
Grassroots Engagement Program: Data Collection Resources and Recommendations

Introduction

As part of its Project Accelerator initiative, WaterNow supported CHN Housing Partners (CHN) and the Northeast Ohio Regional Sewer District (NEORSRD) with implementing the Water Champions program, a two-year pilot program that utilizes grassroots outreach to serve at-risk communities, administered by CHN, NEORSRD, and the Cleveland Water. The Water Champions program aims to both increase the number of residents who take advantage of water and sewer affordability programs and to help the utilities better understand the needs and concerns of the neighborhoods within their service areas.

In one phase of the project, WaterNow conducted informational interviews with three local organizations with expertise in grassroots community engagement. In addition, WaterNow surveyed 14 national programs similar to the Water Champions program, which serve at-risk communities facing equity challenges through grassroots outreach, and conducted more in-depth informational interviews with three of these programs. During these discussions, these programs shared their experiences and recommendations around data collection processes and reporting metrics. This memo provides a summary of possible data collection options and recommendations, based on these conversations, on discussions that captured lessons and best practices currently underway at CHN, and on outside research.

Background Information

Lessons on Data Practices from other Grassroots Programs

Commonly-cited best practices for data and reporting metrics serving at-risk communities facing equity challenges included:

- Programs tracked sign-ups for specific affordability programs, which included metrics ranging from residents' addresses, the quantity of incentives distributed (e.g., emergency kits), and the number of people engaged at community events. For a program that taught residents conservation strategies, it was important to survey and track whether strategies were being implemented by collecting relevant data before and after the residents participated in the program.
- Many groups also used surveys and focus groups to ascertain how well the programs met the needs of community members and to identify areas where more support was needed. However, it was often challenging to incentivize participation in these meetings.
- Several organizations noted that documentation of the program for funders and other stakeholders can go beyond traditional narration to include stories, podcasts, and videos. These forms of documentation can help capture participants' experiences and may resonate more with community members to help drive continued engagement in the program.
- A key goal for many programs in designing forms or surveys is to structure information so it can easily be transformed into drop-down format and analyzed in Salesforce or other databases. There is often a combination of structured and open-ended answers to questions. It's important to learn how to balance structured data while also ensuring that the potential answers are open to unanticipated responses and able to fully capture participants' experiences and insights.

- One approach cited as helpful included collecting information from clients prior to one-on-one meetings. This enabled deeper focus and listening on the part of staff during meetings. This organization is usually successful in getting some information – though not all of it – from clients prior to one-on-one meetings. Depending on the program, documentation may be required to verify identity, eligibility, etc., and if needed, time can be taken during meetings to fill in any gaps. Flagging and tracking follow-up with different community members in the organization's database is key to this approach.
- Another learning focused on the value of explaining the need for collecting various data to participants at the beginning of any data collection processes. It's important to understand the incentives that motivate people to share their data, since doing so can be time-intensive and require participants to share personal information.
- It can be important to consider whether any Community Ambassadors working in the field will likely use surveys or forms provided digitally in advance of meetings and/or hardcopy versions shared in-person.
- The types of information requested through forms may also vary depending on the meeting size – e.g., the information collected in a group meeting setting might be much less detailed and extensive than data collected during one-on-one meetings. A key decision point in community listening efforts can center around determining how much information to collect from people in a group setting and how much information to gather from individual conversations.
- Information such as names (thought it's important to be wary of duplicates), birthdays, utility account numbers, SSNs, email addresses (which tend to work better than phone numbers), physical addresses, and parcel IDs were among the most effective data fields suggested to attribute accounts to an individual participants (and, in some cases, a combination of these fields may work best).

Data Collection Goals

While data collection goals can vary, examples of some key goals identified by organizations follow below.

Key Data Collection Goals Include:

- Understand residents' experiences with, attitudes toward, and awareness of water management issues and affordability programs:
 - What do people think is going on as their water and/or sewer bills go up?
 - What is their sense of what their options are?
 - How are they feeling about their ability to pay water and sewer bills and what does that mean to them?
- Understand residents' priorities for water management issues and affordability programs, particularly as it relates to other priorities for both individuals and the community as a whole.
- Identify residents who do not pay their water/utility bills directly and gather content to help inform outreach strategies that can engage them.
- Identify communication and outreach strategies that best reach customers.
- Collect data that enables the organization to follow up with customers to share additional resources and to connect them with affordability programs.
- Identify anything that might be helpful to communicate to participants or to the wider community. For instance, one report notes that: "releasing data to the community regarding

participation numbers can also convince struggling households that they are not alone—there are programs available that can help them pay their water bill.”¹

- Determine eligibility for existing assistance programs.
- Avoid burdening Community Ambassadors with onerous data collection and data entry, while still gathering information that supports program administration and follow-up and paves the way for future funding requests and reporting.

It is also important to think through check-in points in the process of collecting and analyzing data – for instance:

- When should it be reviewed and by who?
- Who is responsible for verifying what?
- To whom is it most important for the data to be clean - and what does “clean data” mean to them?

One interviewee suggested that it’s helpful if the person who will be using the data is the one cleaning it, since they are often most invested in how it is structured and handled.

Additionally, developing approaches that work for both group and individual forms and conversations will be important. For example, one organization plans on conducting larger group meetings, and then conducting any needed follow-up with meeting participants in a one-on-one fashion. Conducting this kind of follow-up is crucial, as it allows community liaisons to go deep into conversations and really spend time talking with community members to understand individual and community needs. As a result, in this context, it often works best to keep initial data entry as streamlined as possible and focus on collecting and capturing inputs from these more in-depth conversations. A physical form may be the easiest to use for initial data gathering, since participants can fill these out on-site. After the conversations take place, capturing information in Salesforce or other databases can help link it to any existing data and make it easy to capture trends over time.

¹ Clements, J., et al. (2017). Customer Assistance Programs for Multi-Family Residential and Other Hard-to-Reach Customers. Water Research Foundation. Pg. 26.

Data Collection Recommendations

This section describes: (1) data that could be collected through forms, in support of individual meetings and group meetings; (2) possible ways of recording the take-aways from in-person conversations in Salesforce or other databases; and (3) a list of supplementary data sources that may provide helpful context in determining what information is publicly available for city neighborhoods.

Data Collection: Individual and Group Forms

The table below describes potential data that could be collected through written or online forms, reflecting examples from other grassroots programs, and descriptions of potential indicators in reports and gray literature focused on community engagement and utility affordability. We included some metrics in this list that we do not necessarily recommend be directly collected through these forms to flag metrics that could be measured in other ways or at future stages of the program (e.g., through conversations and more open-ended questions; through analysis at the neighborhood scale, using other data sources (Census data, utility data, etc.)).

Data field	Description	Recommendation	Reasoning and Notes
Personal identifier	<p>A combination of one or several of the fields below:</p> <ul style="list-style-type: none"> • Names (do not use as only identifier due to risk of duplicates) • Birthday • Utility account number • SSN • Email address • Phone number • Physical address • Parcel IDs 	<p>Collect a minimum of:</p> <ul style="list-style-type: none"> • Name • Email address • Phone number • Physical address <p>for both individual and groups forms</p>	<p>Collecting this information makes it possible to add any information gathered by the Community Ambassadors into Salesforce or other databases, where the identifier can match it to any pre-existing or future information the organization has gathered.</p> <p>Collecting a resident's name, email address, and phone number will support Ambassadors' efforts to follow up with residents. The physical address will support efforts to track participation and needs across different neighborhoods.</p> <p>The other fields would also be helpful but may be more burdensome or sensitive for residents to share. An organization could follow-up with them for this data on an as-needed basis.</p>
Preferred conversation methods	<p>Preferred contact methods:</p> <ul style="list-style-type: none"> • Phone call • Virtual meeting (e.g., Zoom, Google Hangouts) 	<p>Do not collect; but revisit this decision once it is safe to meet in person</p>	<p>Any in-person meetings are contingent on it being safe to gather in person (given COVID restrictions).</p>

Data field	Description	Recommendation	Reasoning and Notes
	<ul style="list-style-type: none"> ● In-person meeting ● In-person meeting at a local community center/library/etc. ● In-person meeting at the residents' home (e.g., for those with mobility issues) 		
Household size (HH size)	Number of people living in the respondent's household	Collect HH size for individual form	Helps contextualize likely water use and bills. Living alone can contribute to vulnerability (particularly for residents over 65). ²
Household type (HH type)	<p>Whether respondents:</p> <ul style="list-style-type: none"> ● Own ● Rent <p>Some reports³ also suggest tracking more granular rent/ownership categories:</p> <ul style="list-style-type: none"> ● Market-rate housing, including housing units that are affordable to lower-income groups but are not subsidized ● Public housing administered and owned by a local housing authority ● Privately owned rental housing in which households receive 	<p>Collect whether respondents:</p> <ul style="list-style-type: none"> ● Own ● Rent <p>for individual form</p>	<p>This information helps determine the resident's eligibility for current assistance programs and could help inform how future assistance efforts include all residents.</p> <p>Limiting the data to just the own and rent categories will reduce the overall time needed to collect data.</p> <p>More granular data could be collected as needed, as well as through more qualitative questions (e.g., asking residents directly about how their bill is paid, rather than asking them to select which of the more detailed housing descriptions applies to them).</p>

² Cleveland Neighborhood Progress. (2015). Cleveland Climate Resilience and Urban Opportunity Plan. http://www.clevelandnp.org/wp-content/uploads/2015/11/Final-Implementation-Plan_CNP.pdf.

³ Clements, J., et al. (2017). Customer Assistance Programs for Multi-Family Residential and Other Hard-to-Reach Customers (pg. 41). Water Research Foundation.

Data field	Description	Recommendation	Reasoning and Notes
	<p>government-issued rental assistance</p> <ul style="list-style-type: none"> ● Project-based subsidized housing owned by a private landlord or corporation that receives government subsidies to provide affordable housing (i.e., the government-issued subsidy stays with the housing development, not a particular tenant) ● Single family homes - paying bills directly ● Single family homes - paying bills through homeowners' association or similar home maintenance fee 		
Time in property	<p>How long have you lived in your current property?</p> <ul style="list-style-type: none"> ● 0-6 months ● 6 months – 1 year ● 2 years ● 3 years ● 4 years ● 5-10 years ● 10-15 years ● More than 15 years 	Collect in individual form	<p>Average housing tenure can be a measure of neighborhood stability. This data may also be available on the neighborhood scale from Census data.</p> <p>May be helpful context for understanding if/how renters are accessing accessibility programs.</p>
Primary language	<p>Respondent is most comfortable speaking in:</p> <ul style="list-style-type: none"> ● English ● Spanish 	Collect in individual form	Will help guide Community Ambassadors' outreach and could inform creation of any later outreach to spread the word about affordability programs.

Data field	Description	Recommendation	Reasoning and Notes
	<ul style="list-style-type: none"> ● Arabic ● Chinese [Mandarin, Cantonese] ● Russian [including Slavic and Serbo-Croatian rooted languages] ● Indic [Hindi, Urdu, Indo-European] ● French [combined with variety of African dialogues] ● Nepalese ● Other 		<p>This list reflects one location’s most commonly-spoken languages (as reported in the US Census American Community Survey results) and could be updated to reflect the most prevalent languages in other locations.</p>
<p>Individual Income / Total Household Income</p>	<p>What is your individual/total household income?</p> <ul style="list-style-type: none"> ● Less than \$10,000 ● \$10,000 to \$19,999 ● \$20,000 to \$29,999 ● \$30,000 to \$39,999 ● \$40,000 to \$49,999 ● \$50,000 to \$59,999 ● \$60,000 to \$69,999 ● \$70,000 to \$79,999 ● \$80,000 to \$89,999 ● \$90,000 to \$99,999 ● \$100,000 to \$149,999 ● \$150,000 or more 	<p>Do not collect (unless part of assistance application process)</p>	<p>This information could be helpful in understanding applicants’ overall financial situation, but could be somewhat sensitive and is also available, at a larger/more anonymized scale, through publicly available data. This information could be collected as needed (e.g., as part of any application processes or eligibility determinations) rather than through the main forms.</p>
<p>Income spent on rent</p>	<p>Approximately what percentage of your total household monthly income would you say you spend</p>	<p>Do not collect (unless part of assistance application process)</p>	<p>This information could be helpful in understanding applicants’ overall financial situation, but could be somewhat sensitive and is also available, at a larger/more anonymized scale, through publicly available data.</p>

Data field	Description	Recommendation	Reasoning and Notes
	on your rent or mortgage payment? <ul style="list-style-type: none"> ● 10 % or less ● 11-20% ● 21-30% ● 31-40% ● 41-50% ● More than 50% ● Mortgage payments exceed monthly income ● Not sure 		
Income spent on utility bills	Approximately what percentage of your total household monthly income would you say you spend on your water and sewer utility bills? <ul style="list-style-type: none"> ● 10 % or less ● 11-20% ● 21-30% ● 31-40% ● 41-50% ● More than 50% ● Water bill exceeds monthly income ● Not sure 	Collect for individual form and/or in one-on-one conversations with Community Ambassadors	It may be difficult for respondents to calculate or estimate this on the spot, but it also might be helpful for the Community Ambassadors to have this information to prepare for their conversations with residents. It may be also possible to calculate and estimate this later on in the project (e.g., using median neighborhood household income from the Census; calculating a weighted average for water and sewer bills based on the number of single- and multi-family homes in the community and their respective average household consumption levels). ^{4 5}

⁴ For an examples and suggestions on how to determine the share of utility bills as a share of household income, see: American Water Works Association. (2013). Affordability Assessment Tool for Federal Water Mandates. Chapter Five: Guidance for Developing Alternative Measures of Household Affordability. <https://www.awwa.org/Portals/0/AWWA/ETS/Resources/AffordabilityAssessmentTool.pdf>.

⁵ Another helpful resource is the University of North Carolina Environmental Finance Center’s Affordability Assessment Tool, available at: <https://public.tableau.com/app/profile/efcatunc/viz/AffordabilityAssessmentTool/Input>.

Data field	Description	Recommendation	Reasoning and Notes
Participation in utility affordability programs	Are you currently participating in any affordability programs? If so, what programs?	Collect for individual form	Will be helpful in guiding follow-up conversation; including connecting residents with other resources and in linking data entry with previously entered information in Salesforce or other databases.
Permission to look at utility data	Would you like to give this organization permission to anonymously view your utility bill data?	Collect for individual form	Would make it possible to track water use and bills over time; may want to reserve this question only for applicants that are also receiving some kind of benefit (e.g., assistance applying for an assistance program). Would likely need to contact the water and sewer districts to see exactly what kind of permission is needed from customers to access this.
Community attendance at community events	Number of residents attending or participating in community events	Collect for group form (e.g., based off of group sign-up sheet)	Helpful to establish a baseline for tracking engagement over time.
Staff attendance at community events	Names of Community Ambassadors, organization staff, and other partner community liaisons attending or participating in community events	Collect for group form (e.g., based off of group sign-up sheet)	Could be helpful in guiding any follow-up with participants.
Demographic information: gender	What gender do you identify as? <ul style="list-style-type: none"> ● Male ● Female ● Non-binary ● Prefer not to say 	Collect for individual form	Helpful to collect to track outreach and flag any need to reach out to a specific demographic.
Demographic information: age	What is your age: <ul style="list-style-type: none"> ● 12-17 years old ● 18-24 years old ● 25-34 years old 	Collect for individual form	Could be helpful to collect this to track outreach and flag any need to reach out to better engage a specific demographic. Residents over 65 years old can have a heightened risk for social vulnerability. ⁶

⁶ Cleveland Neighborhood Progress. (2015). Cleveland Climate Resilience and Urban Opportunity Plan. http://www.clevelandnp.org/wp-content/uploads/2015/11/Final-Implementation-Plan_CNP.pdf.

Data field	Description	Recommendation	Reasoning and Notes
	<ul style="list-style-type: none"> ● 35-44 years old ● 45-54 years old ● 55-64 years old ● 65-74 years old ● 75 years or older ● Prefer not to say 		
Demographic information: race and ethnicity data	Collect according to US Census and HUD guidelines	Collect for individual form	Could be helpful to collect this to track outreach and flag any need to reach out to better engage a specific demographic. Non-white residents can have a heightened risk for social vulnerability. ⁷
Demographic information: education	What is the highest degree or level of education you have completed? <ul style="list-style-type: none"> ● Some High School ● High School ● Bachelor's Degree ● Master's Degree ● Ph.D. or higher ● Trade School ● Prefer not to say 	Do not collect	The lack of a high school diploma can be a factor in social vulnerability. ⁸ While this information could be helpful, it's possible to examine the neighborhood-level data for this question from Census information; it may make sense to exclude this from the form, in order to keep it short.
Change in water and/or sewer bills	Compare bills before and after participation in affordability and/or outreach programs	Potentially calculate as performance metric	This would ideally be calculated through access to participants' utility bills or could also be gauged through survey responses.
Conservation impact of energy and water programs	Compare energy and/or water use before and after Community Ambassadors program or other programs begins working with participants	Potentially calculate as performance metric	This would ideally be calculated through access to participants' utility bills. Any calculations should account for the suppressed demand, e.g., when a home is weatherized

⁷ Ibid.

⁸ Ibid.

Data field	Description	Recommendation	Reasoning and Notes
			so heat that was not used before is turned on. ⁹ This metric may currently be more applicable to energy use – since none of the water programs in this program explicitly target water conservation – but could track the impact of future programs and/or the impact of education and outreach initiatives.

Data Collection: Recording Information from In-Person Conversations

The questions below represent suggested ways information from Community Ambassadors’ conversations with residents could be captured by questionnaires, completed either by the Ambassadors after the conversations occur and/or by participants themselves (e.g., in an online survey). The questions are not necessarily designed to provide a script to the Ambassadors (e.g., all of these questions might not be covered in a one-on-one conversation), but to represent options for recording the information that rises to the top of Ambassadors’ conversations with residents in a consistent way.

- What is the current process of how you pay your water bills?
 - I pay these myself
 - Someone else in my household pays the bills
 - These are folded into the cost of my rent; my landlord pays them
 - I pay someone (a third party other than my landlord)
 - I’m not sure
 - Other

- What is the current process of how you pay your sewer bills?
 - I pay these myself
 - Someone else in my household pays the bills
 - These are folded into the cost of my rent; my landlord pays them

⁹ Examples of different methodological approaches to calculating energy and water savings in situations with suppressed demand can be found in: United Nations Framework Convention on Climate Change. (2013). Clean Development Mechanism: CDM Methodology Booklet (pg. 25). <https://cdm.unfccc.int/methodologies/documentation/methbooklet.pdf>.

- I pay someone (a third-party) who is not my direct wastewater provider
 - I'm not sure
 - Other

- What has your process of paying your water and sewer bills been like (e.g., what is it like to navigate the payment system, to sign up for services, to get in touch with the water and sewer districts with questions)?
 - Very positive
 - Mostly positive
 - Neutral
 - Mostly negative
 - Very negative
 - What's made it this way?
 - [Comment field]

- Do you think the cost of your water and sewer bills are reasonable?
 - Yes
 - No
 - Unsure
 - Comments: [comment field]

- How do you think the water and sewer services are working where you live? What's your sense of what these bills are paying for?
 - Unsure
 - Regular upkeep
 - Repairing/updating infrastructure
 - Other [comment field]

- Are there any major issues you've run into around your water and sewer services?
 - Leaks
 - Need to repair toilets, washing machines, or other appliances
 - Concerns about water quality
 - Flooding
 - Other [comment field]

- Have you noticed any changes in your water and/or sewer bills over time?
 - Have not been looking closely at them
 - Don't have access to them
 - Have not noticed any changes over time
 - Yes, I've noticed they've increased
 - Yes, I've noticed they've decreased
 - No, they've stayed mostly the same
 - Notes [comment field]

- What do you and other members of your household do to save water?
 - Check and fix leaking taps
 - Collect rainwater to use in gardens or outdoor spaces
 - Only run dishwasher if it is full
 - Have shorter showers (4 minutes or less)
 - Use half flush or don't flush the toilet every time
 - Wash cars with minimal water (e.g., with a bucket or at an efficient car wash)
 - Turn off taps when brushing teeth
 - Only run the washing machine if it is full
 - Use minimal water in the kitchen (e.g., for cooking, rinsing food, washing up)
 - Collect and use gray water on the garden (e.g., from washing machine, shower/bath, sink)
 - Be water-wise in the garden (e.g., only water at night, less watering, drought-tolerant plants)
 - Use low-flow showerheads and/or taps
 - Use water efficient appliances (e.g., dishwasher, washing machine)
 - Other (notes)

- Are you currently participating in any of the following affordability programs?
 - Cleveland Water Tenant Deposit Agreement (transfers water service from landlord to tenant)
 - Sewer District Crisis Assistance (one-time assistance with sewer bill)
 - Sewer District and Cleveland Water Plumbing Repair Assistance to Low-Income Residents
 - HEAP & PIPP (electric & gas) affordable monthly payment plan
 - Notes [Comment field]

- If not:

- Before speaking with me, had you heard of any of these programs?
 - Yes
 - No
 - Comment: [comment field]
- Was there any reason you decided not to apply? (select all that apply)
 - I learned I'm not eligible for them
 - I didn't have the time to complete the application
 - I wasn't sure where to find all of the information needed to fill out the application
 - The application process was confusing or difficult to navigate
 - Other [comment field]
 - If you were not eligible for this program, do you remember the reason why? (select all that apply)
 - My income is too high
 - I am a renter
 - I do not pay the water and sewer bills directly
 - Unsure/I don't remember
 - Other [comment field]
- If so:
 - How did you learn about this? What lead you to sign up?
 - Word of mouth – current/past homeowner or staff
 - Word of mouth – general
 - Word of mouth - friend (heard about this from a friend, neighbor, family member, etc.)
 - Poster/flyer
 - Event
 - Internet search
 - Paid Advertising - Newspaper/magazine
 - Paid Advertising - Radio/TV
 - Paid Advertising – Other
 - Public Service Announcement – Radio
 - Public Service Announcement – Television
 - Real Estate Listing
 - Earned media – news article
 - Referred by lender
 - Referred by real estate agent

- Referred by another agency/non-profit
- Referred by CHN employee
- Homebuyer education
- Other [comment field]

- How was the process of signing up and applying for this affordability program?
 - Pretty easy
 - Somewhat easy
 - Somewhat difficult
 - Very difficult
 - Why was this easy or challenging?
 - [Comment field]

- How is your experience in the program going so far?
 - Very positive
 - Somewhat positive
 - Neutral
 - Somewhat negative
 - Very negative

- What's made your experience this way?
 - Notes [Comment field]

- If you could, what changes would you make to the program?
 - Notes [Comment field]

- Do you think these programs could be useful for others in your neighborhood?
 - Yes
 - No
 - Maybe
 - Unsure
 - Notes (why/why not?) [Comment field]

- How would you prefer to learn more about the water and sewer district (e.g., about affordability programs, about their activities)?
 - By mail
 - By email
 - By text
 - By phone
 - On flyers/posters
 - On social media – Facebook
 - On social media – Twitter
 - On social media – Instagram
 - Through radio advertisements
 - Through TV advertisements
 - Through the newspaper
 - At community gatherings and events
 - Other [notes]

Supplemental Data Sources

The data sources described below could help supplement and analyze information gathered by the Ambassadors. This table is included in case it is helpful to have a sense of the information available at the neighborhood scale to help guide decisions about what types of data are collected by the Ambassadors.

Data Source	Description
US Census American Community Survey (ACS) Data https://www.census.gov/programs-surveys/acs	Includes data such as: the number of renters, multi-family households, and income levels for renter versus owner-occupied households within a given community, along with community- and neighborhood-level affordability indicators, such as the number of elderly households, disabled households, households that receive government assistance, and poverty rates. The ACS does not provide information on public/subsidized housing. While it is not possible to use data from the ACS to determine “the exact number of hard-to-reach[H2R] households within a service areas, or to calculate how many of these households might be eligible for assistance...[it is possible to use it to] develop a general sense of the scope of the H2R

	<p>challenge, and gain a better understanding of some of the different characteristics of households that make up their H2R population.”¹⁰</p>
<p>U.S. Census Public Use Microdata Sample (PUMS) (https://www.census.gov/programs-surveys/acs/microdata.html)</p>	<p>PUMS data are the raw data upon which the ACS (along with the American Housing Survey) are based. PUMS data are available for Public Use Microdata Areas (PUMA): Census-defined geographic units consisting of at least 10,000 people (and based upon Census tract boundaries). The U.S. Census Bureau releases PUMS data annually, typically during the fall.</p> <p>The PUMS dataset includes metrics on whether a household pays for water directly, pays for water as part of their rent or home maintenance fee, or does not pay for water at all (presumably because they self-supply through a private well). PUMS data can be used to further analyze (and determine the number of) vulnerable populations (e.g., how many people rent their home, live in multi-family buildings, would qualify for an assistance program, and/or have other H2R characteristics, including how many are elderly, disabled, and/or non-native speakers, etc.).¹¹</p>
<p>University of North Carolina Environmental Finance Center’s Affordability Assessment Tool (https://public.tableau.com/app/profile/efcatunc/viz/AffordabilityAssessmentTool/Input)</p>	<p>This tool includes a series of dashboards that enable a user to enter Census data to explore the affordability of water and wastewater rates for customers, and to help assess the affordability of current and alternative rates for the average customer, low-income customer, and customers with different ranges of incomes.</p>
<p>HUDS Picture of Subsidized Housing (https://www.huduser.gov/portal/datasets/assthsg.html)</p>	<p>Includes a summary of subsidized households and public units by program type at the city and county scale. The Picture of Subsidized Housing allows users to select the information they would like and easily downloads this information in an Excel format.</p>

¹⁰ Clements, J., et al. (2017). Customer Assistance Programs for Multi-Family Residential and Other Hard-to-Reach Customers (pg. 45). Water Research Foundation.

¹¹ Clements, J., et al. (2017). Customer Assistance Programs for Multi-Family Residential and Other Hard-to-Reach Customers. Water Research Foundation.

Walk Score, Bike Score, and Transit Score data
[\(https://www.walkscore.com/\)](https://www.walkscore.com/)

Walkability, bikeability, and transit connectivity of city neighborhoods as a measure of access to jobs, amenities, and city services.