

# Partners in Home Preservation Program Report January, 2021

**Prepared By:**

Morgan Cooper

*UNC Gillings School of  
Global Public Health*

Ryan Lavalley, PhD, OTR/L

*UNC Partnerships in Aging Program  
Orange County Department on Aging*

Cherie Rosemond, PhD

*UNC Partnerships in Aging Program*



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## Executive Summary

### Purpose of Partners in Home Preservation

Partners for Home Preservation was designed to respond to the lack of coordination among service providers and funders in delivering home repair and energy efficiency services. This disjointed system creates funding inefficiencies and a difficult landscape for homeowners to navigate. Two coalitions, Chatham County Home Repair Collaborative (CCHRC) and Orange County Home Preservation Coalition (OCHPC) in North Carolina, developed and leveraged collaborative tools to the following ends:

Objective #1: Increase access to and comprehensiveness of home repair and energy-efficiency

Objective #2: Decrease the administrative burden of applying for service

Objective #3: Decrease organizational inefficiencies

Objective #4: Decrease weatherization and energy efficiency service deferrals

Objective #5: Improve quality of life for applicants

### The Intervention

The primary aim of the Partners for Home Preservation project was to develop customized, collaborative tools for inter-organizational home repair and energy efficiency *systems*. These tools include:

- streamlined intake
- centralized home assessment processes
- coordinated case management
- collaborative data sharing mechanisms
- unified data collection and evaluation processes

### Evaluation Methodologies

The purpose of this evaluation was to understand how collaborative tools were developed and utilized, and identify their benefits for both homeowners and partners in the home repair system. The evaluation team used mixed-methods approaches. Focus groups with partners and direct observation by the evaluators informed lessons on development and utilization. An analysis of administrative data from the shared database also provided insight on organizations' use of the tools. Finally, homeowners shared their experiences through a researcher conducted phone survey.

### What We Learned About Developing Tools to Facilitate and Support Collaboration

The development process was underpinned by an existing commitment to partnership among coalition members. This established culture of collaboration and trust fostered flexibility and a willingness to adapt. Partners in the coalitions had a range of diverse needs — and strengths — and customizing tools for these contexts encouraged coalition engagement. This was particularly true in developing the home assessor's and coalition coordinator's roles. A unique set of skills was integral to the role of the home assessor: expertise in construction, accessibility modifications, environmental safety, and energy-efficiency measures. Likewise, development and management of the shared database was facilitated by a coalition coordinator with strong skills in: communication and organization; assessing organizational readiness; adapting tasks to meet capacities; and systems thinking.

The development process was iterative, but prioritizing appropriateness rather than speed was rewarding: tools that were useful *were used* and supported collective infrastructure for success.

## **What We Learned About Utilizing Collaborative Tools**

### *Successes*

In Orange County, over 90% of homeowners utilized the unified screening tool and received a comprehensive home assessment, which provided coalition partners with the “right information” about both the home and homeowner. Partners used this extensive information to make appropriate referrals *within* the coalition and to services outside of home repair. In fact, nearly three-quarters of applicants to OCHPC received collaborative home repair services; 100% received collaborative case coordination. Information exchange, creative problem solving, and coordinated case management happened through the shared database and at regular coalition meetings.

In Chatham County, data limitations constrained the ability to quantify use of collaborative tools. Partners in CCHRC favored informal communication to structured communication over the database. Still frequent communication positioned the organizations to collaborate when necessary. Notably, the division of responsibility in repair provision is more straightforward in Chatham County than in Orange with fewer participating service providers. Moreover, limited municipal resources warranted focus on creatively leveraging funding rather than coordinated case management. Instead of expecting rigid and exact implementation of the collaborative tools, the project manager and grantor provided CCHRC with flexibility to prioritize its own shared goal and use the tools as partners see fit to that end.

### *Ongoing Challenges*

Obstacles to using collaborative tools were aligned with previously reported challenges including disparate funding, complicated eligibility requirements, and limited staff capacity. Staff capacity was particularly relevant to an emergent challenge of navigating dual work flows of the independent organization and the collective, as well as managing frequent updates to the database. Organizations that identified a database point person were best equipped to cope with this challenge, but having a coalition coordinator, as OCHPC did, facilitated smooth communication and information sharing.

## **What We Learned About the Benefits of Collaborative Tools**

### *For Service Providers*

By sharing intake and assessment responsibilities, coalition partners had access to the “right information,” which facilitated divisions of repairs across organizations and funding sources. Focusing their attention on repairs they are best equipped to address, organizations were able to stretch their budgets and increase service provision. Additionally, partners in both OCHPC and CCHRC spoke to the role of Partners in Home Preservation in leveraging external funds, and creating aggregate knowledge for equitable policy advocacy at the local level.

In these ways, the coalitions were successful at reaching anticipated objectives, and additional benefits emerged. With strong collaborative infrastructure, OCHPC welcomed a new repair organization to the table and helped it identify an appropriate work scope. Moreover, collaboration made use of organizational strengths, like the Orange County Department on Aging’s social service referrals, and unencumbered the Jackson Center, a community based organization, from the challenges of navigating repair referrals, allowing it to focus on its mission and purpose in housing justice advocacy.

### *For Homeowners*

Overall, homeowners in both Chatham and Orange Counties were highly satisfied with the collaborative repair process. The majority reported improvements in quality of life, safety, and ease of daily activities. While the application process can still be confusing in some instances, homeowners were connected

with the right organizations and were well served. Survey participants agreed that the coalitions reduced financial barriers to home repairs and completed projects in a timely manner. In fact, applicants waited an average of 1.5 months for a home assessment and those with at least one repair complete waited an average of 6 months for their first repair, representing early contact with service providers.

#### *For Energy Efficiency Services*

The overall benefits that all partners experienced applied to CPCA, the major energy efficiency and weatherization service provider. Participating in a strong collaborative system, CPCA was better able to identify homes that were eligible for these repairs and upgrades: for the first time in decades, CPCA reached its service goal. Nearly 30% of all homeowners surveyed — regardless of the repair service received — reported improvements in energy efficiency and ability to manage utility costs, as well. Still, this evaluation was unable to quantitatively assess improvements in energy efficiency. Obstacles to this analysis included: limited availability of household level utility data; inconsistencies in data provided by various utility providers; and small sample size.

### **Recommendations**

#### *For Continuation of OCHPC and CCHRC*

1. Support lynchpin roles of the Home Assessment and Coalition Coordination for ongoing communication, data collection, and cooperation.
2. Continue to utilize the newly developed collaborative tools, while maintaining flexibility to adapt as coalition needs evolve.
3. Strengthen the integration of energy efficiency services into the home repair and preservation system through continued education and referrals.
4. Expand capacity of the coalitions to influence funding and policies structure that advance equity, preserve community, and rectify disparities in home quality.

#### *For Others*

1. For future coalitions, building flexibility and adaptation into the collaborative processes in order to achieve unique shared goals is key.
2. For future funders, expecting grantees to customize both the development and utilization of collaborative tools, and to make adjustments along the way, is invaluable.

### **Conclusion**

Using a partnership model that focuses on abundance and building capacity — rather than managing scarcity and competition — benefited both home repair organizations and homeowners. The partners involved and SEEA, as a grantor, demonstrated flexibility and a willingness to adapt the process of achieving shared goals; maintaining this commitment, organizations operated beyond their own boundaries in service of the collective. By investing in coalition infrastructure and collaborative tools, the benefits of efficiency and comprehensiveness are positioned to outlast the initial investment in the Partners in Home Preservation program.

## List of Abbreviations

- CCHRC** | Chatham County Home Repair Collaborative
- COA** | Chatham County Council on Aging
- CPCA** | Central Piedmont Community Action, Inc.
- Habitat** | Habitat for Humanity of Orange County, NC
- Hope** | Hope Renovations
- Jackson Center** | Marian Cheek Jackson Center for Saving and Making History
- MAP** | Master Aging Plan
- NC Justice** | North Carolina Justice Center
- OCDOA** | Orange County Department on Aging
- OC Housing** | Orange County Housing & Community Development
- OCHPC** | Orange County Home Preservation Coalition
- PiAP** | UNC's Partnerships in Aging Program
- RTT** | Rebuilding Together of the Triangle
- TJCOG** | Triangle J Council of Governments
- UNC** | University of North Carolina

## I. Introduction

### The Importance of Addressing Housing Quality

Addressing housing quality is an important matter of both public health and financial stability. Healthy People 2020 identifies housing quality as a social determinant of health.<sup>1</sup> Substandard housing can increase hazardous exposures to mold, lead, carbon dioxide, and vector-borne diseases, among others.<sup>1,2</sup> Housing conditions and home age are also associated with health consequences such as obesity, asthma, lead poisoning, and decreased independence or safety.<sup>3</sup> The financial cost of poor-quality housing is also significant. Homes of low quality may have leaks or poor energy efficiency, disrupting the physical conditions of the home and increasing utility costs.<sup>1</sup> These repair and utility costs may compete with other expenditures which are necessary to maintain health, like food or health care.<sup>2</sup> The aggregate cost of substandard housing is high, too; in North Carolina alone, medical care for children in substandard housing exceeding \$105 million dollars in 2007.<sup>4</sup> Nationally, Haynes and Gerbode<sup>5</sup> estimate that in-home energy efficiency programs could divert \$228 million in health care costs by addressing trips and falls, asthma, and thermal stress.

These consequences do not affect all populations equally. People with low-income, older adults, and children are more vulnerable to the consequences of substandard housing.<sup>1</sup> Poor-quality housing is more common among people with low income and populations of color.<sup>6,7</sup> Housing quality is also disparate across rural-metropolitan area lines.<sup>8</sup> There are many individual, community-level, and policy related contributors to poor housing quality; likewise, barriers to providing accessible and affordable home repair and weatherization services relate to information access and navigation of services.

### The Problem to be Addressed

In North Carolina, and many other communities in the Southeast, energy efficiency, weatherization, and home repair and rehabilitation programs are delivered and administered separately by multiple agencies. Homeowners seeking repairs submit separate applications to individual services providers for review and approval by their respective programs. Depending on eligibility, applicants are either eligible and put on the service provider's waitlist, or ineligible and subsequently denied. The eligibility of the applicants would only be considered for the service provider they applied for, even though they may be eligible for other services or programs. This type of policy landscape is difficult to navigate.<sup>9</sup>

Further, allowable uses of funding may be limited and funding sources for weatherization and rehabilitation are disparate. Homeowners are often hesitant to take on loans to complete repairs, and funding regulations have also presented challenges to implementing collaboration based interventions across the US.<sup>9</sup> Separation of services and lack of coordination among these programs create significant inefficiencies, often leaving funds on the table because they are not properly leveraged and costing service provider organizations and applicants time, money, and energy. These inefficiencies hamper utilization of energy efficiency upgrades, leaving low-income North Carolinians without services for which they may be eligible that could improve the quality of their homes and lives.

These challenges are not unique to North Carolina. In fact, in 2002 the Ford Foundation and Energy Programs Consortium (EPC) developed the Weatherization, Rehab, and Asset Preservation (WRAP) program, which attempted to address service inefficiencies through local coordination of housing rehabilitation and weatherization programs; they tested it in 9 states.<sup>9</sup> Their overall finding was that coordination at the local level is difficult. Their evaluation determined "that the WRAP approach is

limited in its ability to address the needs of the many lower-income homeowners in the county,” but can succeed under the “right conditions.”<sup>9</sup> (p28;pii) With collaboration among home repair organizations already happening in Chatham and Orange Counties, the Partners in Home Preservation program extends the WRAP model to *create* conditions for success.

### Coalition Histories: Early Collaborations

#### Chatham County Home Repair Collaborative (CCHRC)

Chatham County Council on Aging (COA) has long recognized the need to repair substandard housing and provide accessibility modifications. COA was connected with Rebuilding Together of the Triangle (RTT) through a local older adult residential facility, and together, they began collaborating with Central Piedmont Community Action, Inc. (CPCA) and other community groups. Soon, the county provided financial support for COA to hire Stephanie Watkins-Cruz, an MPA/MCRP graduate student, to develop a “clearinghouse” for data aggregation and collaboration.<sup>10</sup> Prior to the introduction of the clearinghouse, homeowners regularly contacted multiple repair organizations for service, but organizations were not informed of each other’s involvement and the burden of communication was placed on the homeowner (COA representative). This model is depicted in **Figure 1**. The clearinghouse served as a foundation for the planned grant activities and intervention, discussed in the **Collaborative Tools** section. Today, COA, RTT, and CPCA remain the primary service providers and funders for home repair projects done through the Chatham County Home Repair Collaborative (CCHRC). Throughout this document, we will refer to CCHRC by this abbreviation or more generally as a “coalition.”

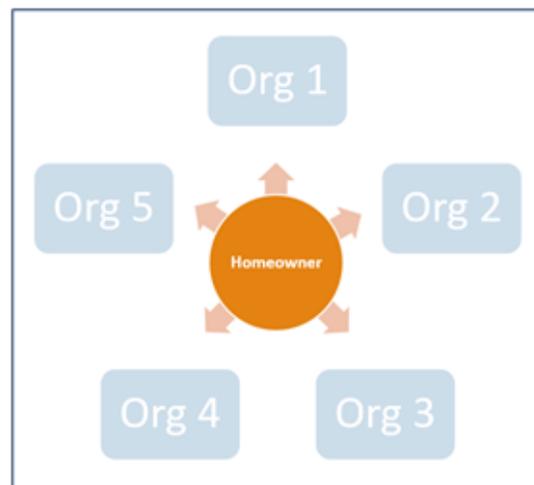


Figure 1 Relationship between a homeowner and repair organizations before collaboration

#### Orange County Home Preservation Coalition (OCHPC)

In 2017, the Orange County Department on Aging (OCDOA) developed its five-year Master Aging Plan (MAP) for providing services to support the well-being of Orange County’s older adult population.<sup>11</sup> Guided by the AARP Framework for an Age-Friendly Community, a key domain was housing; through partnership with local stakeholders, MAP established a goal to “improve choice, quality, and affordability of housing including housing with services and long-term care options.” The collaborative process of developing MAP shed light on the inefficiencies that service providers and homeowners experienced working within singular organizations. As in Chatham County, accessing repairs before the development of collaborative groups in Orange County is depicted by **Figure 1**. RTT, Habitat for Humanity of Orange County, NC (Habitat), and the Marian Jackson Cheek Center for Saving and Making

History (Jackson Center) assisted in identifying gaps and developing strategies for improvement through a MAP workgroup. Informed by the work being done in Chatham County, MAP explicitly identified collaboration among home repair organizations as a target strategy (*“Strategy 3.6.3: collaborate across repair/remodel organizations to better communicate, share cases, and refer to specialized services”*).<sup>11</sup>

The Orange County Home Preservation Coalition (OCHPC) was created to respond to MAP’s findings and formalize developing partnerships. Still led by OCDOA, OCHPC brings together local government departments and affiliate and non-profit organizations for service provision, funding, and community engagement. Before receiving this grant, OCHPC was meeting on a monthly basis and sharing some information in a sparsely used online database. Still, these efforts were limited by an incomplete organizing framework and the absence of tools to facilitate collaboration.

An expanded description of the history of each coalition is in [Appendix A](#).

## Developing A Stronger Coordinated Approach

The planned grant activities discussed in the next section helped strengthen some of the existing collaborative processes, created new processes, and offered supports and structures intended to foster new partnerships and collaborations. Importantly, this work is based on models of partnership, abundance, and flexibility. A **partnership** based approach<sup>12</sup> championed the benefits of cross-organizational collaborations throughout the process and ensures the development of collaborative tools in service to all partners. An **abundance** based approach encouraged partners to reach across organizational boundaries, reject competition, and support the work of the whole rather focusing only on their own specific needs.<sup>i</sup> The **flexibility** given by funders offered space for the coalitions to root collaborative tools in the real context of each coalition. Our ongoing work together was founded in each of these components, and each became an essential ingredient in our success.

To address inefficiencies and increase equitable access to home modifications and weatherization services, the Partners in Home Preservation project aimed to strengthen the infrastructure of repair coalitions in two counties in North Carolina- Orange and Chatham. With better access to these services, homeowners save money on energy bills and experience improved quality of life. The Partners in Home Preservation approach was two-fold: 1) develop infrastructure and tools for coordination, and 2) utilize these for improved organizational and homeowner outcomes.

The primary aim of the Partners for Home Preservation project was to develop customized, collaborative tools for inter-organizational home repair and energy efficiency *systems*. These tools include:

- streamlined intake
- centralized home assessment processes
- coordinated case management
- collaborative data sharing mechanisms
- unified data collection and evaluation processes

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<sup>i</sup> The language and model of abundance were greatly informed by the approach of the Marian Jackson Cheek Center, a community partner in OCHPC.

Partners for Home Preservation leveraged these tools to build a more effective home preservation and repair system, which:

1. Increased access to and comprehensiveness of home repairs and energy efficiency for residents;
2. Decreased administrative burden on residents in finding organizations that can serve them;
3. Decreased inefficiencies across service provider organizations through collaboration and communication;
4. Decreased deferrals of weatherization and energy efficiency services due to other home repair needs (e.g., roof leaks);
5. Increased quality of life of residents who receive assistance through a service provider organization.

## Report Roadmap

In this report, we first outline the intervention plan to strengthen collaboration and describe the collaborative tools that the groups developed. Next, we describe the methods used to conduct our evaluation. This evaluation used focus groups, direct observations, homeowner surveys, and administrative data to report on: 1) the **development process** of the collaborative tools components; 2) the subsequent **utilization** of those tools; and 3) the **outcomes** for both homeowners and repair organizations. As previous data had not been established for the collaborative groups associated with this project, this report establishes baseline metrics for quantifying and describing collaborative processes and service provision. From this evaluation, we articulate specific recommendations for these collaborative groups and then broad lessons learned, intended for others interested in pursuing similar endeavors.

## II. The Intervention Plan

To establish support for two existing home repair coalitions in Orange and Chatham counties, Triangle J Council of Governments (TJCOG), RTT, and the North Carolina Justice Center (NC Justice) applied for a capacity building grant from the Southeastern Energy Efficiency Alliance, Inc (SEEA). The three organizations were awarded a grant of \$249,000 over a two-year period. Notably, a portion of these funds were used to compensate additional coalition stakeholders for their engagement in strategically developing the intervention. This funding was essential to encouraging engagement in the development and utilization of collaborative tools.

An overarching logic model outlines the activities and resources deployed through Partners in Home Preservation (**Table 1**). This model also outlines the expected short- and long-term outcomes. A more detailed model is in [Appendix B](#); this version explicitly states the assumptions on which the expected outcomes depend and demonstrates the interaction between development and utilization. The model in [Appendix B](#) was developed with the complexities of OCHPC in mind, but the theory of change applies to CCHRC.

Table 1 Partners in Home Preservation logic model

Resources	Activities	Outputs	Outcomes	Impacts
<ul style="list-style-type: none"> <li>• Service providers</li> <li>• Financial partners</li> <li>• Community referral partners</li> </ul>	<p><i>Tool development process</i></p> <ul style="list-style-type: none"> <li>• Create a unified screening tool/intake</li> <li>• Design a centralized home assessment</li> <li>• Improve database organization/framework</li> <li>• Unify evaluation</li> </ul> <p><i>Utilization process</i></p> <ul style="list-style-type: none"> <li>• Conduct centralized home assessment</li> <li>• Cross-refer homes within coalition</li> <li>• Communicate among coalition frequently about project details and management</li> <li>• Continuously collect cross-organizational data</li> </ul>	<p><i>Tools created &amp; used</i></p> <ul style="list-style-type: none"> <li>• Unified screening tool/intake</li> <li>• Home assessment</li> <li>• Shared database</li> <li>• Aggregate evaluation</li> </ul> <p><i>Services provided</i></p> <ul style="list-style-type: none"> <li>• Home repair, modification, and weatherization services</li> <li>• Referrals to human and social services</li> </ul>	<p><i>For homeowners &amp; community</i></p> <ul style="list-style-type: none"> <li>• Easier and better access to repairs</li> <li>• Increase feeling of comfort and safety in home</li> </ul> <p><i>For local organizations</i></p> <ul style="list-style-type: none"> <li>• Reduced service deferrals</li> <li>• More comprehensive service provisions</li> <li>• Improved collaboration</li> </ul>	<ul style="list-style-type: none"> <li>• Improve applicants' quality of life</li> <li>• Promote aging in community</li> <li>• Maintain affordable and safe housing stock</li> <li>• Decrease service inefficiencies</li> </ul>

## Collaborative Tools

Several collaborative tools were proposed in the Partners in Home Preservation project to improve efficiency. These tools spanned from working with applicants at the beginning of the process to evaluating the services they received (**Figure 2**). Detailed information about the intent of each collaborative tool is provided below. Reporting on the development process and use of each is presented in the sections on **What We Learned**.



Figure 2 Collaborative tools

**Unified Screening Tool and Intake Process:** The purpose of the unified screening tool was to determine the eligibility of applicants for as many programs as possible without creating undue burden of extensive documentation. Basic household and income information, ownership status, veteran status, as well as information about special needs and emergency concerns were identified as key questions for the unified screening tool. Partners also intended to collect information about other household needs for referrals to human and social services. The objective was to create a “no wrong door” approach, providing applicants with a universal gateway to the coalition. The intended, revised intake process is illustrated in **Figure 3**.

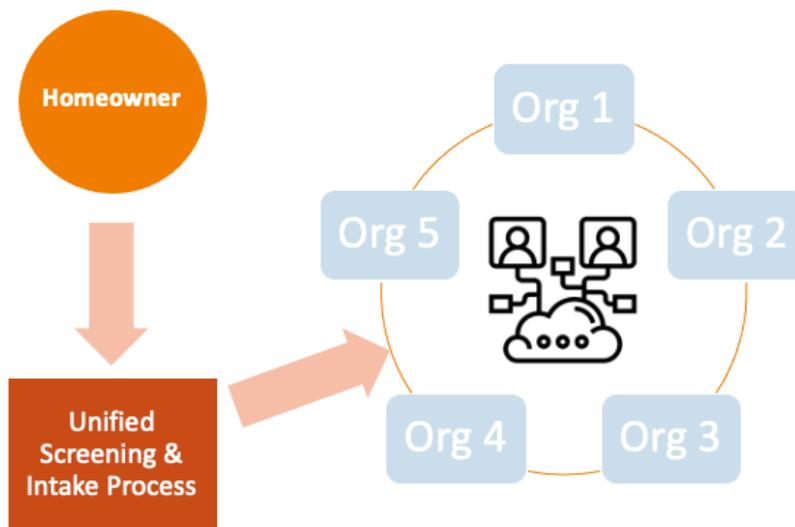


Figure 3 Re-designed collaborative intake model

**Shared Database:** Prior to the grant, both CCHRC and OCHPC were using Airtable®, an online password-protected and secure relational database software. At least one representative from each partner organization had access to the database; however, some partners had more editing privileges than others. Further developing this collaborative tool called for new and improved versions of the databases. The new databases were intended to act as a repository of information for each applicant, including the unified screening tool responses, home assessments findings, work progress, and other ongoing social or contextual notes about each home’s process.

**Centralized and Comprehensive Home Assessment:** Comprehensive home assessments, conducted by a Home Assessment Manager, were intended to identify a full scope of work, or list of projects needed to bring the home up to health and safety standards; weatherize and improve energy efficiency; or modify for accessibility. Once assessments were completed, the coalitions intended to integrate them with the shared database.

**Collaborative Case Management:** The coalitions in both counties planned to meet regularly to facilitate communication and collective management of various homeowner needs.

**Unified Evaluation:** This report represents the first unified evaluation for CCHRC and OCHPC. The purpose is to measure outcomes of the collaborative processes with respect to the primary objectives previously listed. The coalitions intend to leverage collaborative tools to provide cross-organizational and county wide evaluations in the future.

### Partners Involved

Partners in this work were numerous and held various roles in the collaborative process. The roles of partners are simply displayed in **Table 2** and further unpacked below.

*Table 2 Organizational Roles*

Grant administration	Coalition coordination	Direct service provision	Funding	Community engagement & referrals
<a href="#">TJCOG</a> <a href="#">NC Justice</a>	<a href="#">OCDOA</a> <a href="#">RTT</a>	<a href="#">CCOA</a> <a href="#">CPCA</a> <a href="#">Habitat</a> Hope Jackson Center <a href="#">OCDOA</a> OC Housing <a href="#">RTT</a>	Jackson Center <a href="#">OCDOA</a> OC Housing <a href="#">RTT</a> Carrboro Chapel Hill UNC PiAP	Jackson Center OC Sustainability OWASA
<b>Key:</b> Orange County only Chatham County only Both Chatham and Orange Counties SEEA Grant Funds recipient		<b>Notes:</b> <ul style="list-style-type: none"> <li>Organizations may exist in more than one column because they may serve several capacities (e.g., may provide direct service provision and may fund other organizations to complete repairs).</li> <li>Funding roles ranged from financing direct service provision to providing monetary resources for coalition infrastructure.</li> </ul>		

## Grant Funded Partners

**Triangle J Council of Governments (TJCOG):** Serving as the regional government across seven counties, including Chatham and Orange Counties, TJCOG works to advance local government collaboration. Across the region, TJCOG is seen as a leader in coordinating efforts and developing policies and programs that improve the supply and condition of affordable housing.

**Planned role in the grant:** In this project, TJCOG was one of three “anchor” institutions and was represented by Erika Brown, Housing Program Manager. In anchoring the project, her role was to: coordinate and host bi-monthly meetings, engage and recruit local government partners, and support project planning and management.

**Rebuilding Together of the Triangle (RTT):** A non-profit home repair corporation, RTT has served over 500 families in the region, ensuring they can stay in homes that support their health and safety. RTT has provided regional leadership in integrating a health-focused, client-centered approach to traditional home rehabilitation programs.

**Planned role in the grant:** RTT served as another “anchor” institution in the Partners in Home Preservation program. They were represented by Dan Sargent, Executive Director; Heather Szalanski, Program Coordinator; and a newly created Home Assessment Manager, filled through this grant. In addition to participating as a service provider, RTT was commissioned to lead the home assessment and work scope development processes for the coalitions. In these ways, RTT drove the vision and design for the collaborative approach as the organization with the most experience with a variety of funders and programs.

**Orange County Department on Aging (OCDOA):** OCDOA offers integrated aging services to support older adults in living safely and vibrantly in the community. One such service is the Handy Helpers, a volunteer program that provides home repairs to older adults using a cost-share model.

**Planned role in this grant:** The scope of Handy Helpers ranges from minor maintenance and repair to large safety and accessibility modifications. As a service providing partner, OCDOA was recruited to engage in meetings and work to design the collaborative system in which it participates. As described in the sections on **What We Learned from Development** and **What We Learned from Utilization**, the coordination and management roles of OCDOA were expanded in practice.

**North Carolina Justice Center (NC Justice):** NC Justice is a 501 ( c ) 3 that works to improve the lives of low-income people in the state. The organization brings expertise in litigation, public policy advocacy, research, community outreach, and communications. It also leads the state’s Energy Efficiency for All campaign, which focuses on energy equity.

**Planned role in the grant:** NC Justice served as the third “anchor” institution in this project. Represented by Al Ripley, Director of Consumer, Housing, & Energy Project, and Claire Williamson, Energy Policy Advocate, NC Justice was responsible for advocating for energy efficiency programs and for providing relationships with government officials, non-profit partners, and utilities.

**Central Piedmont Community Action, Inc (CPCA):** CPCA is a private non-profit community action agency founded by the Board of Commissioners in Chatham and Orange counties in 1966 to provide services to the low- income population. Using funds from the state’s Weatherization Assistance Program (WAP), CPCA provides energy conservation measures and HVAC replacements to help low-income families improve comfort and reduce energy costs.

**Planned role in the grant:** CPCA was recruited as a service providing organization to engage in meetings and work to design the collaborative system in which it participates.

**Chatham County Council on Aging (COA):** COA is the primary portal for aging services in Chatham County, supporting independent living and physical and mental wellness for older adults in the county. COA offers a wide range of programs and services, including a minor home repair program.

**Planned role in the grant:** COA was recruited as a service providing organization to engage in meetings and work to design the collaborative system in which it participates.

**Habitat for Humanity of Orange County, NC (Habitat):** In Orange County, Habitat has a long history of successfully preparing local residents to become first-time homeowners and has a strong reputation in the community as a respected provider of affordable housing options. In addition to building 282 homes in Orange County, Habitat has also repaired over 120 existing homes since its founding.

**Planned role in the grant:** Habitat was recruited as a service providing organization to engage in meetings and work to design the collaborative system in which it participates.

#### **Other Partners Who Supported Coalition Work:**

*In Chatham County*, multiple service providers, local social services, and other non-profit and religious groups supported the work of the COA.

*In Orange County*, additional organizations and government agencies were members of the coalition, but did not have funded roles in the Partners in Home Preservation project. Their important contributions and experiences are discussed in the section on **What We Learned from Utilization**. **OC Housing and Community Development** (OC Housing) provided funding to repair organizations to complete service, and also provides direct service through county and state funds. The **Towns of Chapel Hill and Carrboro** participated in the coalition and provided significant funding and municipal policy knowledge. **The Orange Water and Sewer Authority** (OWASA) participated in the coalition by connecting service providers with homeowners with major leaks. A young non-profit, Hope Renovations, joined the coalition in its formative stages and began in 2020 as a service provider and contractor for fellow partners. **The Jackson Center** participated in the coalition as a community engagement partner to residents in the Northside and Pine Knolls neighborhoods of Chapel Hill and Carrboro; they also participated as an emergency repair funder in those neighborhoods. **The Partnerships in Aging Program (PiAP) at UNC** was engaged in the coalitions' work as a funder for OCDOA's repair program staff, thus encouraging models of partnership which informed coalition work and acting as an innovative funding mechanism for the OCHPC's coordination and overall grant evaluation.

### III. Evaluation: Tool Development, Utilization, and Outcomes

#### Evaluation Methodology

##### The Framework

An interdisciplinary team — with expertise from public health, occupational science, and city & regional planning — guided this evaluation. The team primarily included Morgan Cooper (OCDOA/UNC PiAP); Erika Brown (TJCOG); Dr. Ryan Lavalley, PhD, OTR/L (OCDOA/UNC PiAP); and Dr. Cherie Rosemond, PhD (UNC PiAP). Partner organizations, particularly RTT, also provided general input on evaluation priorities and tools.

The evaluation employed a mixed-methods approach. **Table 3** summarizes the various data sources used and outlines how they were applied in the evaluation. In essence, this evaluation weaves together qualitative and quantitative data to tell the stories of developing and utilizing collaborative tools, and their outcomes. In doing so, this report creates benchmarks for future evaluation. The methods used to collect and analyze each type of data are described below, and [Appendix C](#) provides additional details on the evaluation framework.

*Table 3 Mixed methods used in evaluation*

Data source	What we evaluated
Focus groups & interviews	Tool development and utilization; organizational experience and outcomes
Direct observations & participation	Tool development and utilization; organizational experience and outcomes
Administrative data/project management data via <a href="#">Airtable</a> ®	Tool utilization; organizational experience and outcomes
Homeowner survey	Homeowner experience and outcomes

##### Data Sources

###### Focus Groups & Interviews

Focus groups were conducted to analyze the process of developing collaborative tools, understand how they were used, and identify the outcomes of their use. Guiding questions for discussion are shown in **Table 4**, but additional topics emerged. These questions were developed to address the *activities* and *outcomes*, specifically related to the *local organizations & organizations*, in the logic model ([Appendix B](#)) and indicator framework ([Appendix C](#)).

CCHRC and OCHPC members participated in focus groups for their respective counties.<sup>ii</sup> In addition, individual responses to key questions were collected from partners who were unable to attend focus group discussions.<sup>iii</sup> Quotes may be edited for clarity.

*Table 4 Key thematic questions for focus group and interview discussion*

- What did the process of developing the collaborative tools look like?
- How have organizations' operations changed since joining CCHRC/OCHPC, and further since receipt of the grant?
- How do you see the role of each grant deliverable (meetings, shared database, assessments, intake/unified screening tool)?
- How have the processes that the grant supported changed organizations' relationship with funders?
- What challenges did organizations in CCHRC/OCHPC experience during collaborative development and intervention, and how do these compare with challenges previously reported report?<sup>iv</sup>

### Direct Observation & Participation

As members of OCHPC, Ms. Cooper and Dr. Lavalley considered our own experiences participating in Partners in Home Preservation. Representing OCDOA and fulfilling service provider and coordination roles, we closely followed cases and drew on this familiarity to integrate participant stories into the analysis. Our practical experiences were assets in shaping the lessons learned and creating salient recommendations.

### Administrative Data

Administrative data refers to information that the coalitions collected and stored on the shared database. This includes responses to the screening tool, home assessment findings, case notes, and ongoing communications that happen within the Airtable® software. In essence, this is data that coalition partners use to function as a collective.

We employed this data to characterize the population being reached, identify the range of repairs needed, and assess the extent to which service is both comprehensive and collaborative. Any data that was entered between January 1, 2019 and October 1, 2020 was included in the analysis. Additional details regarding the data collection and analysis process for these indicators can be found in [Appendix D](#).

To provide context-specific findings, we analyzed and present administrative data for each county separately. In Chatham County, we used the database that was developed and used before grant receipt for our analysis; while they did create a newly organized database, it was seldom used. In Orange

<sup>ii</sup> One focus group was hosted for members of CCHRC, including representation from RTT, CCOA, CPCA, NC Justice Center and TJCOG; another was hosted for members of OCHPC, including representation from OCDOA, RTT, CPCA, Town of Carrboro, OC Housing, TJCOG. These focus group were audio recorded on Zoom and Otter.ai generated transcripts.

<sup>iii</sup> Two individual interviews were conducted, one with a TJCOG representative and the other with a Jackson Center representative. These interviews were audio recorded on Zoom and Otter.ai generated a transcript.

Representatives from Habitat and Hope submitted written responses to the focus group questions via email.

<sup>iv</sup> See Rohe et al.<sup>9</sup> for previously reported challenges in coordinating home repair services

County, we used both the *original* database, which was previously used, and the newly developed, *updated* database, created through Partners in Home Preservation. Homeowners whose data was stored in the *original* database were included in analysis because they still benefited from collaborative components of the Partners in Home Preservation project, despite applying for service before new tools were developed.

### Homeowner Survey

Homeowners' experiences were important considerations in determining success of collaboration. We conducted a researcher-administered survey with homeowners or their caregivers over the phone. Constructs included the application process, financial accessibility of services, and perceived effects of home repair services on quality of life and health. The complete survey tool is in [Appendix E](#); a version of this survey was also available to administer with a caregiver of the homeowner.

Homeowners were eligible for participation if they had at least one repair project completed between July 1, 2019 and April 1, 2020. We selected July 1, 2019 as the earliest date of service because this represents the point at which collaborative processes began with vigor. We used a cutoff date of April 1, 2020 to ensure that participants had at least one month of post-home repair experience to draw upon.

During the process of identifying eligible participants, homeowners were categorized by county —and database for Orange County participants — as well as completion status. The three completion status groups are: complete, ongoing with a plan, and ongoing without a plan:

**Complete:** all identified or requested repair needs addressed to the best ability of partner organizations.

**Ongoing with a Plan:** At least one project is complete, with the remainder either in progress or planned by a specific partner organization.

**Ongoing without a Plan:** At least one project complete, but others remain unfinished and unassigned to a specific partner.

We analyzed survey results in aggregate and stratified by each county and progress in order to account for the variable levels of intervention received.

Surveys were conducted between May 2020 and October 2020. Administrators made at least two call attempts to each eligible participant.

### Limitations

This evaluation is not without limitation. We used a variety of data sources and analysis methods to mitigate possible weakness in quality and causal conclusion. We discuss these barriers below.

### Administrative Data

As one of the collaborative tools developed, the database is used differently in each county; this is discussed in **What We Learned about Utilization**. Notably database utilization was consequential for evaluation. Our ability to analyze demographic and service characteristics depended on the availability and accuracy of information in the database. For example, limited engagement with the database in Chatham County meant that the evaluation team was unable to create a broad demographic profile of service applicants in the county and did not have the data to analyze details of service provision. While insufficient data did not limit the documentation of efforts in Orange County to the same degree, the accuracy of results are likewise dependent on the use and management of the database.

Additionally, this report likely underestimates the number of applicants and service accomplishments. Data housed on Airtable® was exported for analysis on October 1, 2020; these figures exclude work planned, started, or completed in November and December of 2020. This is particularly salient as service resumed with greater vigor in late fall 2020, following a slow-down in service to respond to the COVID pandemic. Taken together, these points indicate that these coalitions are positioned to accomplish even more in future years than is documented here.

**Given limitations, the coalitions are positioned to accomplish even more in future years than is documented here.**

Finally, indicators presented in this report do not all have referents for comparison. TJCOG previously put together a cursory data analysis of the repair landscape in Orange County; however, it does not include all of the currently participating members of OCHPC and is limited in scope. Additionally, it presents the aggregate work and investments of the repair organizations as independent actors, rather than collective impact of collaborative efforts. This following report serves to establish baseline metrics for establishing goals and comparing future outcomes within OCHPC and CCHRC.

### Survey

The survey tool was adapted from an instrument created for OCDOA's Handy Helper program evaluation.<sup>13</sup> During administration for the Handy Helpers, respondents near-universally selected either neutral or positive answer choices for questions about changes quality of life and health. We therefore offered unidirectional responses choices (i.e., not easier to much easier), instead of bimodal options (i.e., much more difficult to much easier). While this biases positive feedback, it was an appropriate trade-off to ease survey administration over the telephone and reduce participant burden.

Additionally, with 3 survey collectors, it is possible that there was variation in the administration. For example, each may have explained terms differently or asked probing questions with variable frequency. Two terms that often required explanation were the terms "Chatham County Home Repair Collaborative" and "Orange County Home Preservation Coalition," themselves. Depending on the explanation provided and the survey participants' familiarity with the coalition identity, participants may have responded to questions – like ease of application or wait time – in reference to individual organizations rather than the collective.

Finally, all survey participants received some degree of the collaborative intervention. With a post-test evaluation design among only intervention recipients, survey results lack internal validity; this means that we are unable to attribute reported changes to the collaborative home repair process. We strengthen this design by stratifying survey results by county, as these represent varying levels of intervention, creating a basis for comparison. Still, these county groups may represent different population groups- Chatham and Orange County home repair recipients may differ in demographics character and in service need.

### Energy Efficiency Study

A key purpose of this grant was to reduce service deferrals of weatherization repairs and improve energy efficiency. Partners in Home Preservation intended to measure the effect of weatherization and rehabilitation repairs on energy efficiency at a household level. However, the evaluation team did not have the technical skills required to weather-normalize data and produce high quality results within the time restraints of evaluation reporting. Moreover, utility data was missing for many service recipients

and was inconsistent between utility service providers. The team planned to shift its approach to qualitative case studies to suit its skill set, but a small sample size and low response limited the generalizability of these findings and, therefore, they were not included.

## What We Learned

### What We Learned About Developing Tools to Facilitate and Support Collaboration

The development of collaborative tools in each county is presented together because they happened in sequence and with many of the same partners. Notably, much of the work of developing these tools occurred in meetings outside regular coalition meetings. Funding support from the grant was helpful in encouraging partners to participate in these additional parallel meetings. The iterative process of developing tools in parallel meetings, applying them in regular coalition meetings, and then reflecting on their use again in parallel meetings facilitated the ongoing adaptation of their use. Overall, three key thematic takeaways about the development process emerged from the data:

- Creating collaborative tools and systems is a dynamic process which requires flexibility, dialogue, and the willingness to root development in the real needs of all partner organizations. Tools must respond to the needs of the area — its homeowners and partner service providers — and this process of customization is iterative.
- Collaborative tools need to align with needs of diverse partners and to integrate well with each other.
- Prioritizing appropriateness, comprehensiveness, and flexibility, rather than speed, facilitated the development of valuable tools that support long term inter-organizational infrastructure.

### Unified Screening Tool

The unified screening tool was revised several times, mostly by Orange County, as partner organizations identified the most helpful data points to collect through utilization. For example, one homeowner was eligible for service from OCDOA only; she had been living in her home for less than 2 years, which significantly limited her eligibility. The applicant's dissatisfaction that this general requirement was not made clear from the beginning motivated the addition of a screening question to confirm residency in the home for 2 or more years.

Partners identified eligibility information that was commonly used. The tool collects more information than OCDOA and COA usually require, but OCDOA also suggested questions tailored to its services and referral capacities, such as ability to safely enter and exit the home and preferred long-term housing option. While the collection of additional information, such as income, was initially a challenge for COA and OCDOA, both organizations adapted. For example, OCDOA selectively and strategically used the screen for repair needs beyond the organizations' scope. Similarly, COA shared the screening tool with applicants and asked them to return it to RTT, thus taking themselves out of the intake process. Additionally, one COA representative said that there's an "education component" of explaining to homeowners and referrals partners why certain questions (like income) are on the application even though COA does not, itself, require that.

The final unified screening tools for Orange County and Chatham County are found in [Appendix F](#) and [Appendix G](#), respectively, and include demographic characteristics, household member information, description of repair needs, and a data share agreement. With overlapping organizations and reciprocal revisions, these two are nearly identical.

### Comprehensive Home Assessment

The home assessment manager position sits within RTT, which has historically taken a “whole home and homeowner” approach. RTT quickly identified that, in order for the home assessment to benefit the entire coalition, it needed to capture repair and social needs beyond its own service scope. Accordingly, RTT exhibited flexibility in responding to the information and assessment needs of all organizations within the coalition.

**RTT’s commitment to cooperation, along with their comprehensive assessment approach, were essential to the success of the collaborative effort.**

The resulting assessment included examination of home repair and rehabilitation as well as accessibility modifications. The home assessor also recorded pertinent information that may arise during the assessment- like previous service attempts; home or land ownership details; utility connections; or availability of financial resources- so that the assessor, occupational therapist, energy efficiency experts, and community partners have a broad view of the needs of both the home *and* the homeowner. Together these details offer a more comprehensive picture of the home’s quality and homeowner’s quality of life for the coalition to discuss. RTT’s commitment to cooperation, along with their comprehensive assessment approach, were essential to the success of the collaborative effort.

Developing and utilizing this tool revealed the valuable, yet rare, combination of skills that a home assessor or team of assessors may require to effectively perform this role; that is expertise in construction, accessibility modifications, environmental safety, and energy efficiency measures.

### Shared Database and Communication System

As a relational database, Airtable® gave the coalitions the ability to present complicated, layered data in intuitive forms and to communicate directly within the database. The shared databases were completely restructured from their original frameworks to take advantage of Airtable’s® capacities and to create opportunities for collaboration. The updated OCHPC database is organized with each applicant in an independent row; applicants’ data are intuitively linked with their home assessment and project details. Each of these layers is dynamic- coalition members can edit and build upon data, but the software continues to store historical versions. Easily manipulated views and filters make this abundance of data accessible and user-friendly. A common platform for updates and information-sharing, the database is organized to be a focal point for case-management discussions meetings, and a venue through which communication happens in the interim. [Appendix H](#) illustrates a screenshot of the main page of OCHPC’s database with identifiable information blurred.

One important development in the evolution of the database was integration of the home assessment findings into specific project needs or tasks. Embedded in the database, individual assessments became available and easily accessible to all partners; in aggregate, these created a library of projects needed across the county. The database is organized such that repairs could be managed and monitored at either the household, organization, or project levels. As a dynamic tool, the database continues to evolve; Dr. Lavalley regularly modifies it to respond to new information needs and maintain a positive user experience, which promotes utilization. His ability to employ systems thinking and expertise in accessibility were integral in the development process.

## Foundation of Collaboration and Partnership

While not specific to the development of the collaborative tools, the existence of collaborative groups shaped the grant process and success. The TJCOG representative explained,

*"I don't think it's necessary to start [in an aging-related agency], but in both counties, that's where this*

*organizational, collaborative processes began. We couldn't have just started from the SEEA investment and gotten the same outcomes that we did without having the background of collaboratives already meeting and talking in place. That was really useful to already have the that established. I imagine that when we start doing the work in some other counties that's going to be similar to this, we're going to have to start from a different place getting the groups meeting, getting the established goal of collaborating to be really clear. What why it was so successful, I think, in Orange and Chatham counties."*

*"We couldn't have just started from the SEEA investment and gotten the same outcomes that we did without having the background of collaboratives already meeting and talking in place. That was really useful to already have the that established."*

The collaborative tools were designed to build inter-institutional capacity and foster partnerships, but their development also depended on commitments to cooperation. In practice, RTT embodied this commitment in creating a vision for repair *systems* and in leading quarterly meetings in Chatham County. In Orange County, OCDOA similarly facilitates this foundation of collaboration by employing Dr. development process. Lavalley to serve as coalition coordinator. Partnership, abundance, and flexibility were essential in the

## What We Learned About Utilization of Collaborative Tools

### Utilization in Orange County

A complicated, layered funding landscape in Orange County called for systematic use of the new collaborative tools. Evident from discussion with OCHPC partners, and supported by administrative data findings, utilization of the collaborative tools has fundamentally changed the operations of both the coalition and independent organizations. In fact, most organizations are shuttling all their applicants through the collaborative process, with few exceptions. Using the collaborative tools has not been without challenge, but these *necessitate* the coalition model and have not been insurmountable.

Here, we document the application of the collaborative tools, which bears important lessons for future implementers to consider and sets the context for the outcomes of collaboration.

### Screening Tool & Data Share Agreement

Embedded in the unified screening tool is the data sharing agreement, which gives permission to the referring organization to share the homeowners' information with OCHPC participants. These combined tools are heavily utilized, especially by Habitat and the Jackson Center, which have collectively referred nearly three quarters of coalition's applicants (**Figure 4**). Together, the screening information and data share agreement help organization collect "*the right information*" and make "*good referrals*" (RTT). This allows OCHPC to absorb the burden of finding an organization who can

### Participant Story - Absorbing the Navigation Burden

When a homeowner reached out to OCDOA for an update on her assessment, the coalition coordinator was able to tell her that that OCDOA would plan to do some repairs and was also coordinating with CPCA on her behalf to determine her eligibility for their services.

make a homeowner's repairs. A valuable tool, the unified screener and data waiver are frequently utilized; OCHPC has collected them from 92.9% of homeowners in updated database ([Appendix I](#)).

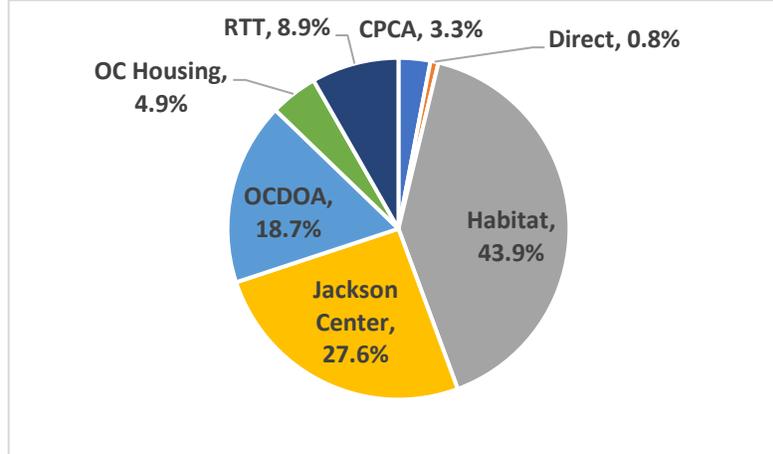


Figure 4 Referring organizations for homeowners in the updated Orange County database (n=123)

#### Participant Story - Making "good referrals"

OCDOA referred one homeowner to social workers on its Aging Transitions Team after the screening tool revealed the need for additional caretaking support- this homeowner reported being essentially bedridden, reliant on external oxygen, requiring bathing assistance, and having limited bathroom access- but few financial resources.

"Good referrals" are not limited to home repair referrals within the coalition. The screening tool provides space for applicants to describe social and health concerns that may relate to the home environment, but require specialized attention and warrant external referral. With information about what applicants needs to remain in their homes for as long as they would like, **the coalition collects "the right information"** to recruit social services and support.

Notably, the data share agreement was not explicitly mentioned in discussions of the screening tool, but the two go hand in hand: the data share agreement provides the consent that underpins the entire collaborative process.

#### Database and Coalition Coordination

The shared database housed information collected in the screening tool and in the home assessment. With information about both the residents and the home, **it served as "the glue" connecting the collaborative tools**. The coalition coordinator reinforced use and accuracy of the database in shared case management, making it a focal point of monthly meetings.

Frequency of updates and use of the dynamic communication abilities varied across OCHPC partners. **Service providers which designated a database point person were most successful at providing timely updates and communicating through the database (OCDOA).** Other organizations continued to use email as the primary means for information sharing, and used the database more as a “repository” for documentation and information (RTT). With varying capacity to participate in database management, **the coalition coordinator role became a core component for supporting collaboration.** Dr. Lavalley provided “*support for any organization that doesn’t have capacity*” to regularly interact with the shared database by “scaffolding” database usage and absorbing management responsibilities. Organizations with varying capacities still engaged in collaboration because effective and feasible use was prioritized over uniformity. **The process of scaffolding also represents a key example of continued development and flexibility throughout utilization.**

In making the “coalitioning” process accessible and user-friendly, the coalition coordinator **kept the database accessible, adaptable, and reliable, making it an effective tool to shepherd complex cases**

**through the home repair network.** Together, the shared database and coordinator role created a rich reference for documentation and smooth, continuous project management. Communication — happening directly within the database and in meetings — “*also naturally create[d] more organizational accountability for repair,*” explained a Jackson Center representative. Partners had the tools and information to openly discuss each case, building upon updates entered into the database, and **collaboratively problem solve.**

#### Coalition Story - Scaffolding Database Usage

For those organizations who do not yet have capacity or readiness, Dr. Lavalley managed work scope updates after coalition meetings. Similarly, if an organization was not yet ready to access the database as frequently to identify potential service recipients or update coalition partners, Dr. Lavalley pulled simpler and more accessible reports from the database and asked for updates from those organizations via email using those reports. On the other hand, if an organization had more capacity to engage in the database, Dr. Lavalley worked with that organization to offer more advanced usage opportunities for their needs (e.g., specific views, calculations, eligibility determinations). His skills in occupational therapy were assets in providing adapted support.

#### Coalition Story - Problem Solving at Meetings

An occupational therapist at a community medical center separately reached out to RTT and OCDOA about an urgent plumbing issue at a patient’s home. Even though the homeowner had not applied to OCHPC and did not have a comprehensive home assessment in the database, RTT assessed the immediate issue but determined the home to have significantly more disrepair. Following several rounds of email communication, the occupational therapist attended an OCHPC meeting to participate in the discussion with all partners regarding RTT’s recommendations on how to move forward given the condition of the home and the availability of funding. Centralizing this conversation gave the occupational therapist a clear sense of what to communicate with the homeowner about options for resolution.

Comprehensive Home Assessment and Home Assessment Manager

Along with eligibility information from the screening tool, the home assessment was a primary source of “the right information” for the coalition. Providing a sweeping view of the all repair needs in a home, the assessment was used to identify organizational and funding matches. As with the unified screening tool, its value promoted use, with **91.9% of homeowners in the updated database receiving a comprehensive assessment.**

The inter-disciplinary approach to the home assessment allowed comprehensiveness. The diverse nature of repair needs identified by the assessment is evident in **Figure 5**, which describes the types of repairs and their frequency in the 88 homes that have segmented projects in the database. For comparison, **Figure 5** also includes repairs identified for the 35 homes from the original database. Notably, the repair needs identified among homes in the original database are largely based on request from the homeowner, and are therefore responsive; in contrast, for the 88 homes **in the updated database, needs are proactively identified through the comprehensive assessment**, explaining the greater variety. This wide variety of repair needs across applicants, in combination with the **average of 13 repair projects identified per household**, indicates that the home assessment, is in, fact comprehensive.

**The comprehensiveness of the assessment and involvement of multiple organizations likely decreased weatherization deferrals.** Of the homes in the updated database with weatherization or HVAC repair needs, most (55.1%) are dependent on preceding repair needs; without the collaboration of the coalition, these homes may have been deferred for service. This proportion is smaller among homes in the original database with weatherization and HVAC needs (38.1%). However, this estimate is based only on the project details available, which are mostly based on homeowner request; without the proactive comprehensive assessment, the coalition may not know about all repair needs and service providers may identify additional “surprise” needs along the way. In essence, the original database may underestimate the dependent nature of weatherization and HVAC repairs due to missing information that the collaborative tools provide.

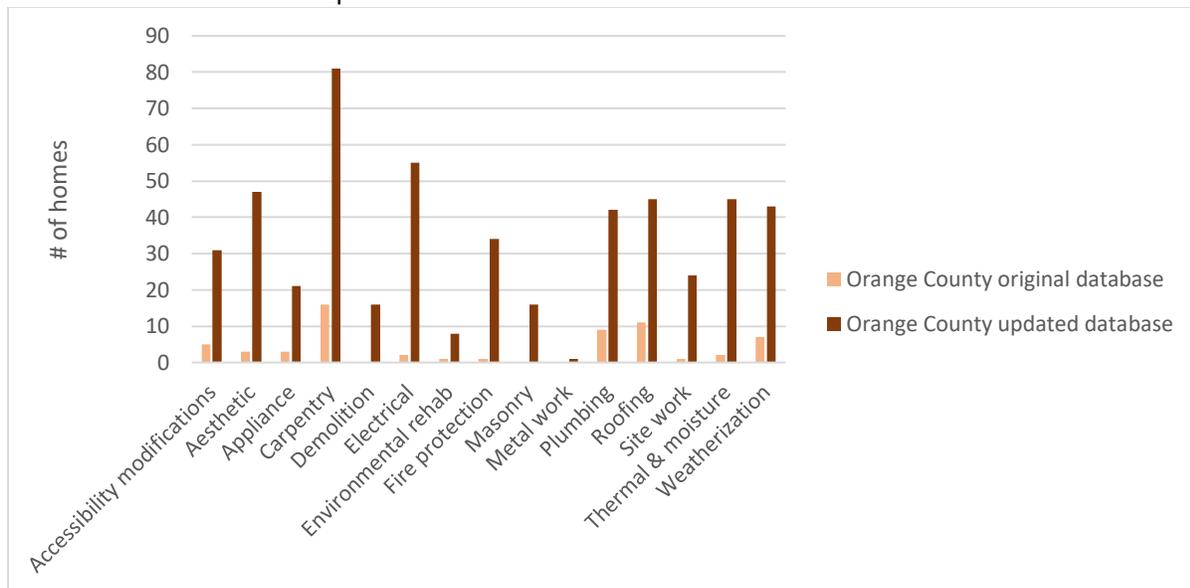


Figure 5 Types and frequency of repair needs identified in the updated database (n=88) and the original database (n=35)

The coalition also used the assessment to **promote coordination**, identifying organizational matches for repairs based on the scope of the work needed. The RTT representative explained that, pushing the home assessment up to be earlier on the process gave the group a “*sense for the systems we’re going to have to touch.*” This put organizations in a position to be proactive rather than respond only to specific repair requests. An OCDOA representative explained,

*“I think that that's the value of that assessment, and that [before], when most of the time each organization [wrote] the assessment up or the work scope, it's what they can do. Whereas we have this assessment that is comprehensive that sort of stands outside of that, and we're able to go back to it and look at, well, this organization was able to take this chunk, but there's still this stuff leftover, whereas if we didn't have that full assessment, that stuff that's left over, might not actually get done, or it might sort of fall through the cracks sometimes.”*

**Understanding repair needs early in the repair process helps the coalition identify appropriate partners based on the scope of work, and also helps match projects to appropriate funding sources within an organization.**

For example, one homeowner was in need of multiple home repairs, including a walk-in shower conversion. The coalition internally referred her to OC Housing, which used the assessment even before its own inspection, to determine that most of the projects could be funded through their Housing Rehab, rather than Urgent Repair Program. This was important for OC Housing to identify early so that they could route the appropriate application to the homeowner and avoid unnecessary paperwork. Just like the unified screening tool, the comprehensive home assessment functions to collect “the right information” (OC Housing and RTT).

*“We still sometimes get out there and start taking something apart and it's not what the assessor sort of identified as the concern - it turns out the solution is different. But we at least have a sense for the systems we're going to have to touch, and the rooms we're going to have to make sure we look at and so it's, I think, been helpful even for us to have those done early in the process.”*

**-RTT representative**

**The comprehensive home assessment completed with RTT’s expertise has proven invaluable.** Still, utilization can be expanded and explicit guidelines and training for the comprehensive assessment process remain a future goal. The TJCOG planner explained,

*“If there is a future in which we have all partner organizations providing whole home assessment and the assessment looks the same regardless of the organization, we will need to implement a structure that can replicate it to make sure that we’re getting the same types of assessments across the coalition.”*

In this future vision, coalition partners share in the task of assessments, but this creates a challenge of consistency. Using a comprehensive home assessment protocol or checklist could facilitate training and sustainability when staff-turnover occurs. **Identifying a future elaboration of this collaborative tool represents the reciprocal nature of development and implementation, and importance of adaptation.**

### Cooperative Service Provision

One intention of the grant collaborative tools was to achieve high levels of collaboration. All homeowners are discussed in OCHPC meetings, benefitting from collaborative problem solving and case coordination. **Additionally, most homeowners are being served by multiple service providers, concretely demonstrating collaboration.** By nature, the 40 homes being served by more than 1

organization (61.5%) are benefiting from collaboration (**Figure 6**); another 8 homes (12.3%) are currently being served by only one organization, but a different one from which it was referred. Taken together, nearly three quarters of homeowners are experiencing collaborative home repair service provision. This is particularly helpful for organizational budgets, as the average value of home repair costs is \$12,140.46.

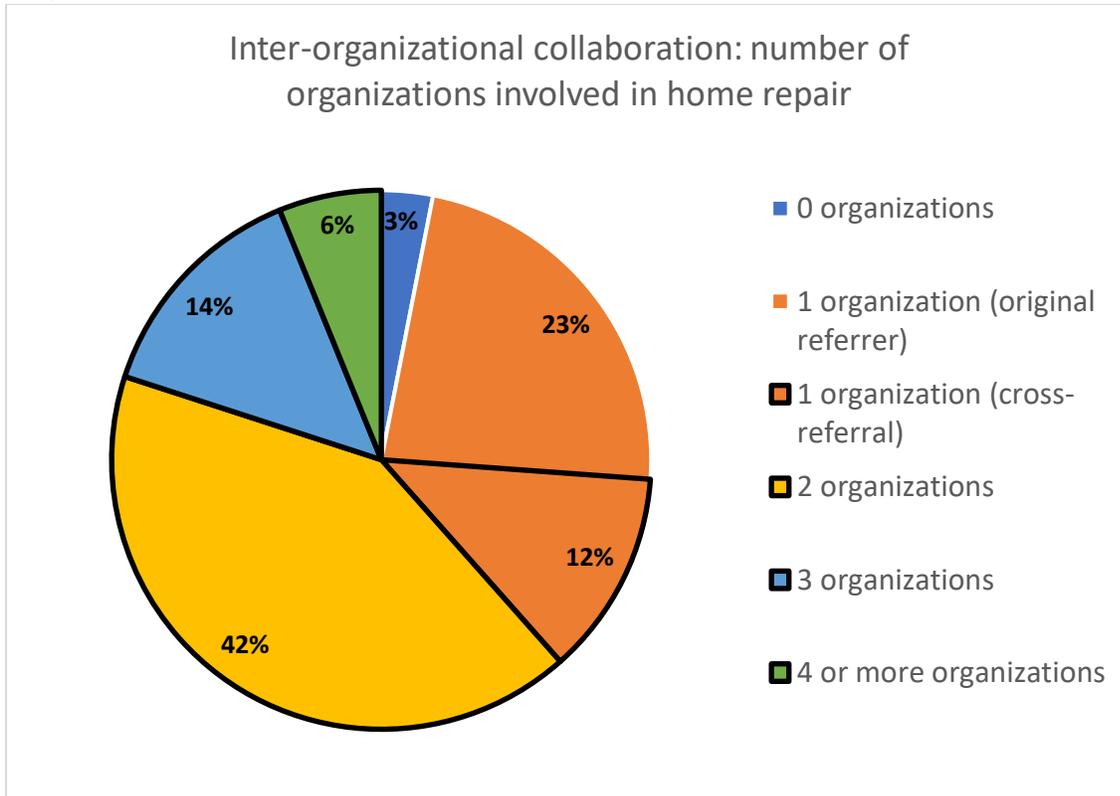


Figure 6 Number of organizations involved in repair among homes with work in progress or fully or partially complete (n=65)

#### Exceptions to Collaborative Processes

With successful and strengthening coordination, organizations are integrating their service lists with the coalition's applicant pool. However, there are some circumstances under which organizations are serving homeowners independently, or without using the collaborative tools now embedded in OCHPC. For example, applicants who have been on waitlists for RTT and Habitat since before Partners in Home Preservation are being served by the individual organization to which they applied; both organizations intend to get through these lists and are transitioning by sending all new applicants to the coalition (RTT and Habitat). The Jackson Center operates an emergency repair program; because of the urgent need repair, these homeowners are not necessarily referred to OCHPC, though they may have already applied to OCHPC for other repair services. Likewise, OC Housing maintains a service list of applicants which apply directly to them that is separate and apart from OCHPC's. However, it does refer homeowners which it cannot serve to OCHPC and takes on some work scopes from OCHPC (OC Housing). Finally, OCDOA also maintains an independent service list. Many homeowners who seek repair services from OCDOA require only minor home repair or accessibility modifications (repairs to a dripping faucet, installing a grab bar, etc.) for which OCDOA has capacity and funds. Still, for homeowners whose repairs are out of scope, one OCDOA representative says,

*"it has provided us the opportunity to say, 'We're not the end. If we can't do it, we can very easily give it to someone else to do.' And I think that has really been helpful to connect with homeowners and make sure that they know that we're sort of taking care of them."*

## Emergent Challenges in Orange County

### *Parallel Work Flows*

As OCHPC continues to operate, **partners are managing projects within the context of their individual organizations and also within the shared space of collaboration.** As one partner said,

*"I think for RTT, we're still trying to figure out exactly how these sort of parallel workflows happen. We use Salesforce for our client tracking and initially we were thinking, like I wonder if we can merge these together? can we push all this out? But all of us, again, end up with some kind of system once we select a project and we needed... we couldn't merge anything. And so, we have had that sort of rethink, and it's been a lot of shuffling trying to figure out the best way to track this without entering a bunch of information a bunch of times and, and so that's still a journey, I think."*

These "parallel" systems and duplication of work connect to staff capacity. As one CPCA representative explained,

*"I just can't do everything and it's hard for me to, to put everything into the Airtable and whatnot with everything else you have to do...But with the funding the way it is hard for me to justify hiring anybody, just isn't enough time in the day for me to do so. Your help is appreciated."*

Having a coalition coordinator in Orange County to collect information and manage updates and communication has reduced the challenge, but this concern will increase if that position does not become a permanent fixture.

### *Explanation and Expectations*

While parallel work flows presented a challenge for internal communication, another area to develop is external communication. This includes talking homeowners through the application process and establishing expectations. **Homeowners were, at times, confused by what it means to be "referred to the coalition;"** both a Jackson Center representative and an OCDOA representative agreed that it can be difficult to explain to the homeowner who each of the involved parties is and what each step in the process will look like- from home assessment to organizational matching to starting work- without getting bogged down in the details. In essence, **there is difficult balance to strike between transparency and over-promising.** As one Jackson Center representative said, there's a challenge in *"trying to explain that nothing is certain."* This is somewhat complicated by the comprehensive nature of the home assessment; while the assessment identifies a range of repairs in a home and homeowners may make specific requests, not all repair needs impact the health or functioning of residents in the same way. In this way, setting expectations with homeowners about priorities in the repair process is important, but coalition capacity to complete all repairs changes over time and isn't known immediately following an assessment. An OCDOA representative said that the group is making headway with regards to external communication, but suggested that formalizing the entity with a memorandum of understanding would ease some of the burden, giving the coalition a unified identity; moreover, continuation of the coalition coordinator role would provide a central voice.

## Utilization in Chatham County

### Collaboration and Referrals

**Key to CCHRC's success in Partners in Home Preservation was the "culture" of collaboration that permeates the group (COA).** This sensibility existed long before the grant and the new collaborative tools amplify it, helping to build inter-organizational capacity. In contrast to Orange County- where many overlapping funding streams and service providers required complex, systematic collaboration- CCHRC favored *informal* shared case management to *formal*, database driven communication. Less information in the shared database presented some limitations in the evaluation process. However, the decision to use the database less was seen by participating organizations as a trade-off for simplicity and works well given the funding structures, repair capacities, and communication styles in the county.

In Chatham County, the value of the grant has been in establishing the case to commit county resources to improving substandard housing and in leveraging external funds.

In the focus group discussion with CCHRC partners, actual use of the shared database came up infrequently; participants more often discussed its potential or their intentions to use it to address the "duplication of effort" across organizations (COA). For example, one COA representative said,

*"I think we realized that we really needed to be more efficient in that the consumer is going to try and reach out to as many different people as possible to try to get help. But once the database was in there, hopefully as a tool, we would say, okay somebody called [COA] because he needed help with his roof. Now let's see whether they called [CPCA]...we didn't want to do weatherization until the roof was fixed."*

More frequently than using the database as a tool of active communication and documentation, partners utilize traditional and informal methods, with one partner stating, "I think that in Chatham, the meetings have become less the central spot where coordination happens, but it's happening even more frequently than waiting for a monthly meeting" through phone calls and emails (RTT representative). At another point, the partner stated,

*"[At the meetings] we don't necessarily spend as much time on individual case management because that ends up being the thing that happens one at a time through the month, and I think it's probably just a process of not having agencies that have as much overlap between what they do."*

With little organizational overlap, the determination of referrals is relatively simple in Chatham County. Still, the unified screening tool facilitated communication and connectivity between organizations and homeowners when a referral is necessary. Homeowners are told to expect to hear from the referred organization, re-positioning the responsibility of contact. One RTT representative explained its use:

*"It's nice to be able to have those [screening tools] come in with a little bit more detail...we will sort of give [CPCA] a list to send the collaborative applications for weatherization to say, 'these people are going to be ready so go ahead and send them [a CPCA] application that we told them to expect...and sort of make the hand off that way. So...it's a little more monodirectional, I guess in terms of the way it works in Chatham, but it's been very helpful."*

In contrast to a traditional referral in which one organization would provide the homeowner with contact information for another, it serves as a warm hand-off.

### Emergent Challenge in Chatham County: Documenting Collaboration

The reliance on informal modes of collaboration and communication outside of the shared database is reflected in – and limited – the results in **What We Learned About the Outcomes**. For example, we were unable to describe homeowner demographics or the types of the repairs needed due to lack of documentation in the database. Without the home assessment details available on the database, we were not able to evaluate collaboration in service (i.e., cross-referrals or multiple agencies completing repairs at a household). The TJCOG representative summarized, saying

*“In Chatham, the main challenge is that collaboration right now is really only happening when somebody needs to refer a client. And that includes getting the home assessment, using the initial [unified screening tool], and putting that person in the database. When we can get to a place where collaboration is expected for every person who comes through anybody’s doors, then we will see the improvement in those things...Even in doing the evaluation, determining who has actually been touched by any of these improved processes...we are definitely missing out on data collection for Chatham County that the database would provide.”*

This is not to say that collaboration hasn’t improved, but it has not been documented. The TJCOG representative continued, *“We can’t quite document [collaborative processes] in the same way [as in Orange County]. It doesn’t mean it’s not happening...but we really don’t know how to measure how much it’s improved.”*

### What We Learned About the Benefits of Collaborative Tools

#### Organizational Experience

#### Benefits in Orange County

Following the process from application, to entry into the database, and then to assessment, homeowners benefit from increasing partnership, and organizations take on more complex collaboration. This complexity is depicted in the model of OCHPC in practice (**Figure 7**). Improved partnership and complex collaboration mean that organizations are working together to appropriately direct resources, make a case for recruiting resources, and creatively manage them. **Collective budgeting and management have given partners the tools to strategically plan and extend their services, and has built inter-institutional capacity for create problem solving.**

### Orange County, NC Home Preservation Coalition Model

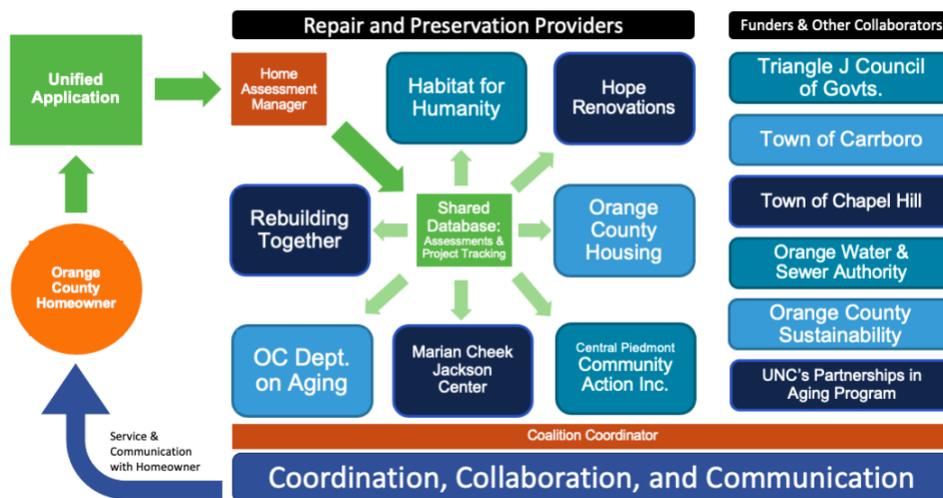


Figure 7 OCHPC collaborative model in practice

Work Progress

Across both databases, OCHPC completed all of the projects it could at **21 homes (Figure 8)**.<sup>v</sup> **Sixty-three (63) homes were in progress**, including homes with work planned, actively being completed, or partially complete with other partners in line to complete additional repairs. Notably, project status was unknown for 14 homes, all of which are in the original OCHPC database; **the absence of homes with unknown status in the updated database demonstrated improved project monitoring**. Moreover, 25 homes were moved from the original database to the updated one as the need for more complex collaboration was identified.

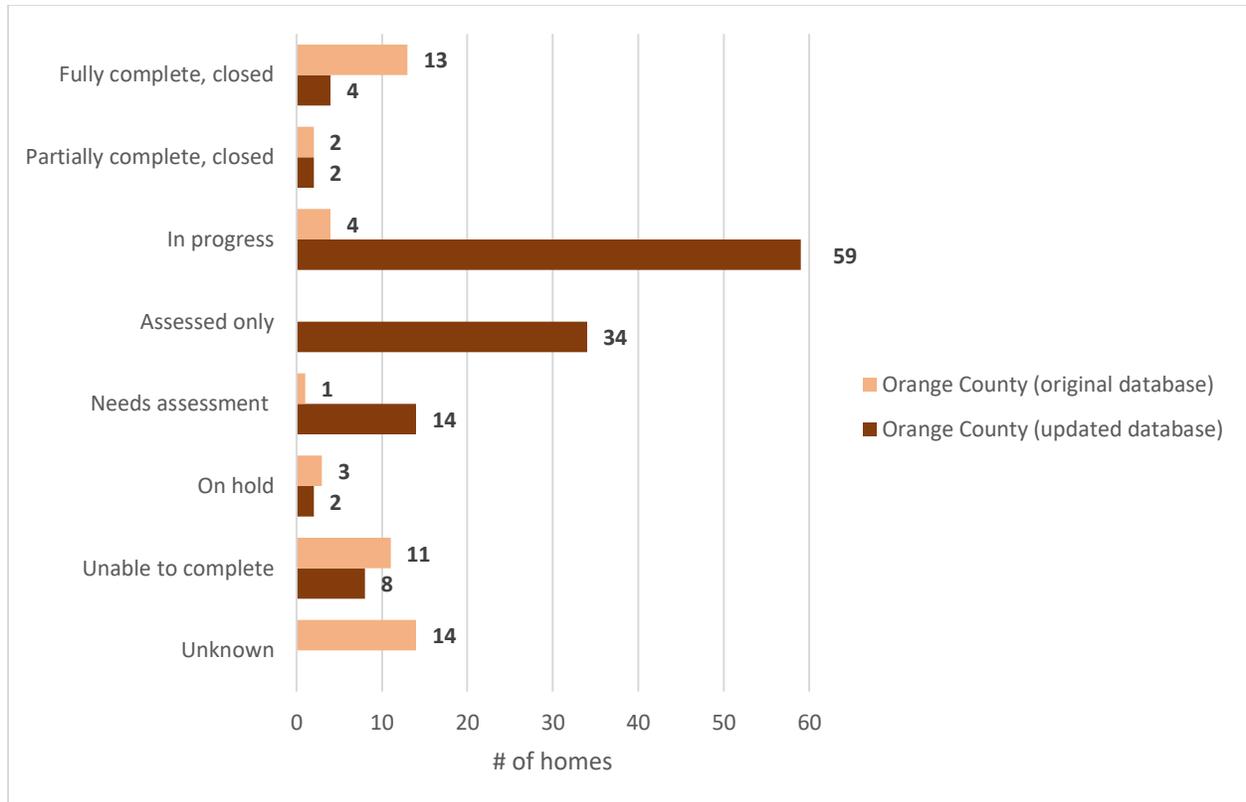


Figure 8 Home repair progress status among homeowners in the original database (n=48) and updated database (n=123)

In the updated database, there are 10 homeowners whose repairs were either unable to be completed at all or are on hold; for 5 of these individuals (50%), the reason for incompleteness or delay was that the applicant passed away or moved to long term care/hospice. Other reasons included: not income eligible for the organizations with technical ability to complete repair; uninterested in referrals within the coalition or in completing necessary preceding repairs; or severe substandard condition of home.

<sup>v</sup> This means that some repair needs may have been left unmet, but the coalition team determined that either: 1) these are not threatening to the health and safety of the home or residents and were outside the priority and capacity of coalition partners at the time, or 2) the homeowner is not eligible for the additional service needs.

## The “Right Information” Leads to Better Organizational Matches

The opportunity to directly refer within the coalition meant that repair jobs were **matched to the organization with the best skill set and capacity**. This was, in large part, because partners now had the “right information” on homeowner eligibility and service needs at the start of the repair process. For example, Habitat explained that, by referring HVAC repairs to CPCA and minor repairs to OCDOA, they’ve been able to stretch their budget and invest more in the jobs for which they’re well equipped; for the first time in several years, Habitat met and exceeded its service goals.

Habitat was able to stretch its budget by referring applicants to an organization better suited to serve certain repair needs (like referring HVAC repairs to CPCA or minor home repairs to OCDOA).

CPCA also increased service,

*“I can honestly say that if it wasn't for this, we probably wouldn't be fulfilling our contract all the way. I've been here almost 20 years and we've always not had enough clients in Orange*

*“I can honestly say that if it wasn't for this, we probably wouldn't be fulfilling our contract all the way. I've been here almost 20 years and we've always not had enough clients in Orange County until last year...”*

**-CPCA representative**

*County until last year, and then this year, it seemed like we're going to have enough houses to spend all the money that we're supposed to spend up there. So, it's great” (CPCA)*

The CPCA representative attributes this accomplishment to having more leads. Administrative data indicated that the home assessment not only identified homes that could benefit from weatherization, but also brought attention to needs that must be addressed before weatherization can be completed. With these projects on the coalition’s radar, homes are served first by other organizations before CPCA, reducing the chance for a weatherization service deferral.

*“..people are calling our organization back and saying, you know, ‘you were able to solve my problem last time and I have a new problem’... they do see the coalition as a solution.”*

**-RTT representative**

Coalition partners also notes the frequency of minor home maintenance requests that their respective organizations received (OC Housing; RTT; Jackson Center). Initially, this was a concern – these requests are not the priority of the coalition. **However, strengthening partnerships and collecting the right information upfront helped organizations**

**better cope with these requests by redirecting them, through the network, to the appropriate resource.** For example, OCDOA often reminded partners that it is well positioned for minor home maintenance work and can accept these referrals from partners. RTT also reframed these requests as a signal of trust in the coalition, saying,

*“I think that's definitely a product of, in my mind, a good thing that people are calling our organization back and saying, you know, ‘you were able to solve my problem last time and I have a new problem.’ It may not be a problem we should be solving; I think I agree with that. It's the wrong tool, but there, they do see the coalition as a solution. And so, I like the idea of journeying towards developing what, you know, resources or whatever to help support the ongoing maintenance because the longer we can keep these houses off our lists, the better off we all are.”*

Identifying this trending need for home maintenance, not just large rehabilitation, OCHPC is responding. The Jackson Center and Habitat chair the newly developed Education & Outreach Committee, which is planning workshops to increase awareness about OCHPC and educate residents about minor home maintenance and repair prevention. While this committee was not a planned component of Partners in Home Preservation, its tools have helped OCHPC respond in a resource-efficient way. One OCDOA representative reflected on maintenance requests,

*“You know, that is absolutely part of that outreach and education branch that I think we’re just starting to build. And having the SEEA grant, I think, has allowed us to sort of see that and have the cushion to be flexible enough to not just focus on putting hammer to nail but also think about these broader issues that we can then address and so that you don’t keep getting called that way. And you can focus more on those urgent repairs and the funding can focus more on those urgent repairs, hopefully.”*

The Jackson Center and Habitat chair the newly developed Education & Outreach Committee, which is planning workshops to increase awareness about the OCHPC and educate residents about minor home maintenance and repair prevention.

Essentially, increasing the strength of partnerships and collecting the right information **supported internal coalition capacity-building and gave organizations the tools to respond** to emerging trends in home quality requests, while protecting their financial resources.

#### Aggregating Data for Advocacy

In addition to building service and infrastructure capacity, the collaborative tools are generating cross-county data about home repair provisions and outcomes. In unifying evaluation and aggregating data, the coalition is identifying the populations being served and common repair needs, as presented in this report, giving leverage for advocacy around funding and policies for a home preservation and repair systems.

The unique combination of experiential knowledge, which comes from navigating the home repair policy and funding landscape, and having data on service needs positions the coalition to not only recruit additional funds but also play an active role in advancing equity through home repair.

OCHPC is sharing data with local government entities and community-based organizations to increase funding and programming. For example, OCHPC consulted with OC Housing and the OC Sustainability Coordinator to prioritize home repair and improvements in the use of a new county-level climate action tax revenue. The Orange County Commission for the Environment and

NAACP Chapel Hill-Carrboro partnered to pursue a grant from these funds; they also came to OCHPC for information on the need for water heater replacements in the county. The coalition coordinator quickly provided aggregated data to the group on how many homes currently needed water heaters.

Additionally, OCHPC is using its insights to partner with the municipalities and county to ensure that home repair and rehabilitation is addressed in their strategic plans for racial equity, facilitated through the Government Alliance on Race and Equity (GARE) process. OCHPC partners have offered local governments specific policy-related questions to explore the advancement of both home preservation and racial equity. The unique combination of experiential knowledge, which comes from navigating the

home repair policy and funding landscape, and having data on service needs positions the coalition to not only recruit additional funds but also play an active role in advancing equity through home repair.

## Funding Management

### Creatively Managing Collective Funds

Partners are using creativity to problem solve and build capacity by collectively funding operational functions. In practice, partners are working beyond linear sequences and sometimes fund each other to **fully utilize the range of strengths, expertise, and resources that are available within the coalition.**

One RTT representative explained,

*“I think, initially we envisioned it might be organization A brings resource 1 and does something, and then organization B, sort of in a line. And what's turned out to be the case is we sort of are finding that partners are good at different things and can sort of fill those different holes. And so, [OC Housing] and I have worked together on several projects, and we've been able to work with [CPCA] on projects where the funding might be coming from one partner and going to another to do the work in some cases. And so, I think there's a lot of- it has sparked a lot of creativity by thinking about not just how all of our organizations meet and talk about houses and then go do our own thing. But really thinking about it as a collective action kind of activity is definitely different than we've ever experienced until the coalition was formed. So, it's been exciting for sure.”*

The value of cross-funding is that organizations are getting to do the jobs that they are best suited to do.

The collaborative tools are allowing organizations to not only manage their individual repair budgets, but also increase capacity through **shared operations and costs.** An OCDOA representative explained,

*“I mean, the SEEA Grant paying for the home assessment manager is vital, and an absolute sort of backbone of the whole process for the coalition and helps all of us. And I think it's novel in that, you know, RTT is essentially working for the coalition. They're not just focused on their work and, and that cooperation across the coalition is, is what sort of defining us and is different than I think other ways that that this has been approached. And then potentially also that sort of same cooperative approach when it comes to the Department on Aging being willing to support the administration and sort of coordination of the process in the same vein, where we're sort of working for the coalition as opposed to just for the Department on Aging. So, the willingness to step into that coalition and doing ‘coalitioning’ a little bit differently. I think that the SEEA Grant has allowed us to do that with funds to sort of be a little bit more flexible about our bottom line when it comes to our specific, you know, our individual organizations and the work we're trying to do.”*

In these ways, the Partners in Home Preservation, and the core components which will outlast it, have provided a **safe opportunity to explore and develop collective capacity, giving organizations the resources and motivation to operate beyond their own boundaries.** With this successful increased capacity, each coalition is able to justify and seek continued support for their collaborative work using the Partners in Home Preservation program outcomes as evidence.

### Efficiently Using Independent Funds

Using the collaborative tools, organizations have not only changed their collaborative processes, but also streamlined internal operations for better planning. With the homeowner information from the screening tool and the project needs from the assessment, **organizations are engaging in effective communication to plan and strategize around funding.**

Habitat attributed their improved funding efficiency to more easily connecting with eligible applicants whose repair needs are in Habitat’s scope of work,

*“through the SEEA grant and OCHPC collaboration, Habitat was able to have a steady flow of applicants and better match our skills to the needs of homeowners. For example, having access to a database of applicants through the unified application process, enabled Habitat to plan a quarter ahead which enabled us to better match projects with available construction staff, match projects with funding, and coordinate location of projects completed during one time.”*

Moreover, Habitat was able to stretch its budget by referring applicants to an organization better suited to serve certain repair needs (like referring HVAC repairs to CPCA or minor home repairs to OCHOA).

*“...having access to a database of applicants through the unified application process, enabled Habitat to plan a quarter ahead which enabled us to better match projects with available construction staff, match projects with funding, and coordinate location of projects completed during one time...”*

**-Habitat representative**

This means that they have been better able to meet their goals and increase service provision. In the last 2 fiscal years, Habitat didn’t reach its goal of serving 30 households. This year, though, Habitat exceeded their target of 30 homes by 2 even in the midst of interior service referrals due to COVID.

An RTT representative echoed this idea of making more appropriate use of funding, stating,

*“my take would be the assessment is probably the thing that has done the most to give us the tools to...treat all those disparate funding sources that have to be spent in*

*different ways. It allows us to think strategically about that before beginning the project, as opposed to finding out halfway through, we bought the wrong thing with the wrong money, and now we're stuck. That would be my, my sort of, I guess, reflections on that.”*

### Efficiently Securing Funds

Service providers are making better use of the funds available to them, and funders themselves appreciate the ways in which the collaborative tools improve the funding process. One representative from the Town of Carrboro said,

*“You know, we're a really small local government organization, and it's administratively burdensome for us to have to do those small, under \$5,000 projects, and have five of them. But you know, [RTT] lately has been able to bundle those together, and then we can bring them to our advisory board and say, you know, here's a group of repairs that are needed in our community and I think it's helped them to, to be able to look at it comprehensively. And there's been a lot of support from our Affordable Housing Advisory Commission, and just from staff for the way the process has been working.”*

Organizations now proactively bundle municipal funding applications because they have the “right information” - from the screening tool and home assessment- to make their appeals. Related, in developing a new application process, the Town of Carrboro specifically requested and incorporated feedback during OCHPC meetings to facilitate more intuitive and helpful processes for partners.

## Emergent Benefits

### Supporting Organizational Development

The effects of the Partners in Home Preservation are not limited to grant recipients. Launched in July 2020, Hope Renovations (Hope) is a non-profit repair provider and trainer for women in the trades. The founder of Hope connected with the OCHPC early in Hope's planning phases, and this partnership shaped the development and scope of their organization's work in the county. Leveraging collaboration from the coalition and the collection of home assessments, they were able to identify the best way to fill gaps in the county's home repair network. Moreover, they've seamlessly integrated themselves into the collaborative process by using the unified screening tool, rather than inventing their own.

### Leveraging and Facilitating Organizational Strengths

While Hope has been able to define its scope of work as a result of improved collaboration, the Jackson Center and OCDOA have been able to better focus on their existing missions and play to their strengths.

A community-based organization whose mission is *"to honor, renew, and build community in the historic Northside and Pine Knolls neighborhoods,"* the Jackson Center is involved in home repair as a means of achieving housing justice, retaining long-term residents, and preventing community loss.<sup>14,15</sup> Improving collaboration among home repair service providers meant that the Jackson Center can focus on its strengths and purposes, rather than being bogged down with the nitty-gritty details of the repair process, like conducting assessments or navigating referrals. The Jackson Center representative explained,

*"we get to do more what we're more built to do, what our strengths are, which I think is to be advocates. And to be, like: over here is the full situation of the house. Here's the background, here's why this person is not a homeowner. Here's the nuances of those situations specifically, that also connects to how different challenges and disparities that there relate to housing and especially in connection to race and class."*

One such program, The Jackson Center's Property Tax Mitigation Program, works with older adult residents in the community to set up payment plans for and provide support towards outstanding property taxes. After the Town of Carrboro awarded a bundle of funding to RTT, RTT coordinated with the Jackson Center to collect proof of payment plans and life-rights for 3 applicants in their service area, a requirement before the Town can release funds. As a trusted organization in the community, the Jackson Center's collaborative approach has been essential for moving repair work forward; creating

### **Coalition Story - Freeing Up Organizational Capacity**

The Jackson Center previously had a staff member doing home assessments for its repair program, but had to reassign that person to another program. They did not have the funding for another staff member to fill the home assessment gap, so the availability of the OCHPC assessments is "fantastic" (Jackson Center). Importantly, the Jackson Center serves residents in select neighborhoods in Carrboro and Chapel Hill, but they would often receive requests from homeowners outside of its service area. Before the formalization of OCHPC, the Jackson Center would internally figure out which organizations to refer these homeowners given the limited information they collected about the applicant on their own form. That's not the case anymore; the Jackson Center representative explained,

*"But now we don't have to do that; now we can just get [the unified screener] and send it. And then it's, it's processed and figured out by the coalition. So, it allows us to just refer more people."*

space for it to focus on its advocacy and outreach strengths not only benefits its own mission, but also lends an important service to OCHPC.

Collaboration with community organizations like the OCDOA and the Jackson Center leverages resources and relationships to better serve homeowners. OCDOA is a “one-stop resource where older adults and caregiver can meet their social, mental, physical, financial, and day-to-day practical needs” with social workers as a backbone resource.<sup>16</sup> In one case, OCDOA used these strengths and recruited the help of a Mandarin-speaking social worker to translate between OC Housing, CPCA, and the homeowner. Moreover, the social worker helped the homeowner understand the terms of the financial resources used and helped establish expectations, including the need for the homeowner to prepare for the work by clearing clutter. These are key examples of how **building internal coalition capacity and creating shared responsibility has positive consequences: homeowners’ repairs move forward and organizations commit time and energy towards achieving their individual missions.**

*Benefits in Chatham County*

Work Progress

CCHRC’s database indicates that, since January 2019, the group has completed work on **45 homes** (37.2%) and has partially completed work on another **2 homes** (1.7%) (Figure 9).<sup>vi</sup> In addition, CCHRC is in the process of planning work- with homeowners either on the waitlist or awaiting a partner match- for another 22 households (18.2%). CCHRC also has another 19 homes (15.7%) with assessments in progress; however, progress could not be assessed for 25.6% of homeowners in the database due to missing information.

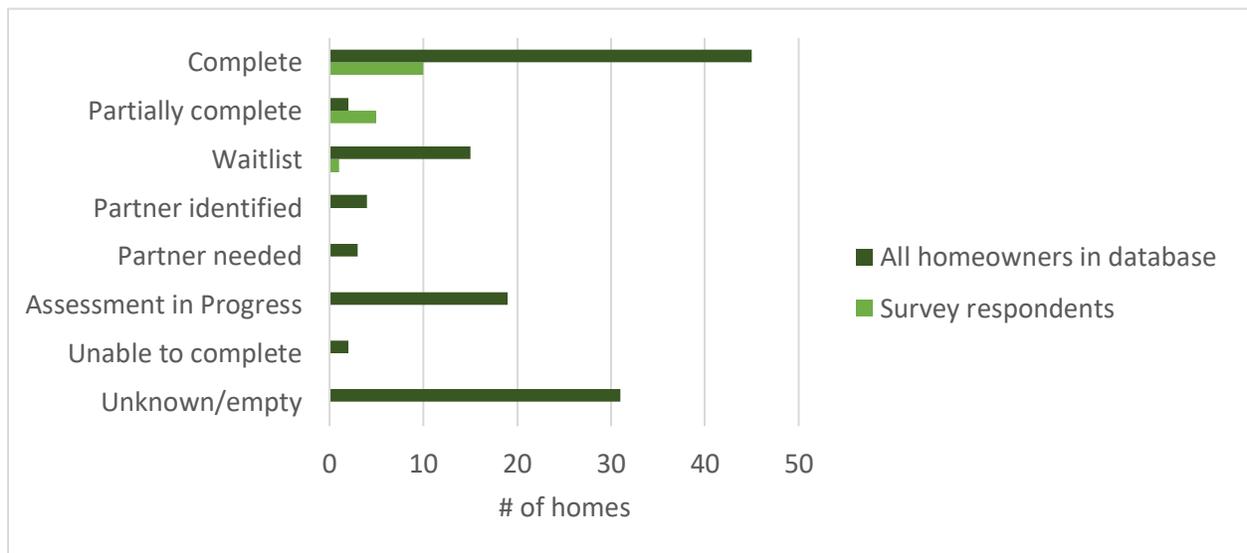


Figure 9 Project status among Chatham County survey respondents (n=16) and all homeowners in database (n=121)

<sup>vi</sup> As with demographic data, organizations consulted their individual records for progress among survey respondents to provide high quality data. The discrepancy between database and direct organizational records represents misclassification of progress status within the database and inconsistent use of status terms, which limit data quality.

## Building Capacity

CCHRC partners say that the grant and the creation of the collaborative tools came at a “fortuitous” time and has had an impact. CCHRC has

*“had several opportunities to expand and create leverage of funding, and those are independent of SEEA, but we’ve been able to use them so much more effectively and scale the work...I think in large part it’s because of the sort of amplification that SEEA provided”* (RTT representative).

When asked what particular aspect of the SEEA grant made that amplification happen, partners pointed to the comprehensive home assessment. **The creation of the home assessment manager and the comprehensive assessment fundamentally changed organizational operations and the relationship that organizations have with funding.** For example, prior to the comprehensive home assessment, RTT was “responsive” to funding, in that once a grant became available, they would consult their waiting list and find homeowners who fit the bill for the grant requirements; only then would RTT conduct the assessment to do the repair projects. Now, one RTT representative says,

*“we’ve able to get out in front of these homes. So even if a home doesn’t necessarily have a pathway to doing it right then, doing the assessment earlier in the process...we can find other ways to get them help...and its definitely allowing us more control over the program and giving us an easier time coming up with options for the homeowner...That’s probably the most significant change directly created through the SEEA grant at the moment...”*

A COA representative provided a concrete example of creating leverage: COA received an \$85,000 grant to serve at least 13 homes, but after identifying the repair needs for these families, realized this would not be enough money to complete all of the repairs. However, he continued, “[RTT] can now use that information, matching it with other resources that he has to bring to the table, and then also hopefully make the case for additional funding from other sources” (COA).

An asset of the Partners in Home Preservation program was that it provided the opportunity for CCHRC to develop its own collaboration priorities, allowing it to focus on leveraging funds.

## Simplicity was a Benefit

In explicitly asking about difficulties or drawbacks to using the collaborative tools, partners came up empty or even redirected their responses to additional benefits. For example, the representative from CPCA said, “I can’t see where it has [created challenge], no. This has been helpful in every way.” A representative from COA agreed, saying

*“I don’t see that it’s had any negatives. It’s been very helpful because if I get a call or a need brought up, I can always count on [RTT] to tell me if they are aware of it or give me background information, so it’s been very helpful for me.”*

COA also added that the development and utilization processes brought COA in stronger connection with TJCOG and the NC Justice Center, as well as Orange County (COA). Finally, an RTT representative appreciated that

*“the grant gave us the flexibility to sort of document and utilize our own process in Chatham, even if the process is different and doesn’t rely as much on the formality of meetings and stuff like that. Had it forced us into a lot of extra meetings that weren’t productive, I think it could have been a negative thing, but I think that the way it’s been structured... it’s sort of what we originally defined... [we] sort of flexed to meet the needs of Chatham”* (RTT representative).

This **flexibility helped CCHRC avoid challenges and remain focused on its priority** to leverage funds. This primary focus on funding is a consequence of *“having three agencies with pretty defined missions that don’t overlap”* - making it simpler to direct projects- and of limited municipal funds. In Chatham County, there are *“fewer people holding the funding levers”* and funding is centralized at the county level because *“the towns in Chatham county haven’t made a lot of particular investments themselves in this particular space around affordable housing...”* (RTT). This balance of attention to funding over shared case management highlights a *“trade-off between complexity and availability of resources”* in that the addition of other agencies and partners with unique resources to mobilize improves funding access, but also requires that partners *“sort out who’s doing what a little bit more than we do in Chatham,”* as partners do in Orange County (RTT). Without a complicated landscape of municipal funds, creating complexity within the coalition was not necessary for organizations to achieve their shared goals.

### *Managing Previously Reported Collaboration Challenges*

After two years of building collaborative infrastructure, CCHRC and OCHPC are positioned to thrive in the future. As has been previously studied, the policy landscape around funding and homeowner hesitancy to take on loans can present challenges in providing collaborative home repair services.<sup>9</sup> It is these external barriers, in part, that have motivated the very existence of CCHRC and OCHPC; while present, they have not been insurmountable.

### Complex Eligibility Criteria

Home repair organizations are reliant on external funding sources- state and municipal, private and philanthropic- to provide service. However, eligibility requirements are variable and timing is often incompatible, creating service difficulties. For example, an older adult contacted OCDOA about a leak in her mobile home on a rented lot; the repair need was clearly beyond OCDOA’s scope, so they immediately reached out to OC Housing directly, knowing that it was the only other organization in the coalition whose eligibility did not require land ownership. OC Housing quickly responded by assessing the issue and providing the resident with an application for the Urgent Repair Program; however, they could not move forward with the repair unless home ownership was changed from the older adults’ son to the resident, despite being the long-term resident, leaving a gap in service. **The many factors of eligibility – verified income; age; ownership, rights, and deed documentation; property tax payments – vary across funding sources, which creates complications.**

### Limited Funding Availability

Allowable uses of funding may be limited and funding sources for weatherization and rehabilitation are disparate. Literature suggests that these funding regulations presented significant challenges to a collaborative home repair interventions in 11 municipalities across the US.<sup>9</sup> Partner organizations in CCHRC and OCHPC agreed that these external parameters were limiting. However, they also suggested **that the coalition infrastructure that has been built through the use collaborative tools has helped to manage the challenge.** When asked about the barrier of inconsistent eligibility requirements for funding, one RTT representative responded,

*“As much as is possible, we’ve done a really good job of sort of weaving those things together and getting folks the help that we can provide. But I think it is fair to characterize that as a barrier. It’s just not one that we have let completely sort of stopped us, but it’s definitely slowed us down.”*

In fact, one representative from OCDOA agreed that this is a challenge, but also cited disparate funding as a motivation for collaboration:

*“Yeah, I feel like the actual coalition is trying to sort of solve that problem by working together in pairing sort of CPCA with RTT or CPCA with the county and, sort of us, you know, bringing two organizations that are pulling on different funding mechanisms together to do the same home. But ultimately, no, we can't get the same funding to those same organizations, but we can do the job together. So, it's most efficient when possible. So that's how I would say that, that barrier is there, but that's what the coalition is, in some ways, trying to solve through communication.”*

At this point, the coalitions are effectively coping with the difficulties of funding regulations and processes by strategically sequencing and matching funding sources. To completely eradicate the challenge, though, funding policies, themselves, have to change; **while policy change is outside of the coalitions' scopes, the outcome of strengthened partnership with municipal funders gives the coalitions leverage and evidence for advocacy at the local level**, and this is an area in which OCHPC is actively developing.

#### Types of Funds Available: Grants vs. Loans

Related to funding regulations is the *type* of funding that is available. In some cases, the best- or only-funding tool for service is for the homeowner to take out a loan, like one through USDA's Section 504 program. Partners in Chatham and Orange Counties say homeowners are sometimes reluctant to do so and hope that a grant comes along. This is not just wishful thinking; one RTT representative put it, this hesitation is sometimes *“with good reason,”* as homeowners may *“have been victims of predatory lending practices in the past and then are just generally suspicious in that stuff.”* In these cases, **connecting homeowners with the resources to understand the loan terms is important, and transparency about funding mechanisms from the start may help manage expectations.**

#### Limited Staffing

The final challenge presented by Rohe and colleagues<sup>9</sup> that resonated with coalition partners was staffing. While **issues of “turf” and credit have not been barriers to collaboration here**, as previously suggested, **partners agreed that capacity, skill, and turnover of staff are salient challenges.** One TJCOG said of collaboration among organization staff,

*“I think everybody is just really pumped to help more people. I mean, we're lucky in that we have a lot of really good people who are a part of these organizations. That is not a challenge for us.”*

Still, a Habitat representative brought up the difficulty of keeping the shared database up-to-date; a CPCA representative echoed this concern, explaining the difficulty to provide updates when staff time is limited and there are insufficient funds for hiring.

As discussed in **What We Learned About Developing Collaborative Tools**, identifying a home assessment manager and coalition coordinator with targeted knowledge and skills is important and can be a limiting factor if not met. CCHRC and OCHPC partners identified these priorities through practice, and future coalitions should do the same: critically thinking about their own needs and ability to find those traits or capacity to train for them.

The final barrier related to staff is turnover. As one OCDOA representative said,

*“And so, I think staff turnover is something that's just going to happen, but it's about being able to have the education and sort of support right there for that new person as they step in. And we hope that the attitude of that person is one towards collaboration and support because I think when that is present, we we've seen a lot more growth and development of this coalition when all parties are really on board and interested.”*

An unavoidable and inherent process, **turnover can be a challenge, but is manageable through partnerships and supportive relationships** that have been strengthened through the Partners in Home Preservation project.

Demographic Characteristics of Home Repair Applicants

Orange County Demographics

Age

**OCHPC is predominantly serving an older adult population.** The majority (80.1%) of homeowners in the updated database are over the age of 55 (**Figure 10**) and the most frequently served age group is homeowners between 70 and 80 years (34.6%), an over-representation compared with the older adult population of the county. The lower proportion of missing data in the updated database (8.9%) compared with the original (77.1%) gives OCHPC a clearer understanding of the age demographic which it serves, and guides non-home repair and social service referrals. This high percentage of older adults may be the result of different service-seeking behaviors by age, but may also represent the disproportionate need for home repair among the older adult population. The preponderance of older adult service recipients highlights the importance of OCDOA as a partner.

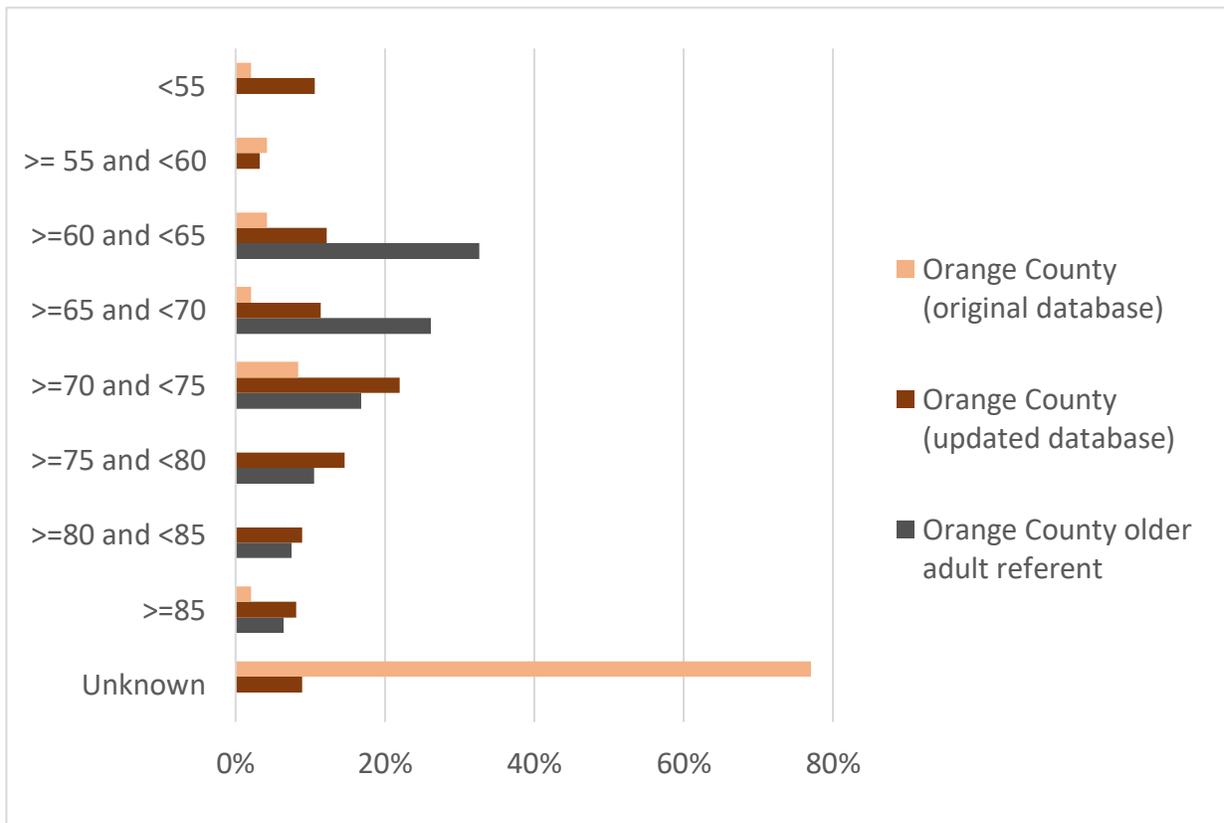


Figure 10 Age of homeowners in each the Orange County original (n=48) and updated (n=123) databases, compared with age distribution among Orange County older adults (60 years of age and up)

Race

**The racial composition of OCHPC applicants is not representative of the general county population, highlighting racial disparity in home repair needs.** Among homeowners in the updated Orange County database, the majority (73.2%) identify as Black or African American (**Figure 11**). The disproportionately large representation of Black or African American people needing home repair services through OCHPC is unsurprising given the legacy of racism in the housing sector.<sup>17,18</sup> Notably, OCHPC did not collect racial/ethnic identity in the original database; with this information, OCHPC is now equipped to understand home quality disparities in the county and expand its advocacy capacity.

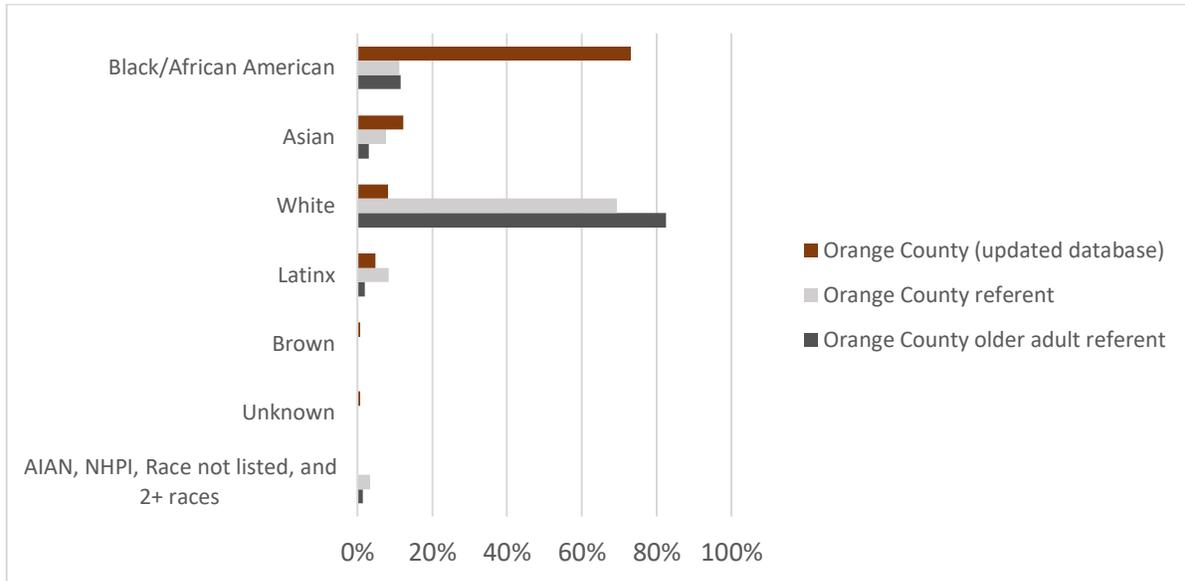


Figure 11 Racial or ethnic identity among homeowners in the updated Orange County database (updated, n=123), general population, and older adults

Income

**Among all OCHPC service recipients, half make under \$25,000 in annual income (50.9%),** an over-representation when compared with the county (17.9%) (**Figure 12**). While the proportion is much smaller among homeowners in the original database (37.6%) than the updated (56.1%), this may be an underestimate given the large amount of missing data (41.7%). Using the number of household members, too, we determined that 76.4% of homeowners in the updated database have income below 50% AMI (**Appendix I**); we cannot estimate this figure for homeowners in the original database without household member information.

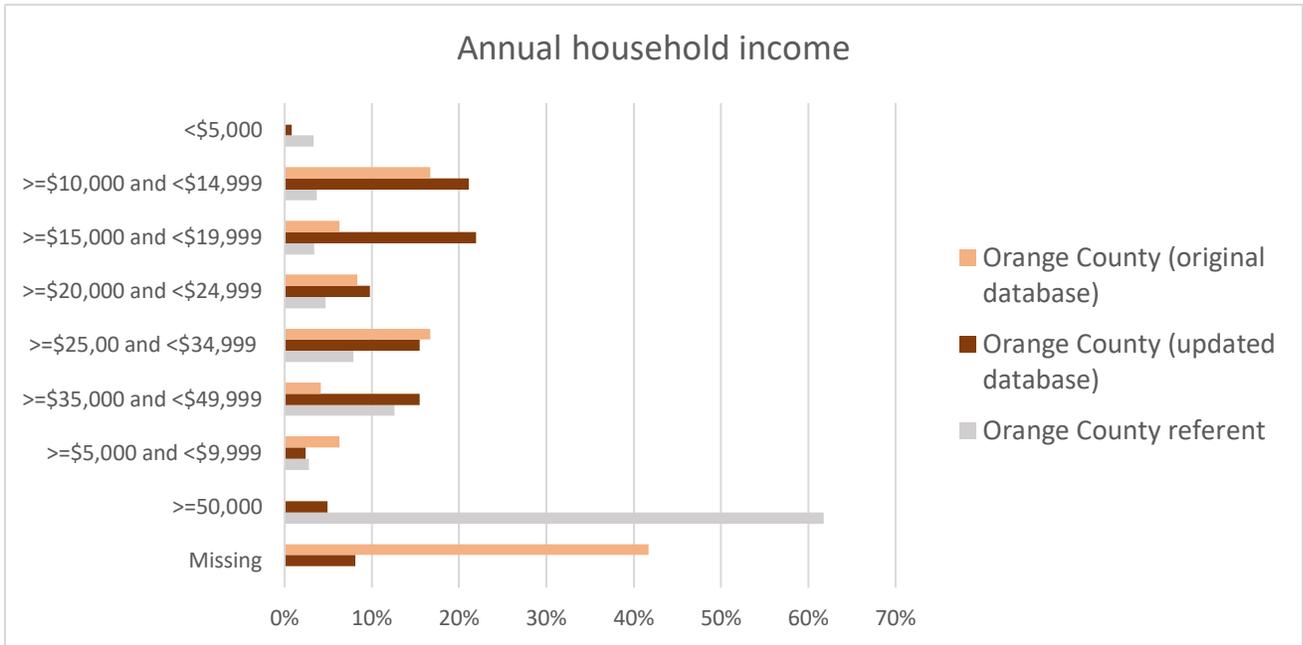
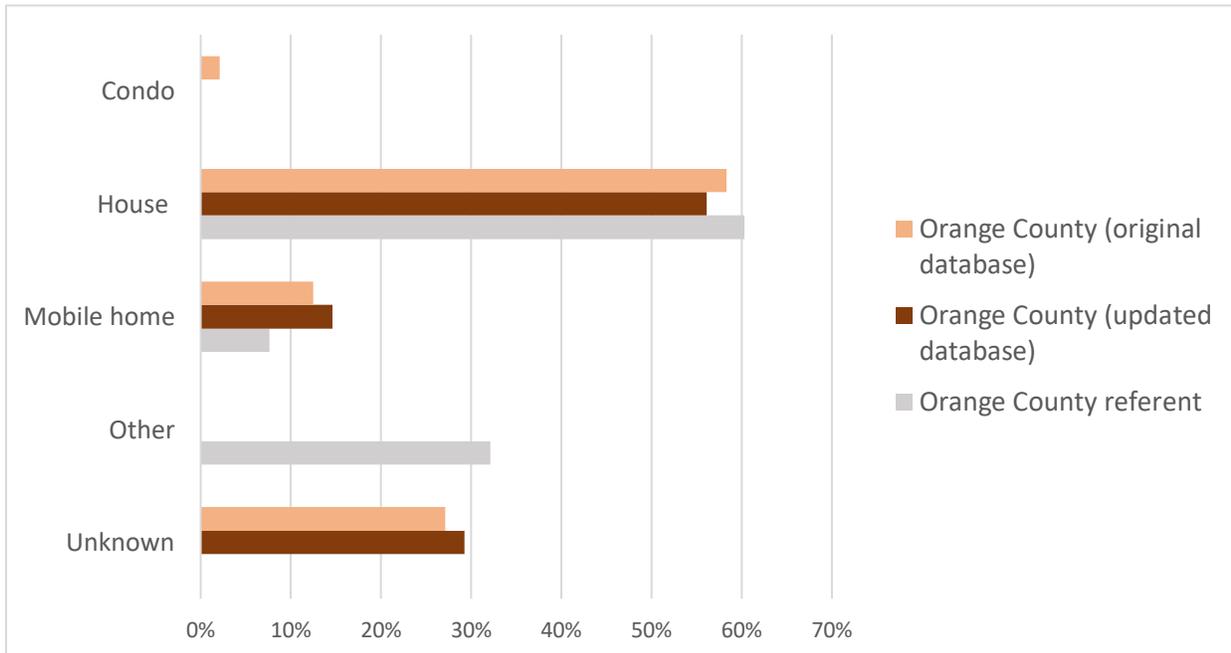


Figure 12 Distribution of annual household income among homeowners in the original Orange County database (n=48), updated database (n=123), and general County population

### Dwelling

In addition to age, race, and income-based disparities we also find that dwelling type of OCHPC applicants is not reflective of the county. While most homeowners seeking repair services in Orange County live in a single family, detached house (56.7%), **there is an over-representation of residence in mobile homes** (14.0% among both databases vs. 7.6% in the general county population) (Figure 13).



Among mobile home owners, land tenure is either rented, complicated, or unknown for many (22.2% in the updated database, and 66.7% in the original), which limits homeowners' eligibility for some organizations ([Appendix I](#)).

### Geography

Over three-quarters of home repair applicants (79.3%) are located in **Chapel Hill, Hillsborough, and Cheeks**, which are the 3 most populous townships in the county and home to the Towns of Chapel Hill and Carrboro, Town of Hillsborough, and part of the City of Mebane, respectively (**Figure 14**). Moreover, each of these townships have older housing stocks compared with the county average. However, the largest cluster of service need within Cheeks appears to be located in an area with relatively housing stock equal to or younger than the county. Detailed data on locations of service is in [Appendix K](#).

#### Legend

##### Application location by status

- Complete
- In Progress
- Waiting for Work
- Unable to Complete
- Unknown Status

##### Township population (2018)

- 3,479 - 5,378
- 5,379 - 7,218
- 7,219 - 15,291
- 15,292 - 93,209

##### Median Year Structure Built (2019)

- 1962 - 1986
- 1987 - 1997
- Orange County Municipalities

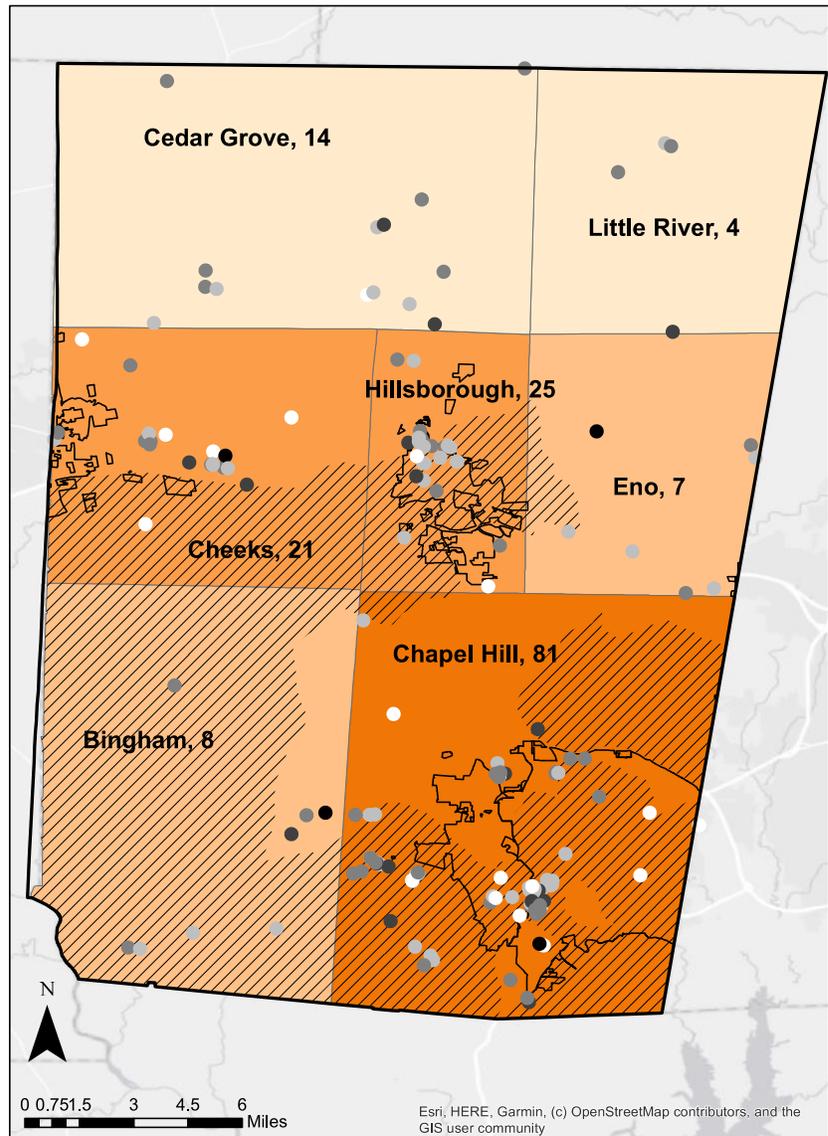


Figure 14 Locations of service applicants in Orange County

Chatham County Demographics

Income

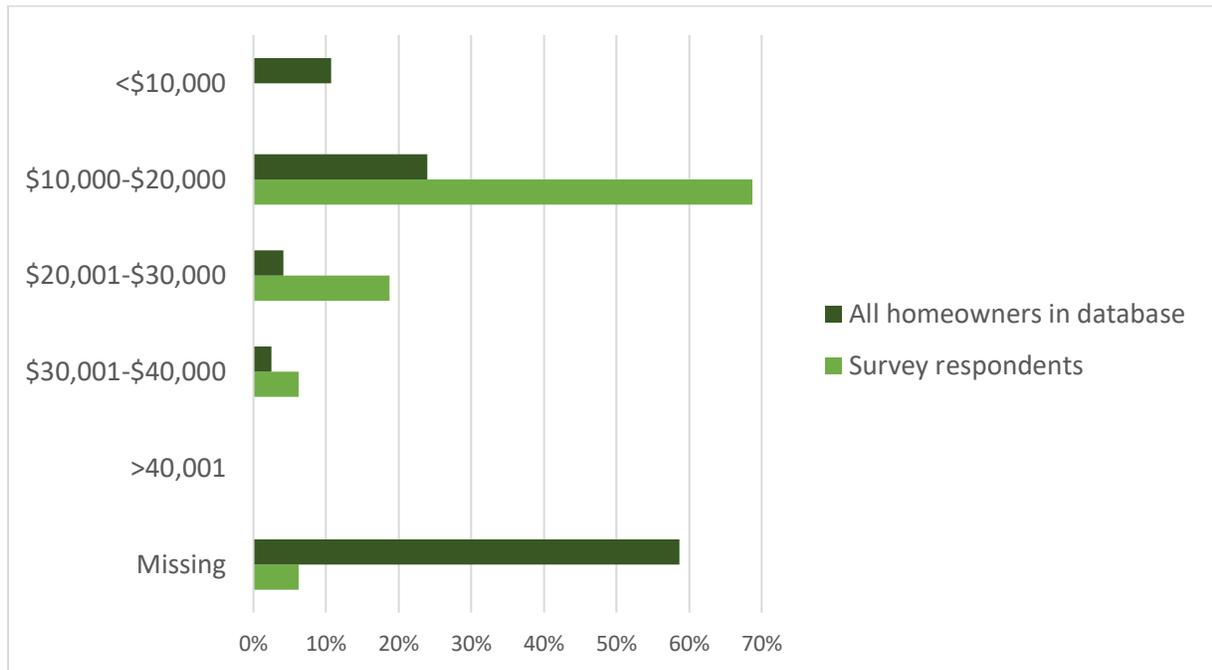


Figure 15 Household income of Chatham County survey respondents (n=16) and all homeowners in database (n=121)

Among all homeowners in the CCHRC database, **the most common annual income is between \$10,000 and \$20,000 (24.0%)**, but there is a substantial amount of missing data (58.7%). Among survey respondents, too, the majority fall within this income category (68.8%). Because survey respondent data has fewer missing data points (6.3%) than the overall database, it provides clues to the general income distribution of CCHRC’s service population (**Figure 15**).

However, the data that is available has limited comparative value. For example, we are unable to compare this to the income distribution of the general Chatham County population because the income category boundaries used in the database do not neatly align with the categories used in the US Census Bureau’s American Community Survey (ACS). Unlike the OCHPC database, CCHRC’s does not include information on the number of people in a household; we are, therefore, unable to report the distribution of homeowners by percent of Area Median Income (AMI), which is frequently used to describe income level and determine service eligibility.

Specific Populations

**Based on survey respondents only, CCHRC serves a higher proportion of older adults than there are in the County (Figure 16).**

In the Chatham County database, homes are tagged with the designation “elderly” when applicable; with no complementary tag for “not elderly,” a missing tag may either represent missing data or no presence of an older adult in the home. While it is likely that the tag is appropriately

applied when it is needed, the small proportion of missing data and high proportion of older adults among survey respondents (75%), indicates that the database may underestimate the presence of older adults in homes being repaired. The same pattern is observed for the presence of people with a disability in homes served by CCHRC (Figure 17); if we use the data from survey respondents to represent the CCHRC population, CCHRC applicants more frequently have a disability (62.5%) than the general county population (15.4%).<sup>vii</sup> Data tables are available in [Appendix J](#).

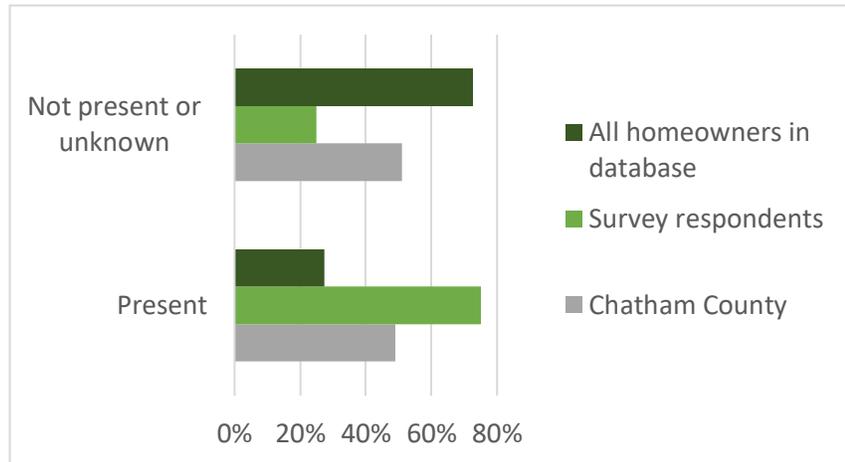


Figure 16 Presence of older adult among survey respondents (n=16), all homeowners in database (n=121), and Chatham County

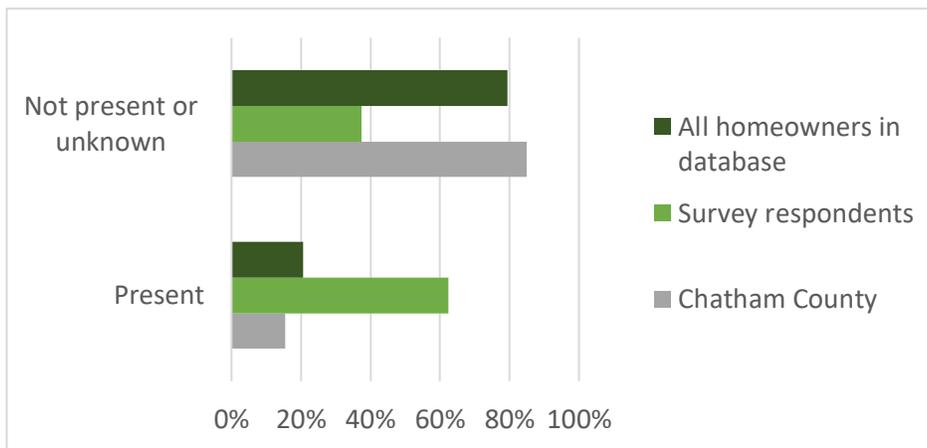


Figure 17 Presence of persons with disability among survey respondents (n=16), all homeowners in database (n=121), and Chatham County

<sup>vii</sup> Both “presence of an older adult” and “presence of a person with a disability” in the CCHRC database are used to describe the household level; whether one person or all people in the home fit the description, the proportion does not change. In contrast, the county referent from ACS describes the proportion among individuals, creating an imperfect comparison. Still, the frequency with which older adults live in one-person households strengthens the ability to compare.

### Geography

Over half of home repair applicants (60.3%) are located in **Matthews, Center, and Baldwin**, which are the 3 most populated townships in the county (**Figure 18**). Pittsboro, which is the county seat, and Siler City are located within Center and Matthews respectively. The disproportionately high service need in Matthews is unsurprising given that the median home age is equal to or older than the county average in addition to its large population. Despite a similarly large population, Williams’ low service need is expected given that homes in this area tend to newer than anywhere else in the county.<sup>viii</sup> While project status is unknown for 17 homes (18.3%), the data that is available indicates that projects are most often completed in Baldwin, Matthews, and Haw River, all of which have service applicants in similar or greater proportion to its population. See [Appendix K](#) for geographical data.

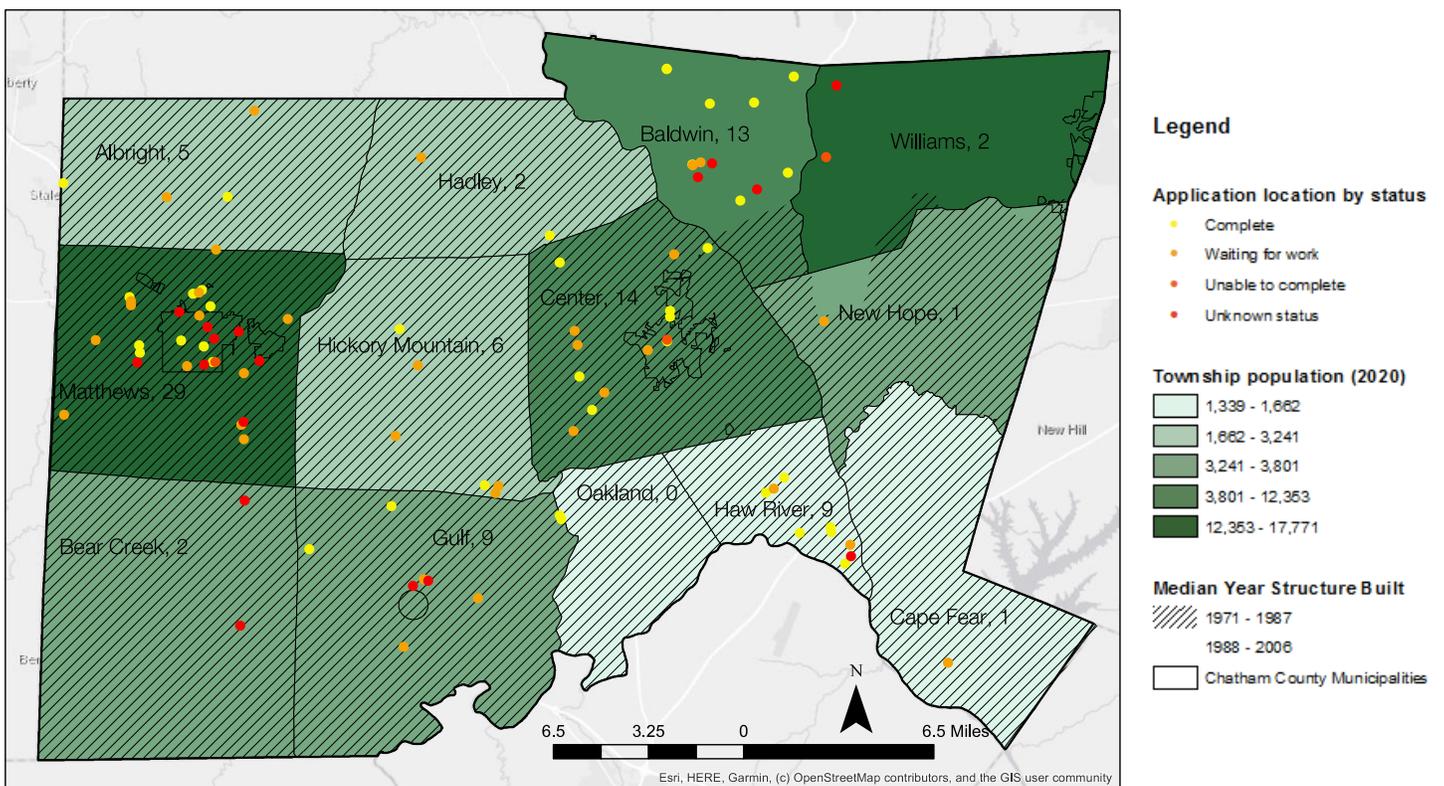


Figure 16 Locations of service applicants in Chatham County

### Homeowner Experience

#### A Case Example

The impacts of the Partners in Home Preservation program are represented by one homeowner’s experience, described below in field notes taken following the researcher-administered homeowner survey. With a proactive and coordinated effort, collaborative home repair systems can make powerful impacts in accessibility, financial stability, health, and overall well-being. Homeowners can experience

<sup>viii</sup> The median year structures were built in the census tract that mostly covers Williams Township is 2006, the most recent of any census tract in the county.

less burden while receiving even more services than they had originally sought. After this excerpt, we unpack these benefits in greater detail to demonstrate the ways in which collaborative tools supported residents.

*Excitement and gratitude flooded her voice as she answered my interview questions. Sally recounted each phase of her family’s home repairs: weatherization from CPCA in November of 2019, a ramp built by Habitat the following April, and most recently a roof repair by RTT in September 2020. Her enthusiasm swept me up a bit as she described her experience with the Coalition. Thankful that the Jackson Center connected her with OCHPC she said, “ they could have just gotten me set up with a ramp- my initial request- and then move on.” Impressed by how proactive we were, she explained, “Had the Jackson Center not connected me with OCHPC, my family never would have known about all of the repairs our home needed and how much it affected our lives. In fact,” she explained, “ I didn’t even realize that my roof was falling apart or that the carbon monoxide monitor was broken!*

*Sally could now get in and out of her home using her wheelchair, an impossibility before. As she shared her experience, I saw the subtle yet important differences some of the home repairs made for Sally and her family. She described how the insulation to the attic improved air flow, “It’s more comfortable, quieter even, making it easier to get a good night sleep.” She explained that many of the rooms used to have big temperature differences- one ice cold, another too hot, some too humid. With relief, she celebrated that she was less worried about her asthma being affected by poor temperature regulation. She admitted, “I still occasionally use a space heater to manage my anemia,” but assured me that both the AC and heat work much better now, reporting with appreciation also that her family’s utility bills are going down. To top it all off, Sally agreed that she felt better able to manage a future home crisis; she said, “we have a longer life expectancy on the house and that way, if things pop up in the future, we may be able to afford small things here and there.” As we wrapped up our phone call, I was amazed at the depth and significance these home repairs had on Sally and her family.*

### Survey Results

The evaluation identified 58 individuals who had at least one repair project completed and were, therefore, eligible for participation in the survey (24 in Chatham County and 34 in Orange County). The survey had a response rate of 67.2% (n=39). Of the 39 surveys conducted, 4 were completed by a caregiver of the homeowner or service recipient, all in Orange County. **Figure 19** shows the proportion

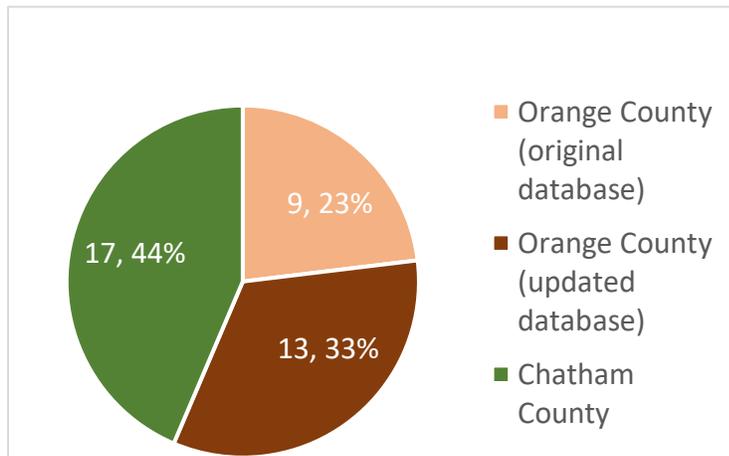


Figure 17 Survey participants by location and database (n=39)

of survey participations by county and database. We stratified results by location to demonstrate variation across intervention levels; the collaborative process is increasingly robust for participants in the Chatham County database, then Orange County’s original database, and then Orange County’s

updated database.<sup>ix</sup> However, we consolidate the Orange County databases for the purpose of explaining survey results because participants in both the original and updated databases experienced higher levels of organizational collaboration than before Partners in Home Preservation. Complete data tables, which stratify Orange County databases, are in [Appendix L](#).

Throughout the explanation of survey findings, we also stratify the results by completion status because this may influence homeowners' perceptions on the impact of the repairs on their lives. As **Figure 20** shows, these completion statuses are driven by county and database, with the proportion of jobs in the "completed" bucket driven up by Chatham County participants and those in the "ongoing with all work planned" bucket exclusively from Orange County, specifically the updated database. This trend is important to keep in mind in interpreting survey results.

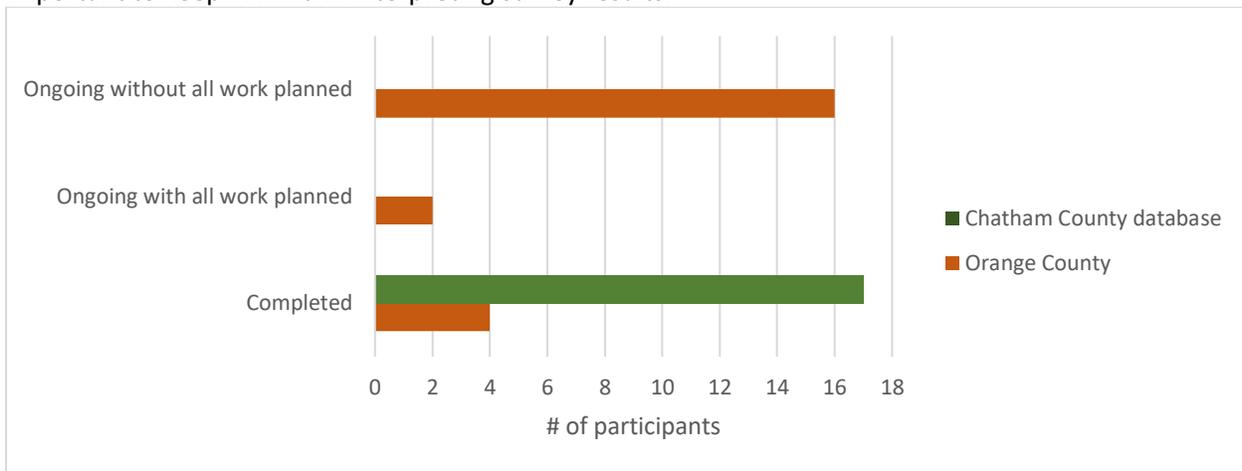


Figure 18 Completion status of repair projects by county (n=39)

### Application Process

**Across counties, the majority (53.8%) of survey participants found the application process to be either somewhat or very easy (Figure 21)** with a higher proportion of Orange County respondents (58.3%) reporting ease than Chatham (47.1%). Four people in Orange County reported getting application support from the Jackson Center; in fact, one such homeowner said, "*It was great working with one group to get things figured out. It made things simple and I didn't have to do much. Most things were taken care of for me.*" At the same time, one participant found the application process to be confusing, saying that there were a lot of people involved but not one central contact person until the repairs began. Another was also frustrated by the request to submit proof of income multiple times, which happens when organizations were not collaborating as effectively. The application process seemed to be easy for respondents, especially when receiving assistance; however, the process of the coalition is somewhat unclear still and further explanation to homeowners would benefit their experience.

<sup>ix</sup> This distinction is drawn from focus group data, email communication, and direct observations, as discussed in **What We Learned About Utilization of Collaborative Tools**

Additionally, some homeowners were unsure about their use of the unified screening tool or reported not using it. There was more uncertainty in Orange County (36.4%) than in Chatham County (23.5% reporting “unsure” about use). A substantial proportion (46.2%) of survey participants from the updated Orange County database stating uncertainty, despite the fact that administrative records indicate that over 90% of all homeowners in that database have one on file. Taken together, this indicates that homeowners may have confusion – though not difficulty – around the screening process and would benefit from a single contact person to simplify communication.

*"It was great working with one group to get things figured out. It made things simple and I didn't have to do much. Most things were taken care of for me."*

**-Service recipient, applied with Jackson Center support**

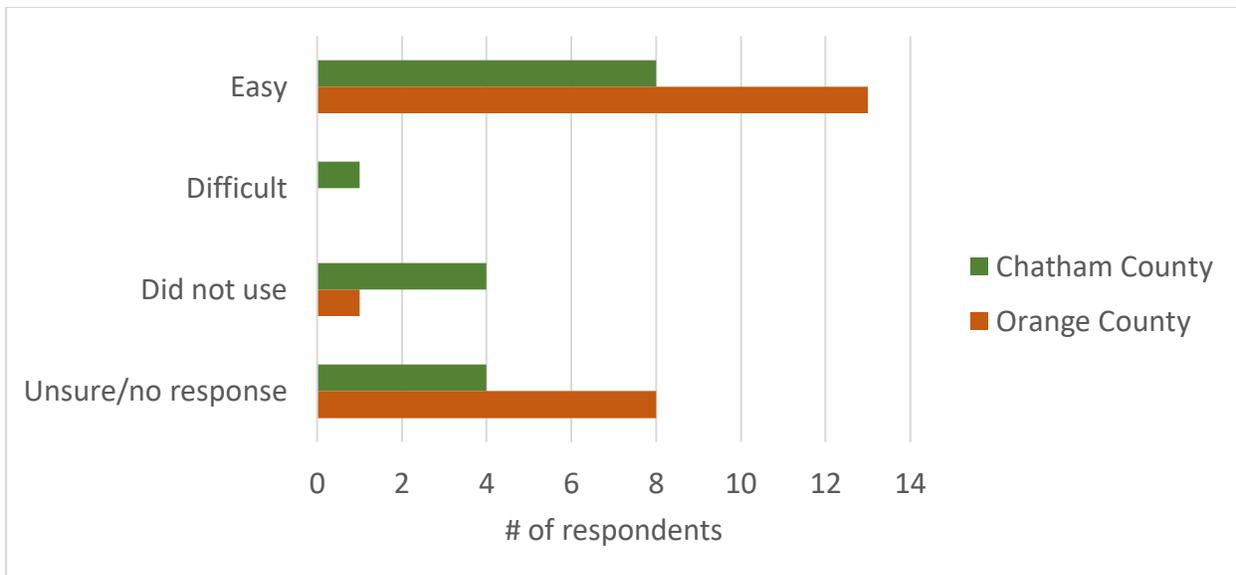


Figure 19 Reported ease or difficulty of application process (n=39)

### Timeliness of Repairs

**Over 85% of participants across counties agreed that their repairs were made in a timely manner (Figure 22).** A few participants made comments about the long wait, particularly if they were anxious about ongoing repair needs, but others said that the wait was well worth it. Notably, the proportion of respondents who strongly agreed that repairs were timely was higher among those in the updated Orange County database (76.9%) – who are receiving the most robust collaborative processes – than either those in the original Orange County database (66.7%) or Chatham County (58.8%). This was also true of respondents whose repairs are ongoing and do not necessarily have a plan forward (81.3%) – most of whom were from the updated Orange County database – than those with all work planned (50.0%) or completed (57.1%). This indicates that even in the absence of a full plan forward, the **intense collaborative approach is pushing organizations into some repair work and connecting them with homeowners rapidly.**

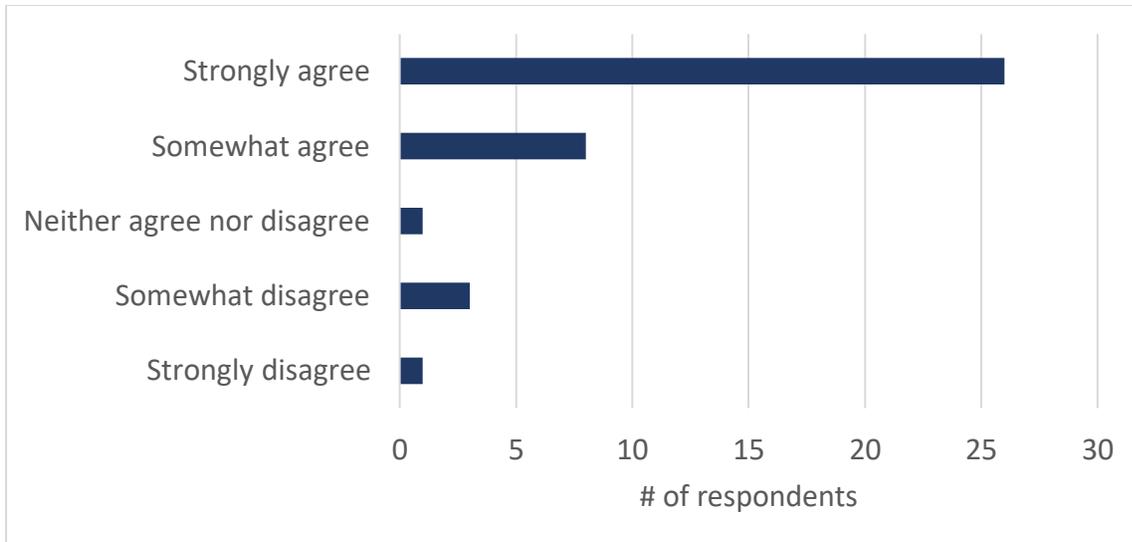


Figure 20 Agreement or disagreement with the statement "I received my home repairs in a timely manner" across both counties (n=39)

Administrative data on the pace of work confirms homeowner perceptions. On average, applicants are entered in the database 1.5 months after they apply; after another month, their homes are assessed (**Figure 23**). However, these averages are influenced by high outlier values (see maximum in **Figure 21**), and assessment wait time was influenced by COVID-related delays. More importantly, these wait times are likely decreasing as the collaborative processes have grown stronger. **Finally, the average homeowner who has had a repair done waits under 6 months for the first repair project to be complete.** This average was influenced by extreme values. For example, the data show that some applicants actually have their first work scope complete before ever even applying; this has happened in cases where applicants are referred to the coalition after an organization has already began work, but realized there was need for collaboration. On the other hand, the data also show lengthy waits for some homeowners. This may happen as a community organizations help homeowners set up a payment plan for delayed taxes or sort out ownership, title, and deed issues. Additionally, the fact that the time between assessment and data entry is sometimes longer than the time to assessment or to when the first work scope is completed indicates organizations are likely, and justifiably so, prioritizing providing direct services over database management. This further supports the value of additional administrative support focused on bolstering communication and collaboration across the coalition through data management.

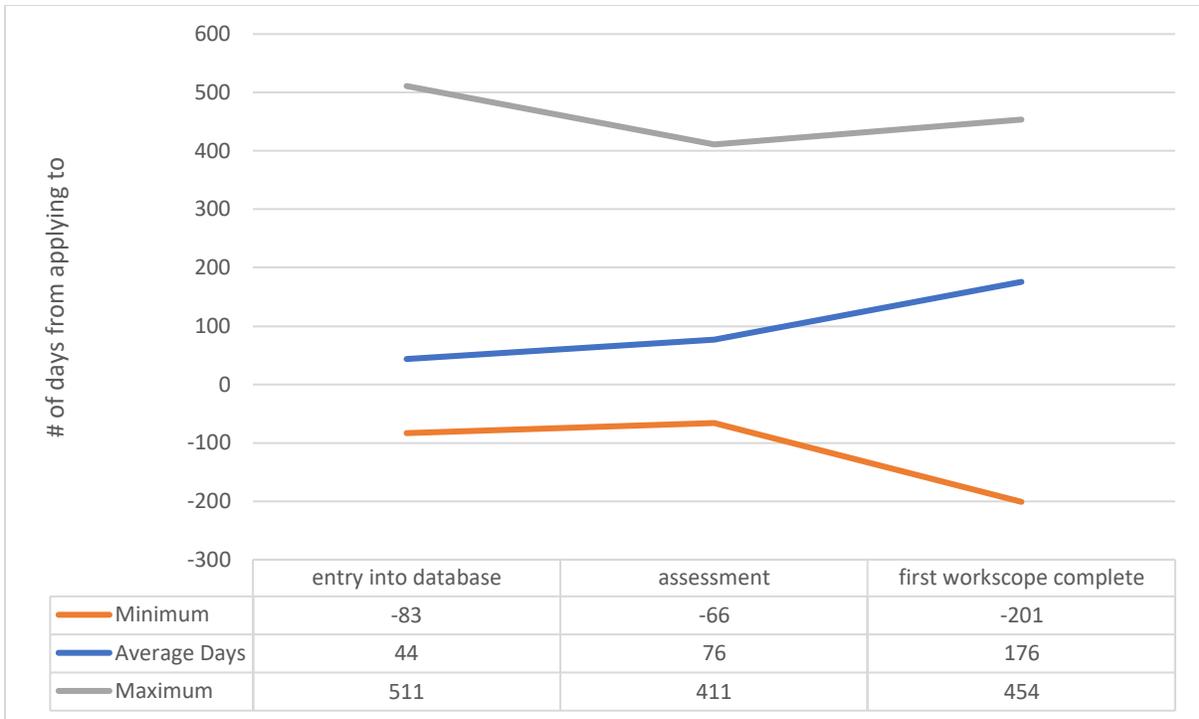


Figure 21 Minimum, average, and maximum timeline from time of application to 3 progress milestones

### Cost Mitigation

**Across both counties, there was resounding agreement among participants that they would have been unable to afford other repair services had OCHPC or CCHRC not served them (Figure 24).** Nearly 85% of survey participants strongly agreed and another 10% somewhat agreed; one participant felt “reassured” that there was not a cost for service. In fact, 92.3% of respondents from OCHPC's updated database strongly agreed, despite the fact that most of those respondents still had projects remaining. Possible explanation is that the repairs that are being done among this respondent group are more comprehensive and large-scale, and are therefore more costly and financially unattainable without assistance.

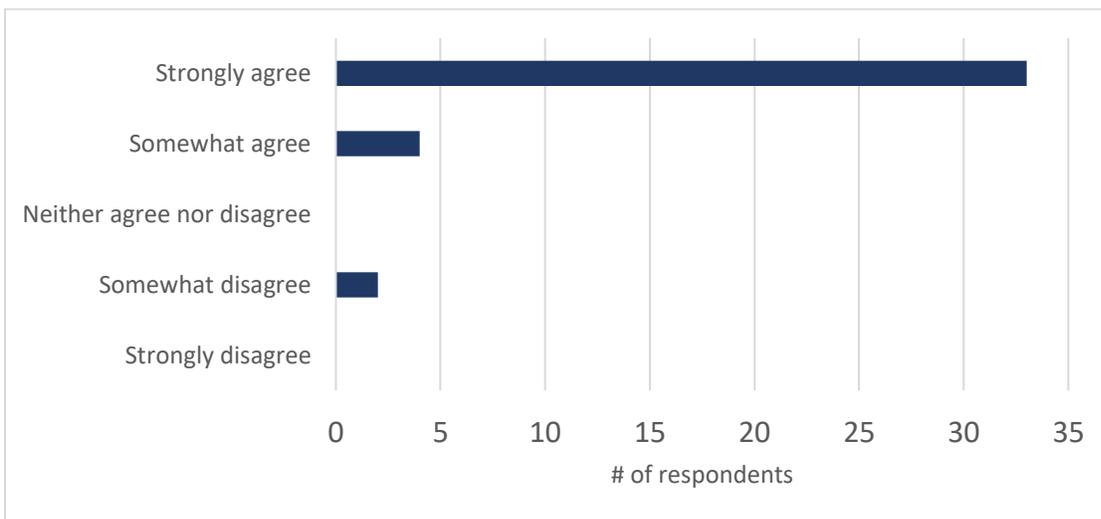


Figure 22 Agreement of disagreement with the statement "If the partners in the CCHRC/OCHPC were not able to make my home repairs, I would not have been able to afford other repair services." across both counties (n=39)

Utility Bill Concerns

**Among survey respondents, 28.2% report less worry about paying utility bills since their home repairs compared with before. This proportion increases to 33.3% among respondents whose repairs are fully complete**, rather than ongoing. Importantly, weatherization and energy-efficiency serviced from CPCA are often the last projects completed at a home and have the greatest potential to affect utility bills; the timing of energy-related repairs may contribute to this trend of improvement among completed cases. Still, among both all survey respondents and those with all project complete, a substantial proportion of participants (12.8% of all respondents, 9.5% of respondents with completed projects) were unable to respond to the pair of questions, as they did not see a connection between their repairs and utility bill costs, particularly if their repairs were accessibility related. Therefore, these figures most likely underestimate the impact energy related repairs had for participants.

Quality of Life and Safety

**The majority of survey respondents, regardless of county or completion status, report feeling safer (84.6%), less stressed (79.5%), and more comfortable (92.3%) since their home repairs were done (Figure 25).** Still, several respondents said that they will feel safer and less stressed when the rest of their repairs are made. A higher proportion of respondents from Chatham County (88.3%) than Orange County (81.8%) report improvements in safety, which may be driven by the high frequency service from the Council on Aging for accessibility related repairs in Chatham County. On the other hand, A higher percent of respondents in Orange County (95.5%) report improvements in comfort than in Chatham County (88.2%), and this may also be driven by the types of repairs that respondents received (i.e., a wide range of repairs across areas of the home in Orange

**Participant Story - Improved Quality of Life**

One participant commented that she was glad to be able to grow flowers again on her newly repaired porch; 3 participants were also relieved to no longer put pots out to collect water from leaky roofs when it rains or be worried about the roof caving in. In one illustrative survey, a homeowner reported living down the street with her daughter when her furnace went out; she would longingly look at her own home from the window and "couldn't wait to come home," feeling a sense of independence when she finally was able to.

County). Finally, fewer survey participants report improvements in social isolation (17.6%) than other aspects of quality of life- driven up by Chatham County responses- but most have experienced no change in their social isolation (67.7% across both counties). Importantly, the social isolation question has a smaller sample because this question was modified towards the end of survey administration.

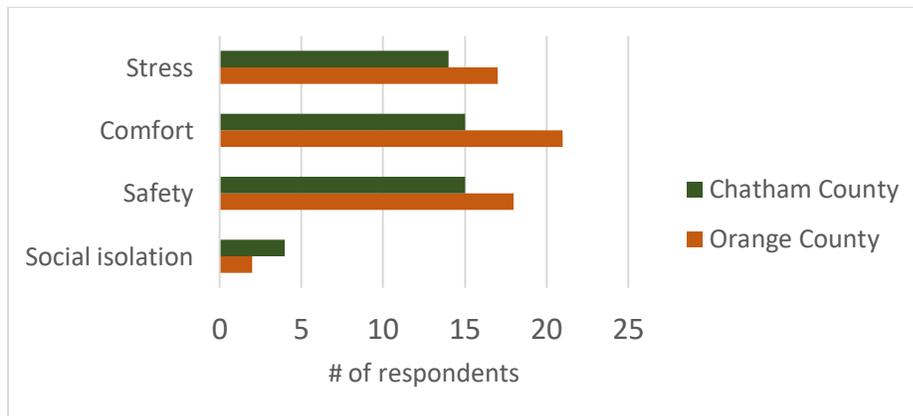


Figure 23 Survey respondents reporting improvements in quality of life by county (n=39)

### Everyday Occupations and Falls

Related to safety, we asked survey participants about aspects of occupational health including changes in fear of falling and in ease of completing daily activities. Fear of falling can lead to reduced function and increased likelihood of falling again.<sup>19</sup> **Across both counties, the majority of survey participants (64.1%) experienced a reduction in fear of falling (Figure 26).** These results are driven up by the reports from Chatham County, where 47% of participants report being much less scared of falling than they were before the repairs (vs. 36.4% in Orange), and another 23.5% report a little less scared (vs. 22.7% in Orange). **Results are similar for improved ease in daily activities (Figure 24).** Participants most frequently said that activities like bathing and using the bathroom were made easier with grab bars, but two participants said doing laundry is much easier now than it was before.

#### Participant Stories - Safety & Occupational Health

One participant reported that the exterior lights by the steps made her safer and that she has not tripped since they were installed.

Before a general (not specifically accessibility-related) repair to the floor, one homeowner reported walking very carefully through the home, afraid that her foot would fall through holes in the floor; now she is less afraid of that happening.

One caregiver said that it is easier to get her daughter, who is ill, in and out of the home for doctor’s appointments now that the ramp has been installed – it previously took 3 to 4 people to help her down the stairs.

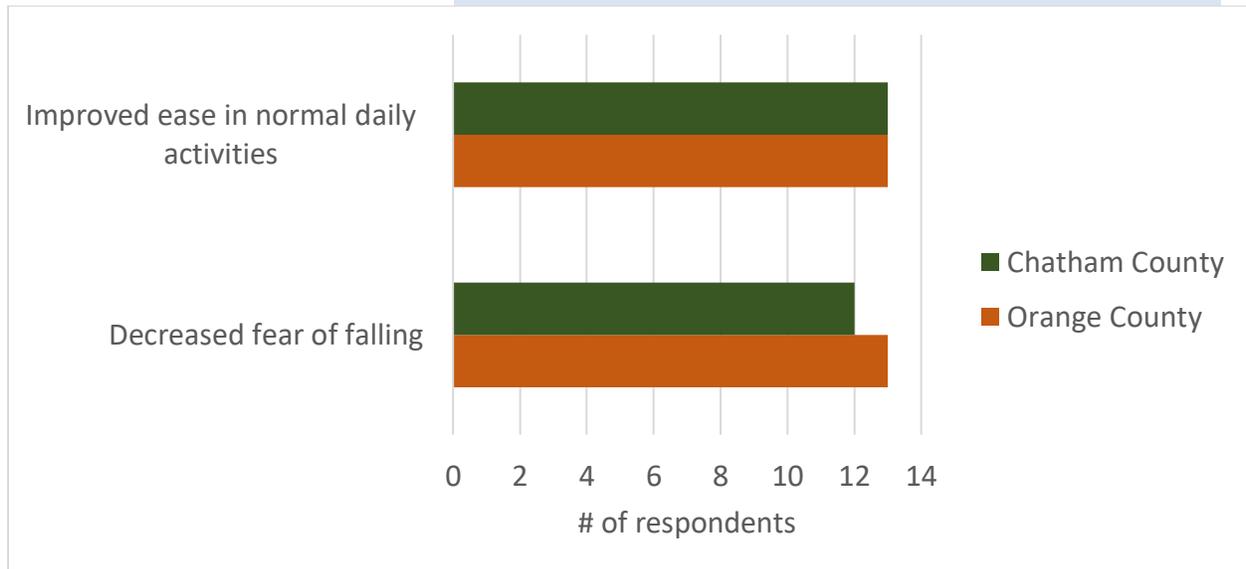


Figure 24 Survey respondents reporting occupational improvements (n=39)

## Unintended Findings

The open-ended nature and conversational style of the survey allowed the evaluation team to explore unintended findings – or those that we had not planned to measure. Unsurprisingly, 50% of survey respondents with planned but ongoing repairs and 62.5% of respondents with unplanned and ongoing repairs mentioned outstanding repair needs at some point during the survey.<sup>x</sup>

Still, 47.6% of participants whose projects the partner organizations deemed “complete” also inquired about continuing repair need; this is not entirely surprising given the previously discussed feedback from partner organizations about frequent requests for help on routine maintenance tasks. **This finding demonstrates the need for partner organizations to engage service recipients in follow up and lends support for the initiation of an Education and Outreach Committee within OCHPC.**

*“Thank god every day for Habitat coming through for us...I pray they always have the funding to do what they are doing.”*

*-Survey participant*

Despite the ongoing repair needs and requests, over half of the participants offered additional appreciation for the services provided before the survey ended. Participants also praised the friendliness, thoroughness, and cleanliness of repair and construction people. One caregiver surveyed said *“Thank god every day for Habitat coming through for us...I pray they always have the funding to do what they are doing.”*

## Summarizing What We Learned

In developing collaborative tools for home repair systems, flexibility and adaptability from both partners and funders are key. While the unified screening and home assessment tools were similar between counties, the shared databases were unique to the needs of each county. Creativity and flexibility from partners (e.g., RTT tailoring assessments to partners’ needs or UNC’s Partnerships in Aging program creatively supporting administration and evaluation) facilitated collaborative work. Flexibility from funders to design tools that align with coalition goals and priorities promoted appropriate utilization.

Achieving the Partners in Home Preservation objectives — and unique coalition goals — was not only dependent on the collaborative tools but a broader set of **core components**, including **clearly assigned coordination, regular communication among organizational representatives, and an overall commitment to partnership from all organizations.**

In Orange County, the complexity of funding warranted frequent use of the unified screening and home assessment to collect “the right information.” A layered database and hands on coordination helped to manage this abundance of home and homeowner information, altogether creating a structure for creative problem solving. Taking partner testimony and administrative data together, OCHPC was successful in meeting organizational objectives for the Partners in Home Preservation program:

**Objective #1:** Increased access to and comprehensiveness of home repairs and weatherization for residents

**Objective #3:** Decreased inefficiencies across service provider organizations through collaboration and communication

<sup>x</sup> These results emerged inductively through detailed notes and records in the comments box of the survey tool.

**Objectives #4:** Decreased deferrals of weatherization services due to other home repair needs

In Chatham County, limited local repair funds encouraged a focus on coordination for leveraging external funds. Low database utilization limited our ability to evaluate CCHRC's utilization of the other collaborative tools, and therefore the degree to which it achieved these objectives. Still, CCHRC was successful in achieving its goal to effectively secure and use resources.

In regards to Objectives #2 (*Decreased administrative burden on residents applying for service*) and #5 (*Increased quality of life for residents*), homeowners in both counties were highly satisfied by collaborative repairs and reported positive outcomes. They overwhelmingly agreed that CCHRC and OCHPC reduced financial barriers to home repair and perceived repairs to be done in a timely manner. Homeowner responses to survey questions about the application process provided insight on **Objective #2** — the application process was not difficult for most homeowners, but was confusing, indicating that communicating the coalition structure and process is a continued area for development. Finally, the vast majority of homeowners experienced improvements in safety, comfort, and occupational health, indicating achievement related to **Objective #5**.

## IX. Recommendations

Below we identify lessons learned and recommendations for moving forward based in the experiences of both counties' collaborative groups.

### Lessons for Continuation

**Continue to support Home Assessment Manager and Coalition Coordinator: both roles were essential in effectively facilitating communication, data collection, and/or cooperation among collaborative partners. We recommend:**

1. Permanently fund the Home Assessment Manager position. If possible, we recommend this be a jointly funded effort among coalition partners benefiting from the assessor's services.

This evaluation emphasized the important, yet rare, combination of skills needed by the home assessment manager: expertise in construction, accessibility modifications, environmental safety, and energy efficiency measures.

2. Creating a part time coordinator position for the Chatham County collaborative to support data collection and case tracking. Solidify the existing coordinator in Orange County as a permanent role.

This evaluation identified important skills and qualities needed for the coordinator role including effective communication and organization; data management; evaluation of organizational readiness; grading and adaptation of tasks to meet this readiness; group leadership; and systems thinking. In Orange County, the skills and expertise of a community-based occupational therapist were useful.

3. Formalizing the identity of the OCHPC through an MOU (similar to CCHRC) to permit shared budget and expenses, including these two staff members.

An MOU assists in establishing expectations and norms and formalizing the collaborative relationships. This is particularly important to aid in continuity of organizational commitment during times of staff transition as well as formally outlines which organizations have access to shared information.

4. Enhancing the partnership between the Home Assessment Manager and Coalition Coordinator so that they can jointly facilitate the match between funds for home repair and needed projects.
5. Positioning the coalition coordinator as a point of contact for homeowner communication and referrals. This could include funneling all new applicants to the coordinator via online application processes as well as making the coordinator's contact information more widely known as a go-to for information.

**Continue to use and customize collaborative tools to meet changing needs of coalition partners. Tailoring systems to be useful and accessible to diverse organizational needs improves coalition participation and communication. This could include:**

1. Developing a standard home assessment process or protocol to facilitate staff turnover and shared responsibility among organizations.
2. Customizing databases to accommodate evolving and varied needs of partners (e.g., adding new features or hiding certain aspects to simplify)

Embed the home assessment into CCHRC database for improved shared project management and more granular data for soliciting funds.

3. Re-organizing progress categories in the database to more effectively use time together in monthly meetings

Support individual organizations in proactively updating database and identifying funding resources available before meeting times

Use separate meeting times for exchanging updates/problem solving on individual cases and for coalition planning and process improvement.

**Integrate weatherization services more fully into home preservation systems and processes. Fuller integration connected more homeowners to weatherization services, even if they were unsure if they needed them. This step involves:**

1. Educating home repair providers, community organizations, and other referrers about the types of repairs that often deter weatherization and HVAC repairs and what resources are available to and remediate those first.
2. Increasing direct communication and referrals with weatherization partners to facilitate repairs that are causing deferrals.
3. Positioning weatherization organizations as a routine final stop for all homes in the coalition process.

Utilize functions in database to determine obstacles in eligibility criteria and potential repair needs that would defer services.

4. Communicating with homeowners about the benefits of weatherization and preparing them for the next step of the coalition process – the “warm handoff” to CPCA.

**Expand capacity to influence funding and policy structures related to access and affordability of home preservation. These structures are consequential for racial and social equity, and require advocacy and proactive involvement to achieve justice. Explicitly adopting an equity lens means:**

1. Advocating for funding and policy adaptations to better serve historically oppressed groups given the legacy of racism, ableism, and other discriminatory practices within the housing sector. This warrants an anti-racist and critical approach to prevent perpetuation of such oppression.

Engage and financially support the work of community organizations, like the Jackson Center, who are actively connecting with and building equity for populations that have been historically excluded from housing opportunities.

Collect and share data that reveals inequities across historically oppressed groups (e.g., racialized groups, rural communities, disabled people) and indicates policy opportunities.

Participate in and advise municipalities' Governmental Alliance for Racial Equity Process.

2. Continuing to develop the Education and Outreach Committee to increase access for these populations to information about the coalition and support prevention of the need for repairs.
3. Mobilizing as a coalition to increase resources available for home preservation.

Continue to aggregate interorganizational data across the county to develop broader picture of assets, disparities, limitations in service, and benefits of the coalition process.

Identify frequency and severity of urgent repair needs in the county and advocate at local, county, and state levels for resources to address disparities in meeting these needs.

Partner with stakeholder organizations by sharing data and figures in support of initiatives expanding home preservation opportunities for historically excluded populations.

## Lessons for Others

**The collaborative process can and should look different for counties seeking to introduce collaborative processes into their home preservation and repair networks. Factors to consider in adapting the processes and collaborative tools may include; the nature of the organizations and agencies are at the table, shared agreements and priorities of the identified partners, and existing resources, skills, and capacities. Still, new partnerships would be served well by mirroring CCHRC's and OCHPC's commitment to cooperation and willingness to adjust throughout the collaboration process. This means:**

1. Developing coalitions and cooperative groups from a grass-roots approach. Involve partners (service providers, funders, community liaisons) with a range of needs organizational needs and assets. Shared goals should be built collectively and be context-specific.
2. Adapting the deliverable tools based on collective goals, subtracting unnecessary burdens or adding new ones, as needed. This may include modifying screening questions, selecting a different database platform, or developing unique assessment priorities. We recommend considering coalition coordinator, home assessment manager, and shared information system as essential components.
3. Implementing with an eye towards learning and continuous improvement. Changes to the tools and processes are inevitable; new expectations should be agreed upon and clearly communicated to all partners involved, including service providers and grantors or funding agencies. To this end, funding applications should explicitly request flexibility to establish an early expectation that the process to achieving shared goals may evolve along the way.

**Likewise, future funding agencies would be wise to follow SEEA's example of adaptability and commitment to innovation. The confidence with which SEEA entrusted Partners in Home Preservation participants gave CCHRC and OCHPC the latitude to strategically focus their efforts in ways that would benefit the groups, not only satisfy the grant, and is therefore a model for the future of implementation.**

## X. Conclusion

The benefits of partnership are multi-faceted. For example, home repair organizations become more efficient and expand capacity while homeowners receive comprehensive service and experience improved quality of life for themselves and their homes. The partnerships embedded in CCHRC and OCHPC have been strengthened by communication and collaboration tools. These tools live not just in the tangible documents and databases, but in the people facilitating their use — the partners in collaboration. Home repair service providers and funders who participate in shared processes depend on the lynchpin roles of the home assessment manager and coalition coordinator who work in service of the collective. With these roles as inter-organizational resources, repair organizations stand to provide high quality and comprehensive service while remaining financially efficient and strategic. It is important, then, to not only fund repair service itself, but also to invest in the infrastructure and supports that generate collective impact.

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## XII. Appendices

### Appendix A: Extended Coalition Histories

#### Chatham County Home Repair Collaborative (CCHRC)

Chatham County Council on Aging (COA) has long offered -since 1974- minor repair services for older adults in the community. Through this volunteer repair program, COA recognized the need to repair substandard housing and provide accessibility modifications. COA was connected with Rebuilding Together of the Triangle (RTT) through a local older adult residential facility, and soon they together began collaborating with Central Piedmont Community Action, Inc. (CPCA) and other community groups. With interest from a county commissioner (who was a repair volunteer) and the Vice Chair of COA, the county provided financial support for COA to hire Stephanie Watkins-Cruz, an MPA/MCRP graduate student, to develop a data “clearinghouse” for collaboration <sup>10</sup>. Prior to the introduction of the clearinghouse, homeowners regularly contacted multiple repair organizations for service, but organizations were not informed of each other’s involvement and the burden of communication was placed on the homeowner (COA representative).

By November 2016, Watkins-Cruz secured free licensing from Airtable® as the host platform. In addition to building the database infrastructure, the graduate student brought together various referring agencies, including North Carolina Vocational Rehab, North Carolina Baptist Aging Ministries, and social services.<sup>COA representative; ,10</sup> Still, repair organizations were responsive to specific repair requests from homeowners and were doing independent assessments. The clearinghouse served as a foundation for the planned grant activities and intervention. Today, COA, RTT, and CPCA remain the primary service providers and funders for home repair projects done through the Chatham County Home Repair Collaborative (CCHRC).

#### Orange County Home Preservation Coalition (OCHPC)

The Orange County Department on Aging (OCDOA) has historically subsidized grab bars and assistive technology needs for older adults, but ramp referrals to other organizations often took from 6 months to 2 years to complete. Further, many homes required more substantial repairs than just accessibility modifications; unless it was an emergency, these repairs often took even longer than ramps. There was also no direct connection or collaboration between home repair organizations and the OCDOA. Older adults were left to pursue services independently. Attempting to address similar challenges, the Marian Cheek Jackson Center (Jackson Center) had led independent collaboration with RTT and Habitat for Humanity of Orange (Habitat) to support their target communities. The organizations met monthly, sometimes all three and other times separately, to discuss projects in the Jackson Center’s target service areas, identify overlap, and “divide and conquer.” The Jackson Center facilitated these meetings to assist in determining where they could provide matching funds to move projects forward (Jackson Center representative). Still in its collaborative infancy, each organization continued to maintain independent records and wait lists and conducted independent assessments that were responsive to homeowner repair requests, not focused on comprehensiveness across the home. Collaboration elsewhere in the county was minimal; as needed phone calls were occasionally occurring – between RTT and the OC Housing for example.

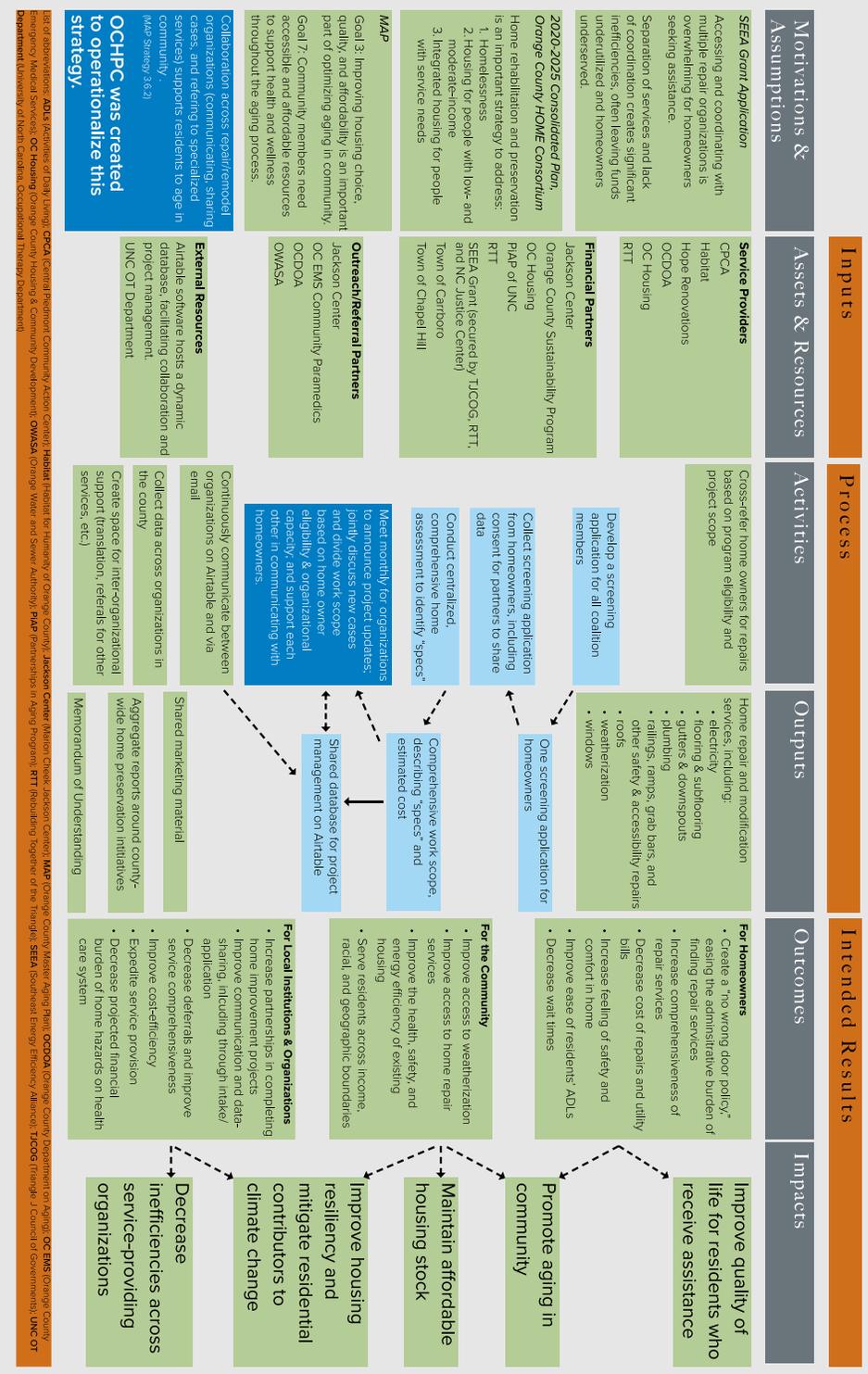
In 2017, OCDOA developed its five-year Master Aging Plan (MAP) for providing services to support the well-being of Orange County’s older adult population.<sup>11</sup> Guided by the AARP Framework for an Age-

Friendly Community, a key domain was housing; through partnership with local stakeholders, MAP developed goals to “improve choice, quality, and affordability of housing including housing with services and long-term care options.” The collaborative process of developing the MAP shed light on the inefficiencies that service providers and homeowners experienced across organizational systems. Namely RTT, Habitat, and the Jackson Center assisted in identifying gaps and developing strategies for improvement through a MAP workgroup. Informed by the work being done in Chatham County, MAP explicitly identified collaboration among home repair organizations as a target strategy (*“Strategy 3.6.3: collaborate across repair/remodel organizations to better communicate, share cases, and refer to specialized services”*).<sup>11</sup>

The Orange County Home Preservation Coalition (OCHPC) was created to respond to MAP’s findings and formalize and support developing partnerships. Today, still led by OCDOA, OCHPC brings together local government departments and affiliate agencies (OCDOA, Orange Water and Sewer Authority, OC Housing & Community Development, Town of Carrboro, Town of Chapel Hill) and non-profit organizations (RTT, Habitat, Hope Renovations, CPCA, the Jackson Center, UNC Partnerships in Aging Program) for service provision, funding, and community engagement. As in Chatham County, accessing repairs before the development of collaborative groups in Orange County is depicted by **Figure 1**. Prior to Partners in Home Preservation, OCHPC was meeting on a monthly basis and sharing some information in a sparsely used online database. Information flow and communication about homes were hindered by an unintuitive database framework, the lack of a comprehensive and collaborative assessment process, and limited capacity of some key stakeholders. The intervention and activities of Partners in Home Preservation assisted in fine tuning some of these collaborative processes, fully reimagining and recreating others, and offering space for additional partnerships to develop and collaboration to flourish.

## Appendix B: OCHPC Logic Model

### Orange County Home Preservation Coalition (OCHPC) Program Model



Appendix C: Evaluation Indicators Framework

Logic Model Component	Indicator	Measurement	Data Source
Activities	Cross-referrals	<ul style="list-style-type: none"> <li># of homes referred by each partner and assigned to each partner</li> <li># of homes served by organization other than initial referee</li> </ul>	Administrative data via Airtable <sup>®</sup>
Activities	Develop Unified Application	Description of process to create collaborative tools and iterations made over course of utilization	Direct observation
Activities	Develop shared database	Description of transition from 1.0 to 2.0	Direct observation
Activities	Integrate centralized home assessment with project management platform	Description of the purpose of the assessment and the process of developing it	Direct observation
Activities	Conduct centralized home assessments	# of homeowners who received assessment	Administrative data via Airtable <sup>®</sup>
Activities	Inter-organization meetings	Description of meeting process/attendees	Agenda documentation, Direct observation, Focus groups
Activities	Continuous communication	Description of collaborative process and role/purpose	Direct observation, Focus groups, Administrative data via Airtable <sup>®</sup>
Activities	Collect data across organizational lines	Availability of data for this report	Program evaluation process
Activities	Create space for inter-organizational support	<ul style="list-style-type: none"> <li>Description of unique capacities/resources of each partner contributes</li> <li>Description of examples of adding value to peer organization/s/service recipients</li> </ul>	Direct observation, Focus groups

Logic Model Component	Indicator	Measurement	Data Source
Outputs	Home repairs and modifications	Types and # of home repairs and modifications	Administrative data via Airtable <sup>®</sup>
Output	Unified Application	Existence of form	Direct observation, Focus groups
Output	Centralized Assessment	Existence of work scope outline/specific project tasks	Direct observation
Output	Shared Database	Existence project management tool	Administrative data via Airtable <sup>®</sup>
Output	Shared marketing material	Description of communication tools (brochure, website)	Direct observation
Output	Aggregate reports	This report	Program evaluation process
Output	Memorandum of Understanding	Description and formality of and accountability to organizational agreement	Documentation
Outcomes: Homeowner	Accessibility of repairs	<ul style="list-style-type: none"> <li>Administrative burden/ease of application and connection</li> <li>Perception of waiting time</li> <li>Waiting time for organizations to make contact</li> <li>Waiting time to first repair</li> <li># of homeowners cross-referred between organizations</li> <li>Proportion of requests/identified projects fulfilled (or with plans to fulfill)</li> </ul>	Survey, Administrative data via Airtable <sup>®</sup>
Outcomes: Homeowner	Accessibility of weatherization repairs	# of weatherization projects with required preceding repairs	Administrative data via Airtable <sup>®</sup>
Outcomes: Homeowner	Affordability of repair	<ul style="list-style-type: none"> <li>Perceived financial alternatives to coalition services</li> <li>Perceived impact on cost of utility bills</li> </ul>	Survey
Outcomes: Homeowner	Comprehensiveness of repairs	<ul style="list-style-type: none"> <li>Perceived completion of home repairs</li> <li>Variety of repairs completed or identified</li> </ul>	Survey, Administrative data via Airtable <sup>®</sup>

Logic Model Component	Indicator	Measurement	Data Source
Outcomes: Homeowner	Health	<ul style="list-style-type: none"> <li>Perceived change in fear of falling</li> <li>Perceived change in ease of ADLs</li> </ul>	Survey
Outcomes: Homeowner	Quality of Life	Perceived change in: <ul style="list-style-type: none"> <li>Safety</li> <li>Stress</li> <li>Social isolation/connection</li> <li>Comfort</li> </ul>	Survey
Outcomes: Community	Accessibility	# of applicants served	Administrative data via Airtable <sup>®</sup>
Outcomes: Community	Diversity of reach	Description of service recipients by: <ul style="list-style-type: none"> <li>Income</li> <li>Gender identity</li> <li>Racial identity</li> <li>Geographic character/location</li> <li>Age</li> <li>Home type</li> </ul>	Administrative data via Airtable <sup>®</sup>
Outcomes: Local Organizations & Organizations	Communication and Collaboration	<ul style="list-style-type: none"> <li>Testimony about use of email/calls, Airtable, meeting times</li> <li>Frequency of shared project database engagement</li> </ul>	Focus groups, Administrative data via Airtable <sup>®</sup>
Outcomes: Local Organizations & Organizations	Deferral for repair	# of weatherization projects with necessary preceding repairs	Administrative data via Airtable <sup>®</sup>
Outcomes: Local Organizations & Organizations	Comprehensiveness of repairs	Variety of repairs completed or identified	Administrative data via Airtable <sup>®</sup>
Outcomes: Local Organizations & Organizations	Cost-efficiency and financial health	<ul style="list-style-type: none"> <li>Average value of household repairs</li> <li>Description of partner determination and path to funding</li> </ul>	Focus groups, Administrative data via Airtable <sup>®</sup>

## Appendix D: Data Collection Details

In Chatham County, demographic information was initially collected from the shared database. However, there was significant data missing for the evaluation process. In order to improve the amount of data available, COA, CPCA, and RTT consulted individual records to collect missing data for survey participants. Because of differences in use, the CCHRC database did not include as comprehensive of data as the OCHPC database. Also, collecting and filling in this data for applicants in the CCHRC database was outside the capacity of this evaluation process. Therefore, we use more comprehensive data collected from survey participants as a presumed proxy for the characteristics of the general CCHRC applicant pool.

In addition to applicant demographics, we also describe the range of project types completed, in progress, planned, and identified in Orange County for homeowners in the updated database. Project types were initially classified based on the trade that is automatically assigned to each project in the home assessment. After a review of these preliminary categories, the evaluation team added new “type” categories as needed (i.e., “accessibility”) and consolidated others; finally, the team reviewed all the projects listed under each type and manually re-assigned some projects to better represent the primary purpose of the repair. For example, building a new ramp is classified as an “accessibility modification” because the primary purpose is to improve entry and exit access; however, repairs to an existing ramp falls under “carpentry” because the primary purpose of the repair is to improve its structure or form. The judgements involved in the processes of consolidation and re-assignment may have integrated some subjectivity into categorizations. The final project types and examples are in **Table 3**.

*Table 5 Project types*

Project type	Example projects
Accessibility modifications	Grab bar installation; tub to shower conversion; new handrail construction; new ramp build
Aesthetic	Interior or exterior painting; power washing
Appliance	Replacements of: heat pump or water heater; oven or stove; dishwasher; clothes washer or dryer
Carpentry	Repairing: cabinets; ceiling tiles; countertops; decks, doors; drywall; siding; railings; steps; subfloor and plank flooring; windows (including replacement)
Demolition	Removal of: carpet pads; decking; tile, etc.
Electrical	Certifying distribution; dryer circuit; install or replace bath or ceiling fan; replace light fixtures and switches; recirculating range hood; venting range hood; install or replace receptacles; rewiring
Environmental rehab	Asbestos abatement; lead and asbestos testing; mold remediation; roach control
Fire protection	CO/smoke detector battery replacement or installation; hard wiring; installing smoke alarm
HVAC	Repair ductwork and air distribution; replace electrical or gas heat pump; HVAC service; clean and adjust HVAC turbine exhaust; general mechanic work on HVAC
Masonry	Remove chimney; repair concrete steps; repoint masonry
Metalwork	Repair or replace aluminum carport roof

Plumbing	Hook up washing machine; crawl space drain and sump pump; install faucet; investigate and repair leaks; septic tank; shower head and diverter; replace toilet; inspect and repair waste lines
Roofing	Fascia; metal roof repair; rubber roof installation; reroof fiberglass shingles; repair soffit (including vinyl and wood)
Site work	Grade driveway gravel; rake crawl space; remove tree and grind stump; site grading; trim overgrowth; yard maintenance and trimming
Thermal & moisture	Caulk, downspouts and gutter cleaning and replacing; dryer vents;
Weatherization	Attic insulation; attic and crawlspace weatherization; weatherstrip doors; insulate walls; caulk windows

## Appendix E: Survey Instrument

Start of Block: Introduction

This is [NAME] from the Orange County Home Preservation Coalition/Chatham County Home Repair Collaborative. We did some home repairs for you back in [MM/YYYY] with [X partner]. I'm doing a survey on our program that will take about 10-15 minutes. Who can I speak to about this/is now a good time?

*If explanation needed: We're a group of organizations that work together to help you get all of the home repairs you need*

*For survey admin; do not ask respondent*

OCHPC Database 1 or 2 or CCHRC

- OCHPC 1.0 (1)
- OCHPC 2.0 (2)
- CCHRC (3)



*For survey admin; do not ask respondent*

Assessment or Airtable #

\_\_\_\_\_

*Note for survey administrator: Listen for reason being about themselves other someone else. If it is about **themselves** (or the entire HH), select "Yes" in next question ("homeowner"), but if it is for **someone else**, select "No."*

Can you tell me about what prompted you to get these repairs?

\_\_\_\_\_

\_\_\_\_\_



*Do not ask respondent unless answer is not clear from question above ("reason"). \*Most likely to respond "No" if the repair was an accessibility/modification for another person.*

Are you the person who benefitted most from the repairs?

- Yes (1)
- No (0)

End of Block: Introduction

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Start of Block: IF YES Homeowner/Primary Beneficiary (Homeowner = 1)



As the OCHPC/CCHRC, we have an **application that you filled out**. We use it to collect screening information that included address, income, homeowner info, other residents of the home info, and had multiple statements to read as well as a final signature (or verbal consent). Do you remember this application? How easy or difficult was it for you to fill out this application?

- Very difficult (1)
  - Somewhat difficult (2)
  - Neither difficult nor easy (3)
  - Somewhat easy (4)
  - Very easy (5)
  - Unsure/no response (99)
  - I didn't use that application (for some CCHRC) (100)
- 

We work with lots of orgs like [the ones that worked with them..]. We work together and all follow your repairs as a group. This process includes understanding what you need, getting connecting with orgs and getting the repairs completed. What was your experience of connecting with the organization(s) and the Coalition?

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How much do you disagree or agree with the following statement? I received my home repairs in a timely manner.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither disagree nor agree (3)
- Somewhat agree (4)
- Strongly agree (5)
- Unsure/no response (99)

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Type any comments about ease of applicate and/or wait times here (for example, if the homeowner had different experiences across partners)

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Page Break



How much do you disagree or agree with the following statement? If partners in [the coalition/the collaborative] were not able to make my home repair, I would not have been able to afford other repair services.

- Strongly disagree (1)
- Somewhat disagree (2)
- Neither disagree nor agree (3)
- Somewhat agree (4)
- Strongly agree (5)
- Unsure/no response (99)

In the next two questions, I'm going to ask you how you feel about the cost of your utilities. By this I mean water, gas, or electric bills.

---



Before your home was repaired, how concerned were you about being able to pay your utility bills?

- I felt very worried (1)
  - I felt a little worried (2)
  - I felt no worry (3)
  - Unsure/no response (99)
- 



Since your home was repaired, how concerned are you about being able to pay your utility bills?

- I feel very worried (1)
  - I feel a little worried (2)
  - I feel no worry (3)
  - Unsure/no response (99)
- 

Do you think your utility bills have gone up or down since the repairs?  
*Also type any comments on cost of utilities.*

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Page Break

I'm now going to ask you some questions about how it has been to live in your home, and how that has changed since your repairs or modifications.

---



In this next question, I'm going to ask you about your social isolation. By this we mean feeling disconnected from your community and the people in your life. Since your home has been repaired, do you feel less socially isolated? If so, how much less?

- I feel much less socially isolated (3)
  - I feel a little less socially isolated (2)
  - I feel no change in my social isolation (1)
  - Unsure/no response (99)
- 



Do you feel safer in your home since your repairs were made? If so, how much safer?

- I feel no change in my safety (1)
  - I feel a little safer (2)
  - I feel much safer (3)
  - Unsure/no response (99)
- 



Do you feel more comfortable in your home since your repairs were made? If so, how much more comfortable?

- I feel much no change in my comfort (1)
  - I feel a little more comfortable (2)
  - I feel much more comfortable (3)
  - Unsure/no response (99)
-



Do you feel less stress in your home since your repairs were made? If so, how much less stress?

- I feel much less stress (3)
- I feel a little less stress (2)
- I feel no change in my stress (1)
- Unsure/no response (99)

What other feelings have you experienced in your home since it has been repaired?

---

Page Break



Since your home has been repaired, how much less scared of falling do you feel?  
\*note in comments if a person says that they feel more fearful of falling or never felt scared, and select answer choice 1

- I am not less scared of falling (1)
- I am a little less scared of falling (2)
- I am much less scared of falling (3)
- Unsure/no response (4)

Next I'm going to ask you about some your normal routines and daily activities.



Since your home has been repaired, how much easier is it for you to do your normal daily activities?

- It is not easier (1)
- It is a little easier (2)
- It is much easier (3)
- Unsure/no response (99)

Can you tell me how your home repairs have impacted your daily routine?

---



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Page Break

Page Break

Thanks for taking the time to speak with me! Before we close is there anything else that you'd like to share about your experience with [the coalition/collaborative]?

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End of Block: IF YES Homeowner/Primary Beneficiary (Homeowner = 1)

Start of Block: IF NO Homeowner/Primary Beneficiary (Homeowner = 0)<sup>xi</sup>



<sup>xi</sup> Survey option for caregiver of homeowner begins here; this is the same survey as the one presented here except for 3 main differences: 1) survey asks about “[HOMEOWNER’S NAME]” instead of “you”; 2) there is an additional question that asks if the caregiver lives in the same home as the homeowner; and 3) two questions about the impact on giving care since repairs

## Appendix F: Orange County’s Unified Screening Tool

### **Orange County Home Preservation Coalition Initial Application**

Thank you for inquiring about home repair services provided by the Orange County Department of Housing and Community Development. In an effort to provide you with improved services, we participate in the **Orange County Home Preservation Coalition**, which includes the following organizations: Rebuilding Together of the Triangle, Inc., Central Piedmont Community Action, Inc., Orange County Habitat for Humanity, the Orange County Department on Aging, the Orange County Department of Housing and Community Development, Orange County Habitat for Humanity, the Marian C. Jackson Center, Triangle J Council of Governments, the Town of Carrboro, the Town of Chapel Hill, OWASA, and other future partners participating in the Coalition.

Together, these organizations seek to make a sustainable impact on preserving and revitalizing homes and communities and making necessary accessibility modifications and weatherization assistance to support homeowners in remaining in their homes. We help coordinate these services when the disrepair of a home imposes discomfort, the environment of a home is unsafe or the home presents a health hazard to its occupants and the homeowners are unable to make repairs themselves.

By signing this form, you are agreeing to submit an application to the Orange County Department of Housing and Community Development, but also allowing us to share the information you provide with all organizations within the **Orange County Home Preservation Coalition** so that we can work together to better serve you! If you meet the initial criteria, staff from Rebuilding Together of the Triangle will contact you by telephone to set up a home visit to assess the requested repairs listed to evaluate whether or not your home is a fit for one or more of the organizations’ programs.

**Date of Application:** \_\_\_/\_\_\_/\_\_\_ **Applicant Name:** \_\_\_\_\_  
Last First

**Address:** \_\_\_\_\_  
Street City State Zip

**Phone:** (\_\_\_\_) \_\_\_\_\_ **Email:** \_\_\_\_\_ **Date of Birth:** \_\_\_/\_\_\_/\_\_\_

**Gender:** \_\_\_\_\_ **Race/Ethnicity:** \_\_\_\_\_ **Disability Status:**  Yes  No

1. Does the homeowner live in the house? Yes  No

If you are not the homeowner, what is your relationship to the owner? \_\_\_\_\_

2. Have you lived in the home for more than 2 years? Yes  No

3. Has anyone in the home served in the Armed Forces? Yes  No

4. What is your total annual household income (before taxes)? \$ \_\_\_\_\_

**5. Language Preference (if you would like to be contacted in a language other than English):**

Spanish	Arabic	Mandarin	Other (specify)
Yo hablo español	أنا أتحدث اللغة العربية	我讲国语/普通话	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**6. Provide information below for everyone who lives in this home *besides yourself*:**

Name	Birthdate	Relationship to Applicant	Disability Status
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No

**7. Best alternative contact for you (caregiver/social worker/case manager):**

Last name: \_\_\_\_\_ First Name: \_\_\_\_\_  
 Agency (if applicable): \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_  
 Email: \_\_\_\_\_ Other Ph. No.: (\_\_\_\_) \_\_\_\_\_

**8. What type of home is it? (house, apartment, mobile home, duplex) \_\_\_\_\_**

**9. What year was the home built? \_\_\_\_\_**

**10. Can everyone in the home enter and exit the home in case of an emergency? Yes  No**

**11. We would like to help you remain in your home as long as you'd like to be there. Which of these statements best describes you?**

- I would like to continue living here.
- I would prefer to live elsewhere; If so, please check box(es) below:
  - I cannot afford to live here anymore.
  - The repairs my home needs are too expensive.
  - I would like more caretaking support.
  - I would prefer to describe: \_\_\_\_\_

**12. What repairs or modifications are needed on your home?**

<b>Repairs/Modifications</b>

**13. What other concerns do you have about your home or living situation?**

--

**Sign for Releases:**

I hereby certify that:

- 1) I own and occupy the home described above as my primary residence.
- 2) The above information is complete and true to the best of my knowledge.
- 3) This information is provided to qualify me for weatherization, energy efficiency, urgent repair, or other related services (program assistance).
- 4) I give permission to the Orange County Department on Aging, Central Piedmont Community Action, Inc., Rebuilding Together of the Triangle, Inc., Orange County Habitat for Humanity, the Orange County Department of Housing and Community Development, the Marian C. Jackson Center, Triangle J Council of Governments, and other future partners to access information to verify the contents of this application and to facilitate the repair and or improvements to my home.
- 5) I understand program grant and or loans may not correct all deficiencies in my home nor make the home conform to any local, state or federal housing quality standards.
- 6) I have been advised that my gender, race, and ethnicity will be determined based upon observation and/or surname if I do not self-disclose the information.
- 7) I understand that filling out this application does not guarantee that my household will receive program assistance.

General Acknowledgement, Consent and Authorization

- 8) I acknowledge that this is an application to the Orange County Department on Aging and that the organization may share this application and its contents with its partners, including Rebuilding Together of the Triangle, Inc., Central Piedmont Community Action, Inc., Orange County Habitat for Humanity, the Orange County Department of Housing and Community Development, the Marian C. Jackson Center, Triangle J Council of Governments, and other future partners for weatherization, energy efficiency, urgent repair and other related services (program assistance). These partners work collectively and are referenced herein as the Orange County Home Preservation Coalition (OCHPC).

9) I give consent and authorize the OCHPC to maintain data concerning this application and any services provided to me on a database managed by Triangle J Council of Governments and made accessible to the OCHPC to secure, perform, manage, record and evaluate energy services and program assistance.

10) I give consent and authorize Rebuilding Together of the Triangle, Inc. permission to enter my home at an agreed upon time and date in order to conduct a home repair assessment to assist in determining my eligibility for energy services and program assistance.

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

PLEASE RETURN THIS APPLICATION BY MAIL, FAX, OR E-MAIL TO:

Rebuilding Together of the Triangle, Inc.  
200 Trans Air Drive, Suite 200  
Morrisville, NC 27560

Telephone: (919) 341-5980  
Fax: (919) 651-0034

E-mail: [info@rebuildingtogethertriangle.org](mailto:info@rebuildingtogethertriangle.org)

**FOR OFFICE USE ONLY:**

Referred By: \_\_\_\_\_

Income Verified:  Yes  No

Action Taken? If so, explain: \_\_\_\_\_

Date Verified: \_\_\_\_\_

\_\_\_\_\_

Documents Verified: \_\_\_\_\_

## Appendix G: Chatham County’s Unified Screening Tool

### Chatham County Home Repair Collaborative Initial Application

Thank you for inquiring about home repair services provided by Rebuilding Together of the Triangle, Inc. (RTT). In an effort to provide you with improved services, we participate in the Chatham County Home Repair Collaborative, which includes the following organizations: Rebuilding Together of the Triangle, Inc. (RTT), Central Piedmont Community Action, Inc., the Chatham County Council on Aging, Triangle J Council of Governments, and other future partners participating in the Collaborative.

Together, these organizations seek to make a sustainable impact on preserving and revitalizing homes and communities and making necessary accessibility modifications and weatherization assistance to support homeowners in remaining in their homes. We help coordinate these services when the disrepair of a home imposes discomfort, the environment of a home is unsafe or the home presents a health hazard to its occupants and the homeowners are unable to make repairs themselves.

By signing this form, you are agreeing to submit an application to RTT, but also allowing us to share the information you provide with all organizations within the Chatham County Home Repair Collaborative so that we can work together to better serve you! If you meet the initial criteria, staff from RTT will contact you by telephone to set up a home visit to assess the requested repairs listed to evaluate whether or not your home is a fit for one or more of the organizations’ programs.

Date of Application: \_\_\_/\_\_\_/\_\_\_ Applicant Name: \_\_\_\_\_

Last First

Address: \_\_\_\_\_

Street City State Zip

Phone: (\_\_\_) \_\_\_\_\_ Email: \_\_\_\_\_ Date of Birth: \_\_\_/\_\_\_/\_\_\_

Gender: \_\_\_\_\_ Race/Ethnicity: \_\_\_\_\_ Disability Status:  Yes  No

1. Does the homeowner live in the house? Yes  No

If not, what is your relationship to the owner? \_\_\_\_\_

2. Has anyone in the home served in the Armed Forces? Yes  No  If yes, which person? \_\_\_\_\_

3. What is your total annual household income (before taxes)? \$ \_\_\_\_\_

**4. Language Preference (if you would like to be contacted in a language other than English):**

English I speak English	Spanish Yo hablo español	Arabic أنا أتحدث اللغة العربية	Mandarin 我讲国语/普通话	Other, specify:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**5. Provide information below for everyone who lives in this home:**

Name	Birthdate	Relationship	Disability Status
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No
	/ /		<input type="checkbox"/> Yes <input type="checkbox"/> No

**6. Best alternative contact for you (caregiver/social worker/case manager):**

Last name: \_\_\_\_\_ First Name: \_\_\_\_\_  
 Agency (if applicable): \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_  
 Email: \_\_\_\_\_ Other Ph. No.: (\_\_\_\_) \_\_\_\_\_

7. Can you get in and out of your home in case of an emergency? Yes  No

**8. We would like to help you remain in your home as long as you'd like to be there. Which of these statements best describes you?**

- I would like to continue living here.
- I would prefer to live elsewhere; If so, please check box(es) below:
  - I cannot afford to live here anymore.
  - The repairs my home needs are too expensive.
  - I would like more caretaking support.
  - I would prefer to describe: \_\_\_\_\_

**9. What repairs or modifications are needed on your home?**

<b>Repairs/Modifications</b>

**10. What other concerns do you have about your home or living situation?**

--

**Sign for Releases:**

I hereby certify that:

- 1) I own and occupy the home described above as my primary residence.
- 2) The above information is complete and true to the best of my knowledge.
- 3) This information is provided to qualify me for weatherization, energy efficiency, urgent repair, or other related services (program assistance).
- 4) I give permission to Rebuilding Together of the Triangle, Inc. (RTT), Central Piedmont Community Action, Inc., the Chatham County Council on Aging, Triangle J Council of Governments and other future partners to access information to verify the contents of this application and to facilitate the repair and or improvements to my home.
- 5) I understand program grant and or loans may not rectify all deficiencies in my home nor make the home conform to any local, state or federal housing quality standards.
- 6) I have been advised that my gender, race and ethnicity will be determined based upon observation and/or surname if I do not self-disclose the information.
- 7) I understand that filling out this application does not guarantee that my household will receive program assistance.

**General Acknowledgement, Consent and Authorization**

- 8) I acknowledge that this is an application to Rebuilding Together of the Triangle, Inc. (RTT), and that RTT may share this application and its contents with its partners, including Central Piedmont Community Action, Inc., the Chatham County Council on Aging, Triangle J Council of Governments, and other future partners for weatherization, energy efficiency, urgent repair and other related services (program assistance). These partners work collectively and will be referenced herein as the Chatham County Home Repair Collaborative (CCHRC).

9) I give consent and authorize Rebuilding Together of the Triangle, Inc. (RTT) and the CCHRC to maintain data concerning this application and any services provided to me on a database managed by Triangle J Council of Governments and made accessible to the CCHRC to secure, perform, manage, record and evaluate energy services and program assistance.

10) I give consent and authorize Rebuilding Together of the Triangle, Inc. permission to enter my home at an agreed upon time and date in order to conduct a home repair assessment to assist in determining my eligibility for energy services and program assistance.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**PLEASE RETURN THIS APPLICATION BY MAIL, FAX, OR E-MAIL TO:**

**Rebuilding Together of the Triangle, Inc.  
200 Trans Air Drive, Suite 200  
Morrisville, NC 27560**

**Telephone: (919) 341-5980  
Fax: (919) 651-0034**

**E-mail: [info@rebuildingtogethertriangle.org](mailto:info@rebuildingtogethertriangle.org)**

<b>FOR OFFICE USE ONLY:</b>	
Referred By: _____	Income Verified: <input type="checkbox"/> Yes <input type="checkbox"/> No
Action Taken? If so, explain: _____	Date Verified: _____
_____	Documents Verified: _____

# Appendix H: Shared Database Organizing Framework

2.0 OC Home Preservation Coordinated Da...

Assessments - Specs Work Scopes Applicants Household Members Documents Alternative Contacts Previously Helped by: OCHPC Partners OCHPC Collaborators

Database Manager View Database Manager View c... 32 hidden fields Filter Grouped by 1 field Sorted by 1 field Color Share View

PROGRESS Count 40

Find a view

Database Manager View

Database Manager View...

Home Assessment Manage...

UPDATES

Eligibility View

Mobile Home View

Input View

Habitat View

Hope Renovations View

OC Housing View

Chapel Hill View

Carboro View

OWASA

View All Assessments (Pas...

CPCA Check In List

OCDOA View

Meeting Review Cases

Create a View

Grid

Form

Calendar

Gallery

Kanban

Record ID	Referred...	Applicant	Initial Screen...	Date of App...	Jurisd...	Type ...	Ownership?	Assessment...	All Work Scopes	Previously...	General Case Not
90	20	Jackson		6/28/2019	Town of Carboro	House	Reported Yes		RTT - 20 OCDOA, Hope - 20		
91	25	Jackson		9/24/2019	Orange County	House	Reported Yes		CPCA - 25 Habitat - 25		
92	30	Jackson		8/27/2019	Town of Carboro	House	Reported Yes		CPCA - 30 Jackson - 30		
93	35	Habitat		9/17/2019	Orange County	House	Reported Yes		CPCA - 35 OCDOA, Hope - 35		CPCA - 2019-Ant
94	36	Jackson		10/3/2019	Town of Carboro	House	Reported Yes		Hope, Jackson - 36 CPCA - 36		Habitat - 2016-Jan Jackson - 2019-J
95	38	RTT		5/8/2019	Orange County	House	Reported Yes		OCDOA, Hope - 38 Habitat - 38		CPCA - 2013-Dall OC Housing - 201
96	45	Jackson		12/12/2018	Town of Carboro	House	Verified Yes		CPCA - 45 RTT - 45		Jackson - 2019-A
97	48	Habitat		11/6/2019	Town of Carboro	House	Reported Yes		CPCA - 48 RTT, Hope - 48		
98	65	Jackson		11/13/2019	Town of Carboro	House	Reported Yes		CPCA - 65 RTT - 65		
99	67	Jackson		11/12/2019	Town of Chapel Hill	House	Reported Yes		OCDOA - 67 OCDOA, Hope - 67		
100	83	Habitat		12/16/2019	Town of Chapel Hill	House	Reported Yes		Habitat - 83 Habitat - 83		Jackson - 2019-E
101	86	Habitat		11/8/2019	Town of Chapel Hill	Mobile ...	Owms Mobile ...		OC Housing - 86 OCDOA - 86		
101	91	Jackson		12/11/2019	Town of Chapel Hill	House	Reported Yes		CPCA - 91 OCDOA - 91		RTT - 2017-Janie Habitat - 2014-Jan

151 records Unique 151

## Appendix I: Administrative Data Tables, Orange County

### OCHPC Participant Demographics & Orange County References

	All homeowners in updated Orange County database (n=123)		Homeowners in original Orange County database <sup>xiii</sup> (n=48)		Total across databases		Orange County reference <sup>xiii</sup> (%)	Orange County reference, among older adults <sup>xiv</sup> (%)
	n	%	n	%	n	%	(%)	(%)
<b>Race</b>								
Black/African American	90	73.2%			90	73.2%	11.2%	11.6%
Latinx	6	4.9%			6	4.9%	8.4%	2.0%
White	10	8.1%			10	8.1%	69.4%	82.6%
Brown	1	0.8%			1	0.8%		
Asian	15	12.2%			15	12.2%	7.7%	3.0%
Unknown	1	0.8%			1	0.8%		
American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Race not listed, and 2+ races	0	0.0%			0	0.0%	3.4%	1.4%
<b>Age (as of Oct 1, 2020 for updated database but at time of application for original)</b>								
<55	13	10.6%	1	2.1%	14	8.2%	75.1%	
>= 55 and <60	4	3.3%	2	4.2%	6	3.5%	6.0%	
>=60 and <65	15	12.2%	2	4.2%	17	9.9%	6.3%	32.6%

<sup>xiii</sup> Excluding homeowners who were also entered into the updated database

<sup>xiii</sup> Source: ACS 2018 5-year estimate

<sup>xiv</sup> Source: <https://files.nc.gov/ncdohhs/documents/files/NC%20County%20Aging%20Profiles%202018.pdf>

	All homeowners in updated Orange County database (n=123)		Homeowners in original Orange County database <sup>xii</sup> (n=48)		Total across databases		Orange County reference <sup>xiii</sup> (%)	Orange County reference, among older adults <sup>xiv</sup> (%)
	n	%	n	%	n	%		
>=65 and <70	14	11.4%	1	2.1%	15	8.8%	5.0%	26.2%
>=70 and <75	27	22.0%	4	8.3%	31	18.1%	3.2%	16.8%
>=75 and <80	18	14.6%	0	0.0%	18	10.5%	2.0%	10.5%
>=80 and <85	11	8.9%	0	0.0%	11	6.4%	1.4%	7.4%
>=85	10	8.1%	1	2.1%	11	6.4%	1.2%	6.4%
Unknown	11	8.9%	37	77.1%	48	28.1%		
<b># of people in household</b>								
1	71	57.7%	16	33.3%	87	50.9%	0.284	
2 or more	52	42.3%	15	31.3%	67	39.2%	0.716	
	2	31	25.2%		31	46.3%	0.363	
	3	13	10.6%		13	19.4%	0.152	
	4 or more	8	6.5%		8	11.9%	0.201	
Missing	0	0.0%	17	35.4%	17	9.9%		
<b>Households with older adult; OA &gt;=55 years for OCHPC but &gt;=60 for County reference</b>								
Present	99	80.5%	10	20.8%	109	63.7%	35.6%	100%
Not present or unknown	24	19.5%	38	79.2%	62	36.3%	64.4%	0.00%
<b>Households with child</b>								
Present	13	10.6%	2	4.2%	15	8.8%	29.5%	
Not present	110	89.4%	12	25.0%	122	71.3%	70.5%	
Unknown	0	0.0%	34	70.8%	34	19.9%		
<b>Both elder and child present in household</b>								
Yes	8	6.5%	Not available		8	6.5%		

	All homeowners in updated Orange County database (n=123)	Homeowners in original Orange County database <sup>xii</sup> (n=48)	Total across databases	Orange County reference <sup>xiii</sup> (%)	Orange County reference, among older adults <sup>xiv</sup> (%)
<b>No</b>	n 115	n 48	n 115	(%) 93.5%	(%) 93.5%
<b>Presence of disability (OCHPC is % of households with person with disability present; County reference is % of individuals with disability)</b>					
<b>Present</b>	59 48.0%	Not available	59 48.0%	8.9%	
<b>Not present</b>	64 52.0%	Not available	64 52.0%	91.2%	
<b>Gender identity of applicant</b>					
<b>Female</b>	90 73.2%	32 66.7%	122 71.3%	52.3%	
<b>Male</b>	31 25.2%	14 29.2%	45 26.3%	47.7%	
<b>Unknown</b>	2 1.6%	2 4.2%	4 2.3%		
<b>Income by % AMI</b>					
<b>&lt;25.0%</b>	45 36.6%	Not available	45 36.6%		
<b>&gt;=25.0 and &lt;50.0%</b>	49 39.8%	Not available	49 39.8%		
<b>&gt;=50.0 and &lt;75.0%</b>	14 11.4%	Not available	14 11.4%		
<b>&gt;=75.0 and &lt;100.0%</b>	5 4.1%	Not available	5 4.1%		
<b>&gt;=100.0%</b>	0 0.0%	Not available	0 0.0%		
<b>Unknown</b>	10 8.1%	Not available	10 8.1%		
<b>Annual household income</b>					
<b>&lt;\$5,000</b>	1 0.8%	0 0.0%	1 0.6%	3.3%	
<b>&gt;=\$5,000 and &lt;\$9,999</b>	3 2.4%	3 6.3%	6 3.5%	2.8%	
<b>&gt;=\$10,000 and &lt;\$14,999</b>	26 21.1%	8 16.7%	34 19.9%	3.7%	
<b>&gt;=\$15,000 and &lt;\$19,999</b>	27 22.0%	3 6.3%	30 17.5%	3.4%	
<b>&gt;=\$20,000 and &lt;\$24,999</b>	12 9.8%	4 8.3%	16 9.4%	4.7%	
<b>&gt;=\$25,000 and &lt;\$34,999</b>	19 15.4%	8 16.7%	27 15.8%	7.9%	

	All homeowners in updated Orange County database (n=123)		Homeowners in original Orange County database <sup>xii</sup> (n=48)		Total across databases		Orange County reference <sup>xiii</sup> (%)	Orange County reference, among older adults <sup>xiv</sup> (%)
	n	%	n	%	n	%	(%)	(%)
>=\$35,000 and <\$49,999	19	15.4%	2	4.2%	21	12.3%	12.6%	
>=50,000	6	4.9%	0	0.0%	6	3.5%	61.8%	
Missing	10	8.1%	20	41.7%	30	17.5%		
<b>Home type</b>								
House	69	56.1%	28	58.3%	97	56.7%	60.3%	
Condo	0	0.0%	1	2.1%	1	0.6%		
Mobile home	18	14.6%	6	12.5%	24	14.0%	7.6%	
	<b>Owens land</b>	14	77.8%	2	33.3%	16	66.7%	
	<b>Rents land</b>	2	11.1%	3	50.0%	5	20.8%	
	<b>"It's complicated" or unknown</b>	2	11.1%	1	16.7%	3	12.5%	
Unknown	36	29.3%	13	27.1%	49	28.7%		
Other							32.1%	

OCHPC Work Progress

	All homeowners in updated Orange County database (n=123)		Homeowners in original Orange County database <sup>xv</sup> (n=48)		Total across databases		
	n	%	n	%	n	%	
<b>Progress</b>							
Application mailed out	1	0.8%			1	0.6%	
Application in missing information	4	3.3%			4	2.3%	
Ready for assessment/needs project assessment	9	7.3%	1	2.1%	10	5.8%	
Assessed	34	27.6%	0	0.0%	34	19.9%	
In progress	59	48.0%	4	8.3%	63	36.8%	
Partially complete- closed	2	1.6%	2	4.2%	4	2.3%	
Fully complete - closed	4	3.3%	13	27.1%	17	9.9%	
Unable to complete	8	6.5%	11	22.9%	19	11.1%	
On hold	2	1.6%	3	6.3%	5	2.9%	
Unknown			14	29.2%	14	8.2%	
<b>Referring organization (note that some homeowners are referred by more than 1 organization)</b>							
CPCA	4	3.3%				4	3.3%
Direct	1	0.8%				1	0.8%
Habitat	54	43.9%				54	43.9%
Jackson Center	34	27.6%	Not available			34	27.6%
OCDOA	23	18.7%				23	18.7%
OC Housing	6	4.9%				6	4.9%
RTT	11	8.9%				11	8.9%

<sup>xv</sup> Excluding homeowners who were also entered into the updated database

OCHPC Collaborative Tool Utilization

	Orange County updated database		Orange County original database	
	n	%	n	%
<b>Unified application Submitted?</b>	<b>n=99</b>			
Yes	92	92.9%		
No	7	7.1%		
<b>Days from applying to database entry</b>	<b>n=92</b>			
<i>Average</i>	43.59			
<i>Median</i>	11.00			
<i>Minimum</i>	-83.00			
<i>Maximum</i>	511.00			
<b>Days from applying to first completed work scope, among those with 1 completed work scope</b>	<b>n=29</b>			
<i>Average</i>	175.66			
<i>Median</i>	204.00			
<i>Minimum</i>	-201.00			
<i>Maximum</i>	454.00			
<b>Home assessment Received?</b>	<b>n=99</b>			
Yes	91	91.9%		
No	8	8.1%		
<b>Days from database entry to assessment</b>	<b>n=91</b>			
<i>Average</i>	39.15			
<i>Median</i>	27.00			
<i>Minimum</i>	-109.00			

	Orange County updated database		Orange County original database	
	n	%	n	%
<i>Maximum</i>	224.00			
<b>Days from applying to assessment, among those with both</b>	<b>n=86</b>			
<i>Average</i>	76.31			
<i>Median</i>	49.50			
<i>Minimum</i>	-66.00			
<i>Maximum</i>	411.00			

OCHPC Project-level Details

	Orange County updated database		Orange county original database	
	n	%	n	%
<b>Projects</b>		<b>n=99</b>		<b>n=48</b>
None available	11	11.1%	13	27.1%
Projects created	88	88.9%	35	72.9%
<b>Types of projects</b>		<b>n=88</b>		<b>n=35</b>
<i>Accessibility modifications</i>	31	35.2%	5	14.3%
<i>Aesthetic</i>	47	53.4%	3	8.6%
<i>Appliance</i>	21	23.9%	3	8.6%
<i>Carpentry</i>	81	92.0%	16	45.7%
<i>Demolition</i>	16	18.2%	0	0.0%
<i>Electrical</i>	55	62.5%	2	5.7%
<i>Environmental rehab</i>	8	9.1%	1	2.9%
<i>Fire protection</i>	34	38.6%	1	2.9%
<i>HVAC</i>	43	48.9%	8	22.9%
<i>Masonry</i>	16	18.2%	0	0.0%
<i>Metal work</i>	1	1.1%	0	0.0%
<i>Plumbing</i>	42	47.7%	9	25.7%
<i>Roofing</i>	45	51.1%	11	31.4%
<i>Site work</i>	24	27.3%	1	2.9%
<i>Thermal &amp; moisture</i>	45	51.1%	2	5.7%
<i>Weatherization</i>	43	48.9%	7	20.0%
<b>Projects per homeowner</b>		<b>n=88</b>		
<i>Average</i>		13.4		
<i>Median</i>		12.0		
<b>Projects per homeowner completed</b>		<b>n=55</b>		

	Orange County updated database		Orange county original database	
	n	%	n	%
0% complete	34	61.8%		
>0 and <=25% complete	9	16.4%		
>25 and <=50% complete	3	5.5%		
>50 and <=75% complete	3	5.5%		
>75 and <100% complete	4	7.3%		
100% done	2	3.6%		
<b>Projects per homeowner planned</b>	<b>n=55</b>			
0% planned	11	20.0%		
>0 and <=25% planned	9	16.4%		
>25 and <=50% planned	6	10.9%		
>50 and <=75% planned	6	10.9%		
>75 and <100% planned	10	18.2%		
100% planned	13	23.6%		
<b>Dependency of weatherization, including HVAC, repairs</b>	<b>n=78</b>			<b>n=13</b>
Weatherization job is <b>not</b> dependent on preceding repairs	35	44.9%	8	61.5%
Weatherization job is dependent on preceding repairs	43	55.1%	5	38.5%
<b># of organizations involved</b>	<b>n=65</b>			
0	2	3.1%		
1	23	35.4%		
2	27	41.5%		
3	9	13.8%		
4 or more	4	6.2%		

OCHPC Service by Organization

Service status by organization and average value of repairs claimed	Orange County updated database, in progress, partial complete, full complete (n=65)	
	n	%
<b>CPCA</b>	<b>n=65</b>	
served-finished	6	9.2%
served-in progress	9	13.8%
did not serve (tried but ineligible)	5	7.7%
unknown	45	69.2%
<b>Habitat</b>	<b>n=65</b>	
served-finished	16	24.6%
served-in progress	10	15.4%
did not serve (tried but ineligible)	1	1.5%
unknown	38	58.5%
<b>Hope<sup>xvi</sup></b>	<b>n=65</b>	
served-finished	4	6.2%
served-in progress	20	30.8%
did not serve (tried but ineligible)	0	0.0%
unknown	41	63.1%
<b>Jackson Center</b>	<b>n=65</b>	
served-finished	1	1.5%
served-in progress	3	4.6%
did not serve (tried but ineligible)	0	0.0%
unknown	61	93.8%

<sup>xvi</sup> Hope's work is in partnership with other organizations, including OCCDOA (see below), and may represent double counting

	Orange County updated database, in progress, partial complete, full complete (n=65)	
	n	%
<b>OCDOA<sup>xvii</sup></b>		
served-finished	7	10.8%
served-in progress	22	33.8%
did not serve (tried but ineligible)	1	1.5%
unknown	35	53.8%
<b>OC Housing</b>		
served-finished	2	3.1%
served-in progress	7	10.8%
did not serve (tried but ineligible)	0	0.0%
unknown	56	86.2%
<b>RTT</b>		
served-finished	8	12.3%
served-in progress	5	7.7%
did not serve (tried but ineligible)	1	1.5%
unknown	51	78.5%

<sup>xvii</sup> OCDOA is likely an overestimate; unexpected funding constraints and the increased cost of supplies during COVID meant that OCDOA and Hope do not have the funding to complete many jobs that they planned for the partnership

Appendix J: Administrative Data Tables, Chatham County

CCHRC participant demographics and Chatham County references

	Chatham County survey respondents (n=16)		Chatham County homeowners in database (n=121)		Chatham County reference (Source: ACS 2018 5-Year Estimate)
	n	%	n	%	
<b>Race</b>					
Black/African American	Not available		Not available		11.3%
Latinx	Not available		Not available		12.4%
White	Not available		Not available		71.5%
Asian	Not available		Not available		1.6%
American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Race not listed, and 2+ races	Not available		Not available		3.2%
<b>Age</b>					
<55	Not available		8	6.6%	75.1%
>= 55 and <60	Not available		10	8.3%	6.0%
>=60 and <65	Not available		5	4.1%	6.3%
>=65 and <70	Not available		11	9.1%	5.0%
>=70 and <75	Not available		7	5.8%	3.2%
>=75 and <80	Not available		12	9.9%	2.0%
>=80 and <85	Not available		6	5.0%	1.4%
>=85	Not available		4	3.3%	1.2%
Unknown	Not available		58	47.9%	
<b># of people in household</b>					
1	Not available		Not available		26.8%
2 or more	Not available		Not available		73.2%
	2		Not available		41.8%
	3		Not available		14.4%
	4 or more		Not available		17.0%

	Chatham County survey respondents (n=16)		Chatham County homeowners in database (n=121)		Chatham County reference (Source: ACS 2018 5-Year Estimate)	
	n	%	n	%	%	
<b>Households with older adult; OA &gt;=55 years for CCHRC but &gt;=60 for County reference</b>						
present	12	75.0%	33	27.3%	49.0%	
not present or unknown	4	25.0%	88	72.7%	51.0%	
<b>Households with child</b>						
present	Not available		2	1.7%	26.8%	
not present or unknown	Not available		119	98.3%	73.2%	
<b>Presence of disability (CCHRC is % of households with person with disability present; County reference is % of individuals with disability)</b>						
Yes	10	62.5%	25	20.7%	15.4%	
No or unknown	6	37.5%	96	79.3%	85.0%	
<b>Gender identity of applicant</b>						
Female	Not available		Not available		52.0%	
Male	Not available		Not available		48.0%	
<b>Income by % AMI</b>						
	Not available		Not available			
<b>Annual household income</b>						
<\$10,000	0	0.0%	13	10.7%	<\$5,000	2.2%
\$10,000-\$20,000	11	68.8%	29	24.0%	>=\$5,000 and <\$9,999	2.3%
\$20,001-\$30,000	3	18.8%	5	4.1%	>=\$10,000 and <\$14,999	4.7%
\$30,001-\$40,000	1	6.3%	3	2.5%	>=\$15,000 and <\$19,999	4.6%
>40,001	0	0.0%	0	0.0%	>=\$20,000 and <\$24,999	6.4%
Missing	1	6.3%	71	58.7%	>=\$25,00 and <\$34,999	8.6%
					>=\$35,000 and <\$49,999	11.1%
					>=\$50,000	60.1%
<b>Home type</b>						
House	Not available		Not available		73.8%	

	Chatham County survey respondents (n=16)		Chatham County homeowners in database (n=121)		Chatham County reference (Source: ACS 2018 5-Year Estimate)
	n	%	n	%	%
Mobile Home					14.5%
Other					11.7%
<b>Progress</b>					
Complete	10	62.5%	45	37.2%	
Partial Complete	5	31.3%	2	1.7%	
Waitlist	1	6.3%	15	12.4%	
Partner identified			4	3.3%	
Partner needed			3	2.5%	
Assessment in Progress			19	15.7%	
Unable to complete			2	1.7%	
Unknown/empty			31	25.6%	
<b>Referring organization</b>					
	Not available		Not available		

## Appendix K: Geographical Data

### Orange County<sup>xviii</sup>

Location of applicant services with Orange County population references

Township	Service sites <sup>xix</sup>		2018 Population <sup>xx</sup>		Median Year Structure Built <sup>xxi</sup>	
	n	%	n	%		
Bingham	8	5.0%	7,005	4.9%	Available at census tract level	
Cedar Grove	14	8.8%	5,378	3.8%		
Chapel Hill	81	50.6%	93,209	65.2%		
Cheeks	21	13.1%	11,358	7.9%		
Eno	7	4.4%	7,218	5.0%		
Hillsborough	25	15.6%	15,291	10.7%		
Little River	4	2.5	3,479	2.4%		
County total	160	100.0%	142,938	100.0%		Overall: 1986

<sup>xviii</sup> County, township, and municipal shapfiles courtesy of Orange County GIS at <https://www.orangecountync.gov/2057/Download-GIS-Data>; census tract shapfile courtesy of US Census Bureau at <https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html>

<sup>xix</sup> The sample is 160 addresses after a duplicate pair was removed and 1 address did not geolocate.

<sup>xx</sup> ACS 2018 5-year Estimate analyzed by Orange County Planning & Inspections (<https://www.orangecountync.gov/1467/Population-Demographics-Population-Proje>, "American Community Survey" tab)

<sup>xxi</sup> ACS 2019 5-Year Estimate

## Completion status of applicants' projects by township in Orange County

Township	Complete		In progress		Waiting for work		Unable to complete		Unknown		Total
	n	%	n	%	n	%	n	%	n	%	
Bingham	0	0.0%	3	4.7%	3	5.7%	1	5.3%	1	20.0%	8
Cedar Grove	1	5.3%	5	7.8%	6	11.3%	2	10.5%	0	0.0%	14
Chapel Hill	11	57.9%	33	51.6%	25	47.2%	11	57.9%	1	20.0%	81
Cheeks	5	26.3%	5	7.8%	8	15.1%	2	10.5%	1	20.0%	21
Eno	0	0.0%	4	6.3%	2	3.8%	0	0.0%	1	20.0%	7
Hillsborough	2	10.5%	13	20.3%	7	13.2%	2	10.5%	1	20.0%	25
Little River	0	0.0%	1	1.6%	2	3.8%	1	5.3%	0	0.0%	4
County total	19	100.0%	64	100.0%	53	100.0%	19	100.0%	5	100.0%	160

Chatham County<sup>xxii</sup>

Location of applicant services with Chatham County population references

Township	Applicant sites <sup>xxiii</sup>		2020 Population <sup>xxiv</sup>		Median Year Structure Built <sup>xxv</sup>	
	n	%	n	%		
Albright	5	5.4%	2,755	3.5%	Available at census tract level	
Baldwin	13	14.0%	12,353	15.7%		
Bear Creek	2	2.2%	3,801	4.8%		
Cape Fear	1	1.1%	1,662	2.1%		
Center	14	15.1%	9,066	11.5%		
Gulf	9	9.7%	3,766	4.8%		
Hadley	2	2.2%	3,241	4.1%		
Haw River	9	9.7%	1,530	1.9%		
Hickory Mountain	6	6.5%	3,021	3.8%		
Matthews	29	31.2%	14,647	18.6%		
New Hope	1	1.1%	3,688	4.7%		
Oakland	0	0.0%	1,339	1.7%		
Williams	2	2.2%	17,771	22.6%		
County total	93	100.0%	78,640	100.0%		Overall: 1993

<sup>xxii</sup> County, township, municipal, and census tract shapefiles courtesy of Chatham County GIS Hub at <https://opendata-chathamncgis.opendata.arcgis.com/>

<sup>xxiii</sup> Addresses were not available for all applicants. Some addresses were also in the database more than once and 3 addresses did not geolocate correctly. The resulting sample is 93 addresses.

<sup>xxiv</sup> From "2020 Key Demographic Indicators" (ESRI), analyzed by Lucian Stewart (GIS Solutions Engineer at Chatham County); methodology at <https://pro.arcgis.com/en/pro-app/latest/tool-reference/business-analyst/enrich-layer-advanced.htm> and [https://downloads.esri.com/esri\\_content\\_doc/db/us/j10268\\_Methodology\\_Statement\\_2020-2025\\_Esri\\_US\\_Demographic\\_Updates.pdf](https://downloads.esri.com/esri_content_doc/db/us/j10268_Methodology_Statement_2020-2025_Esri_US_Demographic_Updates.pdf)

<sup>xxv</sup> ACS 2019 5-Year Estimate

## Completion status of applicants' projects by township in Chatham County

Township	Complete		Waiting for work		Unable to complete		Unknown		Total
	n	%	n	%	n	%	n	%	
Albright	2	5.1%	3	8.8%	0	0.0%	0	0.0%	5
Baldwin	8	20.5%	2	5.9%	0	0.0%	3	17.6%	13
Bear Creek	0	0.0%	0	0.0%	0	0.0%	2	11.8%	2
Cape Fear	0	0.0%	1	2.9%	0	0.0%	0	0.0%	1
Center	7	17.9%	6	17.6%	1	33.3%	0	0.0%	14
Gulf	4	10.3%	3	8.8%	0	0.0%	2	11.8%	9
Hadley	1	2.6%	1	2.9%	0	0.0%	0	0.0%	2
Haw River	6	15.4%	2	5.9%	0	0.0%	1	5.9%	9
Hickory Mountain	2	5.1%	4	11.8%	0	0.0%	0	0.0%	6
Matthews	9	23.1%	11	32.4%	1	33.3%	8	47.1%	29
New Hope	0	0.0%	1	2.9%	0	0.0%	0	0.0%	1
Oakland	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Williams	0	0.0%	0	0.0%	1	33.3%	1	5.9%	2
County total	39	100.0%	34	100.0%	3	100.0%	17	100.0%	93

## Appendix L: Survey Results Data Tables

## Stratification by county and completion status (n=39)

Completion Status by County										
	Completed		Ongoing w/ plan		Ongoing w/o plan		Total			
	n	%	n	%	n	%	n	%		
<b>Overall</b>	21	53.8	2	5.1	16	41.0	39	100.0		
<i>Orange</i>	4	18.2	2	9.1	16	72.7	22	100.0		
Original	3	33.3	0	0.0	6	66.7	9	100.0		
Updated	1	7.7	2	15.4	10	76.9	13	100.0		
<i>Chatham</i>	17	100.0	0	0.0	0	0.0	17	100.0		

Accessing services questions (n=39), by county and by completion status

How easy or difficult was it for you to fill out the application <sup>xxvii</sup>														
	Very difficult		Somewhat difficult		Somewhat easy		Very easy		Unsure/no response**		I did not use it**		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<b>Overall</b>	0	0.0	1	2.6	13	33.3	8	20.5	12	30.8	5	12.8	39	100
<i>Orange</i>	0	0.0	0	0.0	7	31.8	6	27.3	8	36.4	1	4.5	22	100
Original	0	0.0	0	0.0	5	55.6	1	11.1	2	22.2	1	11.1	9	100
Updated	0	0.0	0	0.0	2	15.4	5	38.5	6	46.2	0	0.0	13	100
<i>Chatham</i>	0	0.0	1	5.9	6	35.3	2	11.8	4	23.5	4	23.5	17	100

<sup>xxvii</sup> Survey question included a prompt about what the application looked like

How much do you agree or disagree with the following statements?													
	Strongly disagree		Somewhat disagree		Neither agree nor disagree <sup>xxvii</sup>		Somewhat agree		Strongly agree		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	
<b>I received my home repairs in a timely manner.</b>													
<b>Overall</b>	1	2.6	3	7.7	1	2.6	8	20.5	26	66.7	39	100.0	
<b>By county</b>													
<i>Orange</i>	1	4.5	1	4.5	1	4.5	3	13.6	16	72.7	22	100.0	
Original	0	0.0	0	0.0	1	11.1	2	22.2	6	66.7	9	100.0	
Updated	1	7.7	1	7.7	0	0.0	1	7.7	10	76.9	13	100.0	
<i>Chatham</i>	0	0.0	2	11.8	0	0.0	5	29.4	10	58.8	17	100.0	
<b>By completion status</b>													
<i>Completed</i>	1	4.8	2	9.5	0	0.0	6	28.6	12	57.1	21	100.0	
<i>Ongoing w/ plan</i>	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	2	100.0	
<i>Ongoing w/o plan</i>	0	0.0	0	0.0	1	6.3	2	12.5	13	81.3	16	100.0	
<b>If the partners in the coalition/collaborative were not able to make my home repairs, I would not have been able to afford other repair services.</b>													
<b>Overall</b>	0	0.0	2	5.1	0	0.0	4	10.3	33	84.6	39	100	
<b>By county</b>													
<i>Orange</i>	0	0.0	1	4.5	0	0.0	0	0.0	21	95.5	22	100	
Original	0	0.0	0	0.0	0	0.0	0	0.0	9	100.0	9	100	
Updated	0	0.0	1	7.7	0	0.0	0	0.0	12	92.3	13	100	
<i>Chatham</i>	0	0.0	1	5.9	0	0.0	4	23.5	12	70.6	17	100	
<b>By completion status</b>													
<i>Completed</i>	0	0.0	2	9.5	0	0.0	4	19.0	15	71.4	21	100	
<i>Ongoing w/ plan</i>	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	2	100	
<i>Ongoing w/o plan</i>	0	0.0	0	0.0	0	0.0	0	0.0	16	100.0	16	100	

<sup>xxvii</sup> Survey administrators did not initially read this as a response option, and offered it only if participants had difficulty answering

Experience since repairs questions (n=39), by county and by completion status

Concern about being able to pay utility bills (n=39)												
Since home repair	Very worried		A little worried		Not worried		Unsure/no response		Total			
	n	%	n	%	n	%	n	%	n	%		
Before home repair	4	10.3	5	12.8	3	7.7	0	0	12	30.8		
Very worried	0	0.0	12	30.8	3	7.7	1	2.6	16	41.0		
A little worried	0	0.0	0	0.0	6	15.4	0	0.0	6	15.4		
Not worried	0	0.0	0	0.0	0	0.0	5	12.8	5	12.8		
Unsure/no response	4	10.3	17	43.6	12	30.8	6	15.4	39	100.0		
<b>Total</b>												
Concern about being able to pay utility bills among respondents whose entire projects are complete (n=21)												
Since home repair	Very worried		A little worried		Not worried		Unsure/no response		Total			
	n	%	n	%	n	%	n	%	n	%		
Before home repair	2	9.5	2	9.5	2	9.5	0	0.0	6	28.6		
Very worried	0	0.0	4	19.0	3	14.3	1	4.8	8	38.1		
A little worried	0	0.0	0	0.0	5	23.8	0	0.0	5	23.8		
Not worried	0	0.0	0	0.0	0	0.0	2	9.5	2	9.5		
Unsure/no response	2	9.5	6	28.6	10	47.6	3	14.3	21	100.0		
<b>Total</b>												

Quality of life: Since your home has been repaired, do you feel less socially isolated? If so, how much less? <sup>xxviii</sup>											
	No change in social isolation		A little less socially isolated		Much less socially isolated		Unsure/no response		Total		
	n	%	n	%	n	%	n	%	n	%	
<b>Overall</b>	23	67.6	3	8.8	3	8.8	5	14.7	34	100.0	
By county											
Orange	12	66.7	1	5.6	1	5.6	4	22.2	18	100.0	
Original	6	85.7	0	0.0	0	0.0	1	14.3	7	100.0	
Updated	6	54.5	1	9.1	1	9.1	3	27.3	11	100.0	
Chatham	11	68.8	2	12.5	2	12.5	1	6.3	16	100.0	
By completion status											
Completed	13	65.0	2	10.0	2	10.0	3	15.0	20	100.0	
Ongoing w/ plan	2	100.0	0	0.0	0	0.0	0	0.0	2	100.0	
Ongoing w/o plan	8	66.7	1	8.3	1	8.3	2	16.7	12	100.0	

<sup>xxviii</sup> Sample size is smaller (n=34) than rest of the survey because this question was transformed into an open-ended question for the 5 energy interviews

Quality of life: Since your home has been repaired, do you feel safer? If so, how much safer?											
	No change in safety		A little safer		Much safer		Unsure/no response		Total		
	n	%	n	%	n	%	n	%	n	%	
<b>Overall</b>	5	12.8	7	17.9	26	66.7	1	2.6	39	100.0	
By county											
Orange	3	13.6	5	22.7	13	59.1	1	4.5	22		
Original	0	0.0	3	33.3	6	66.7	0	0.0	9	100.0	
Updated	3	23.1	2	15.4	7	53.8	1	7.7	13	100.0	
Chatham	2	11.8	2	11.8	13	76.5	0	0.0	17	100.0	
By completion status											
Completed	3	14.3	3	14.3	15	71.4	0	0.0	21	100.0	
Ongoing w/ plan	0	0.0	0	0.0	1	50.0	1	50.0	2	100.0	
Ongoing w/o plan	2	12.5	4	25.0	10	62.5	0	0.0	16	100.0	

Quality of life: Since your home has been repaired, do you feel more comfortable? If so, how much more comfortable?											
	No change in comfort		A little more comfortable		Much more comfortable		Total				
	n	%	n	%	n	%	n	%			
<b>Overall</b>	3	7.7	8	20.5	28	71.8	39	100.0			
By county											
Orange	1	4.5	2	9.1	19	86.4	22	100.0			
Original	0	0.0	0	0.0	9	100.0	9	100.0			
Updated	1	7.7	2	15.4	10	76.9	13	100.0			
Chatham	2	11.8	6	35.3	9	52.9	17				
By completion status											
Completed	3	14.3	6	28.6	12	57.1	21	100.0			
Ongoing w/ plan	0	0.0	1	50.0	1	50.0	2	100.0			
Ongoing w/o plan	0	0.0	1	6.3	15	93.8	16	100.0			

Quality of life: Since your home has been repaired, do you feel less stress? If so, how much less stress?

	No change in stress		A little less stress		Much less stress		Total	
	n	%	n	%	n	%	n	%
<b>Overall</b>	8	20.5	13	33.3	18	46.2	39	100.0
By county								
<i>Orange</i>	5	22.7	8	36.4	9	40.9	22	100.0
Original	2	22.2	3	33.3	4	44.4	9	100.0
Updated	3	23.1	5	38.5	5	38.5	13	100.0
<i>Chatham</i>	3	17.6	5	29.4	9	52.9	17	100.0
By completion status								
Completed	5	23.8	6	28.6	10	47.6	21	100.0
Ongoing w/ plan	1	50.0	1	50.0	0	0.0	2	100.0
Ongoing w/o plan	2	12.5	6	37.5	8	50.0	16	100.0

Caregiving experience since repairs (n=4)

Quality of life: Since [homeowner]'s home has been repaired, is it easier for you to provide care? If so, how much easier? <sup>xxxix</sup>								
	Not easier		A little easier		Much easier		Total	
	n	%	n	%	n	%	n	%
Overall	1	25.0	1	25.0	2	50.0	4	100.0

<sup>xxxix</sup> Sample size is smaller (n=4) than rest of the survey because this question was only asked of caregivers, all of whom were in Orange County

## Occupational experience since repairs questions (n=39), by county and by completion status

Since your home has been repaired, how much less scared of falling do you feel?												
	Not less scared <sup>xxx</sup>		A little less scared		Much less scared		Unsure/no response		Total			
	n	%	n	%	n	%	n	%	n	%		
<b>Overall</b>	11	28.2	9	23.1	16	41.0	3	7.7	39	100.0		
By county												
Orange	8	36.4	5	22.7	8	36.4	1	4.5	22	100.0		
Original	3	33.3	4	44.4	2	22.2	0	0.0	9	100.0		
Updated	5	38.5	1	7.7	6	46.2	1	7.7	13	100.0		
Chatham	3	17.6	4	23.5	8	47.1	2	11.8	17	100.0		
By completion status												
Completed	5	23.8	5	23.8	9	42.9	2	9.5	21	100.0		
Ongoing w/ plan	1	50.0	0	0.0	1	50.0	0	0.0	2	100.0		
Ongoing w/o plan	5	31.3	4	25.0	6	37.5	1	6.3	16	100.0		
Since your home has been repaired, how much easier is it for you to do your normal daily activities?												
	Not easier		A little easier		Much easier		Unsure/no response		Total			
	n	%	n	%	n	%	n	%	n	%		
<b>Overall</b>	9	23.1	8	20.5	18	46.2	4	10.3	39	100.0		
By county												
Orange	6	27.3	4	18.2	9	40.9	3	13.6	22	100.0		
Original	2	22.2	2	22.2	4	44.4	1	11.1	9	100.0		
Updated	4	30.8	2	15.4	5	38.5	2	15.4	13	100.0		
Chatham	3	17.6	4	23.5	9	52.9	1	5.9	17	100.0		
By completion status												
Completed	5	23.8	5	23.8	9	42.9	2	9.5	21	100.0		
Ongoing w/ plan	0	0.0	0	0.0	2	100.0	0	0.0	2	100.0		
Ongoing w/o plan	4	25.0	3	18.8	7	43.8	2	12.5	16	100.0		

<sup>xxx</sup> Includes those who responded that they were never scared of falling

Perceived comprehensiveness of repairs (n=39)

Perceived Comprehensiveness							
	Did not ask about an ongoing repair need		Asked about an ongoing repair need		Total		
	n	%	n	%	n	%	
Completed	11	52.4	10	47.6	21	100.0	
Ongoing with all work planned	1	50.0	1	50.0	2	100.0	
Ongoing, not all work planned	6	37.5	10	62.5	16	100.0	
<b>Total</b>	<b>18</b>	<b>46.2</b>	<b>21</b>	<b>53.8</b>	<b>39</b>	<b>100.0</b>	