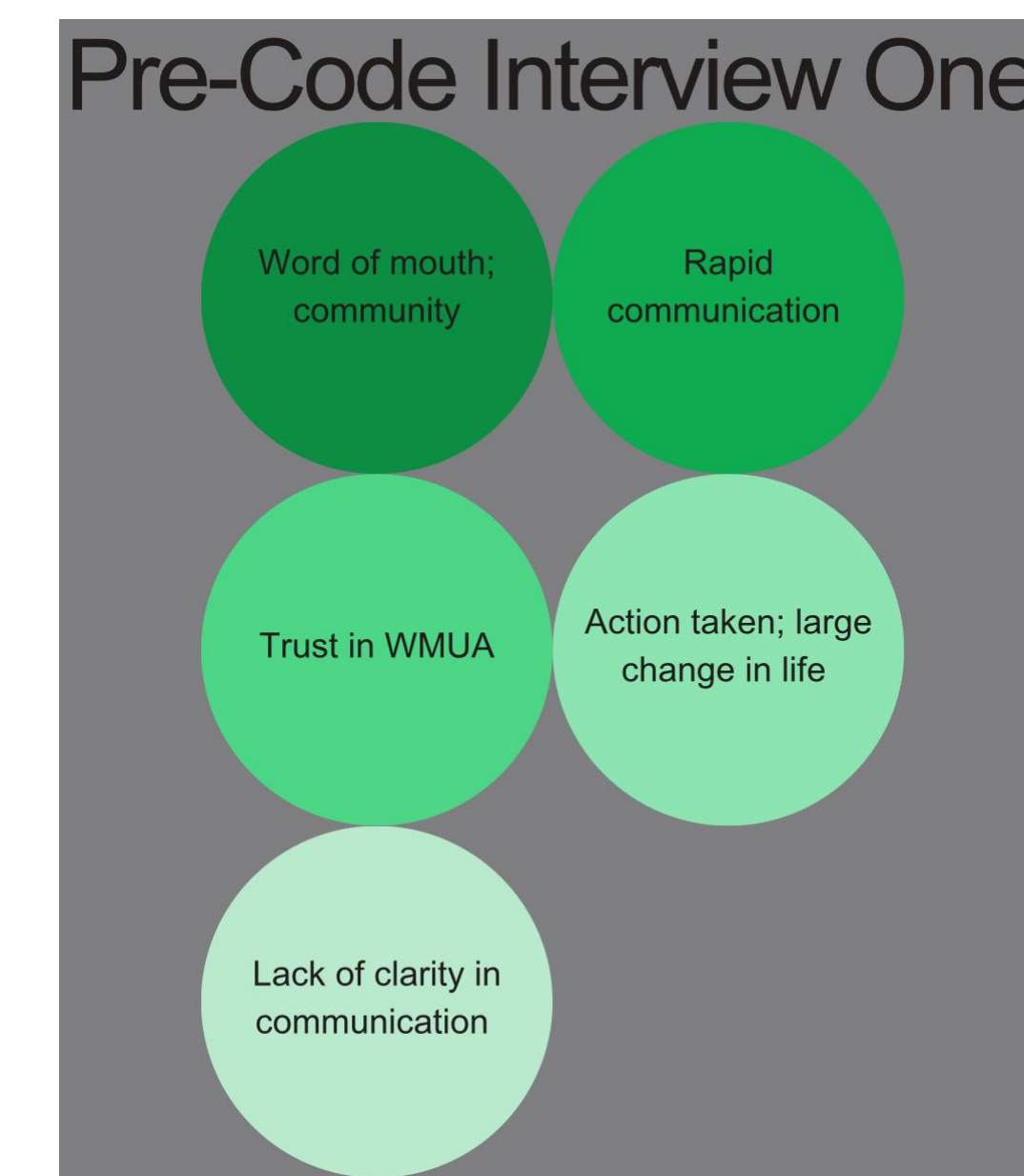


Figure 6 – Each circle represents a theme found through pre-coding the first transcript.

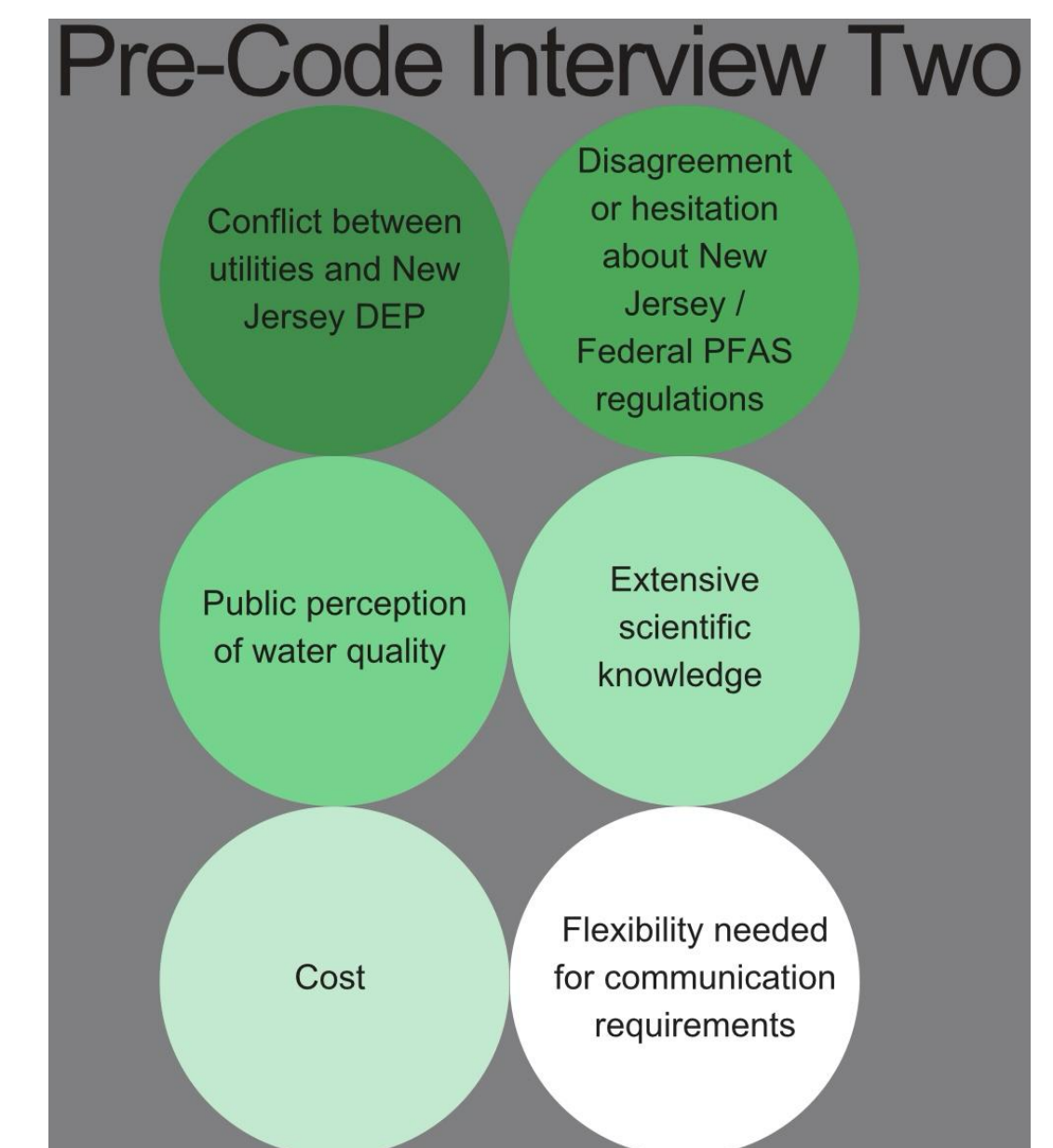


Figure 7 – Each circle represents a theme found through pre-coding the second transcript.

## Discussion

The themes above can not be extrapolated to the larger Willingboro population because of the lack of data. Instead, an alternate study was proposed, detailed below.

1. Acquire funding for transportation through the University
2. Establish community rapport
3. Develop two surveys: one for community members, one for WMUA employees
4. Send survey out, establish a word of mouth system for distributing the survey, table at community events promoting the survey
5. Run a focus group to discuss results of the survey

## References

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