

# STORM SURGE:

Report on the Findings from the  
Hartford Foundation for Public  
Giving Survey on Impact of Post-  
Maria Displacement of Puerto  
Ricans and U.S. Virgin Islanders on  
Households in the Greater Hartford  
Region, February - May 2018

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## EXECUTIVE SUMMARY

**O**n September 20, 2017, Hurricane Maria struck Puerto Rico as a category 4 cyclone, with minimum sustained winds blowing at 145 mph, peaking at 155 mph as it made landfall. The northwest trajectory of the storm assured that the entire island would be affected by its effects. One month henceforth, the island's authorities indicate that 49 people had died as a direct result of the hurricane. The Puerto Rican government figures indicated 64 deaths were directly related to the hurricane, even though journalistic accounts pointed to more than 1,000 deaths and a Harvard University Study estimated the count at 4,645.<sup>1</sup> In addition, more than 80 percent of consumers lacked electric service and 20 percent lacked potable water.<sup>2</sup> Six months after the storm, 15 percent still lacked electric service and 12 percent lacked potable water. Furthermore, preliminary estimates by the government of Puerto Rico indicate that approximately 70,000 residential properties were totally destroyed, with an additional 300,000 partially damaged residences. As of February 2018, 1.1 million households had applied for disaster aid from the Federal Emergency Management Agency (FEMA). FEMA reports that it has approved more than 455,000 applications for individual assistance.<sup>3</sup> The devastation caused by the hurricane, and the limited and insufficient response from government authorities at every level, has resulted, among other things, in a massive out flow of residents from the island, to destinations in the United States, including the state of Connecticut.

In light of the severity of the consequences of hurricanes Maria and Irma in the Caribbean, The Hartford Foundation for Public Giving (Hartford Foundation) issued a request for proposals for a brief survey on the impact on the Hartford region of post-disaster displacement, in anticipation that people displaced by the hurricanes might relocate to the area. The Hartford Foundation was concerned about the lack of information about the probability that people from the Caribbean region displaced by the cyclones would relocate to the Greater Hartford Region (GHR) and the magnitude of the number of individuals who might relocate. By sponsoring such a brief survey, The Hartford Foundation would contribute to fill the void in information, and in doing so, allow for the planning and the contingency preparations of non-for-profit organizations, municipalities and schools in the Greater Hartford Region.

### *Summary of Key findings*

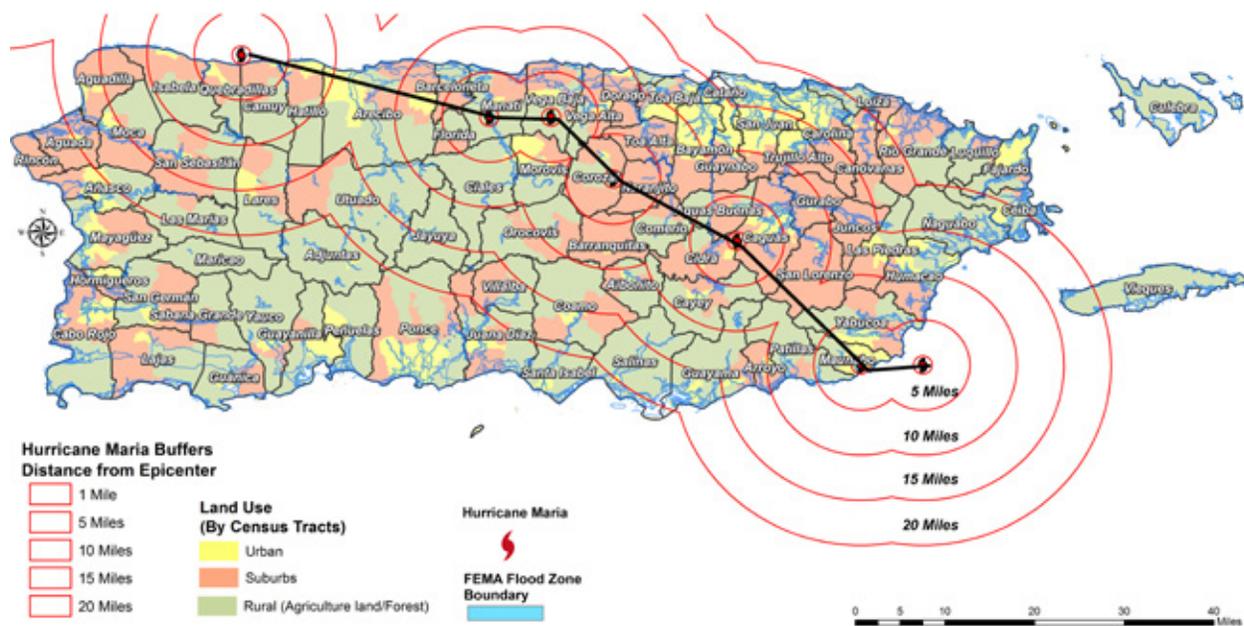
Puerto Ricans in Connecticut are already feeling the aftermath of hurricanes Irma and María. Fully one-quarter of Puerto Rican respondents in the Greater Hartford Region are harboring people displaced by the cyclones. The overwhelming majority of these displaced arrivals in Connecticut have been staying with friends or relatives for several months. Moreover, their likelihood to stay in Connecticut appears indefinite, with one-third unsure of how long they will remain in the state and nearly another third expecting to remain for several years. In addition, the majority of survey respondents expect more relatives or friends to travel to and remain in Connecticut for months or years.

The influx of displaced Puerto Ricans has resulted in pressing needs for Puerto Rican households in Connecticut. Survey respondents identify housing issues and insufficient food as the most critical needs they are facing in Connecticut, along with healthcare, in the aftermath of the crisis. These are needs not only of those who are in the state already, but of those who are very likely to arrive in the short-term. These needs are adding a heavy responsibility on an already over-extended and resource-limited Puerto Rican community in Connecticut, given the extreme levels of need that are present in the community and that pre-dated the crisis created by hurricanes Irma and Maria. Survey findings indicate a great level of poverty among respondents, with an overwhelming majority of them living in households classified as low income and two-thirds meeting the federal definition of poverty. Survey respondents report needs everywhere, though most critically concentrated in the city of Hartford and radiating from there to the surrounding towns in the region.

# INTRODUCTION

On September 20, 2017, Hurricane Maria struck Puerto Rico as a category 4 cyclone, with minimum sustained winds blowing at 145 mph, peaking at 155 mph as it made landfall. The northwest trajectory of the storm assured that the entire island would be affected, as was in fact the case (see Figure 1). One month henceforth, the island's authorities indicate that 49 people had died as a direct result of the hurricane. The Puerto Rican government figures indicated 64 deaths were directly related to the hurricane, even though journalistic accounts pointed to more than 1,000 deaths and a recent Harvard University study estimated the death count at 4,645.<sup>4</sup> In addition, more than 80 percent of consumers lacked electric service and 20 percent lacked potable water.<sup>5</sup> Six months after the storm, 15 percent still lacked electric service and 12 percent lacked potable water. Furthermore, preliminary estimates by the government of Puerto Rico indicate that approximately 70,000 residential properties were totally destroyed, with an additional 300,000 partially damaged residences. As of February 2018, 1.1 million households had applied for disaster aid from the Federal Emergency Management Agency (FEMA). FEMA reports that it has approved more than 455,000 applications for individual assistance.<sup>6</sup> The devastation caused by the hurricane, and the limited and insufficient response from government authorities at every level, has resulted, among other things, in a massive outflow of residents from the island to destinations in the United States, including the state of Connecticut.<sup>7</sup>

**Figure 1: Hurricane Maria's trajectory**



**Source: Centro de Estudios Puertorriqueños**

Over the past ten years, half a million Puerto Ricans have emigrated from the island to the United States. Migration from the island and returning to it after sojourning for a period of time, has been a feature of Puerto Rican society for decades. However, the decade-long economic crisis that has battered the people of Puerto Rico spurred an even greater exodus from what had been habitual. The annual rate of emigration from Puerto Rico exceeded 60,000 people per year in the three years before the hurricane. The catastrophic conditions on the island in the wake of hurricane Maria led to expect of an even larger emigration.

Connecticut was expected to be a leading destination for new arrivals from Puerto Rico. Connecticut ranks sixth among the states with the most Puerto Ricans (298,000) in the United States, after New York, Florida, New Jersey, Pennsylvania and Massachusetts. But Connecticut has the distinction of having the highest concentration of Puerto Ricans of any state of the union. Puerto Ricans represent 8 percent of the total state's population. Between 2006 and 2015, Connecticut received approximately 22,000 emigrants from Puerto Rico, ranking seventh among all the states receiving Puerto Ricans from the island.<sup>8</sup> The composition of those emigrants from the island prior to the hurricane skewed more towards the younger cohorts of working age (e.g., 25-34 and 18-24) who were seeking employment opportunities. While there were emigrants of all ages, minors and adults over age 55 were notably underrepresented among them.<sup>9</sup> This is the result of the economic nature of that emigration flow. However, given the magnitude of the destruction and incapacitation of the physical and institutional infrastructure, it had been expected that the emigration stream from Puerto Rico would reflect a different age composition, including not only people of prime working age, but also of very young and very old cohorts. The hurricane destroyed an electricity delivery infrastructure—the grid—that has taken months to be reestablished as well as washing out roadways and bridges, and damaging schools and other municipal facilities, which hinder the normal provision of governmental services. Medical facilities had curtailed the provision of services, save for emergency interventions, leaving many patients with little options for treatment of chronic conditions and elective surgical procedures. Anecdotal and news accounts have shown many patients being flown from the island to receive medical services in the United States as well as children of school-age being taken in by relatives in order to resume their schooling.

The emigrant stream is expected to rely heavily on family and kin networks, centered in locations in the United States with large Puerto Rican settlements. Connecticut is expected to be one of those settlement sites with a local Puerto Rican community infrastructure in place to receive refugees from the natural disaster, given its size and density. Hartford, the location with the largest percentage of Puerto Ricans in Connecticut (37%), is expected to receive the bulk of those emigrants. Given the reliance of the migration stream on such family and kin networks, the expectation is that those people displaced from the island by the cyclone will turn to friends and families in the United States to provide them with safe shelter. As a result of the relatively high concentration of Puerto Ricans in the state, the expectation is that Connecticut will become a leading reception site for Puerto Ricans displaced by the hurricane. This in fact has been the case.

In the six months since hurricane Maria made landfall in Puerto Rico, it has been estimated that more than 135,000 people have left Puerto Rico for the United States.<sup>10</sup> The magnitude of this emigration is four times greater than the already high emigration stream from Puerto Rico as a result of the economic crisis.

The state of Connecticut received approximately ten percent of that estimated emigrant total. According to available data documented by the State of Connecticut's Evacuee Support Report for the week of June 11, 2018, this number includes 1,245 households (2,867 people) under FEMA's Temporary Shelter Assistance program. In addition, upwards of 1,800 students enrolled in K-12 schools throughout the state between October 2017 and June 2018. As of June 14, 2018, only 31 households have requested support from FEMA's transportation assistance program to either book flights or travel back to Puerto Rico from Connecticut.<sup>11</sup> Starting in late September 2017, Connecticut's Governor Dannel Malloy, created a Unified Command to help coordinate assistance for hurricane survivors arriving in Connecticut.

Island residents displaced by the hurricane are seeking succor and safe-haven after catastrophic communal and personal losses. They have been seeking and receiving relief in specific communities in the United States. These communities welcoming Puerto Ricans displaced by the hurricane have largely been Puerto Rican communities. Many of these Puerto Rican communities in the United States have themselves been communities in need relative to the states and counties of which they are a part; made worse to a large extent by the downward pressures imposed by the Great Recession. In fact, then, many Puerto Ricans finding safe-haven in the United States are indeed tapping into Puerto Rican communities with limited local and statewide resources.

In light of the severity of the consequences of hurricanes Maria and Irma in the Caribbean, the Hartford Foundation, issued a request for proposals for a brief survey on the impact on the Hartford region of post-disaster displacement, in anticipation that people displaced by the hurricanes might relocate to the area. The Hartford Foundation was concerned about the lack of information about the probability that people from the Caribbean region displaced by the cyclones would relocate to the Greater Hartford Region and the magnitude of the number of individuals who might relocate.<sup>12</sup> By sponsoring such a brief survey, the Hartford Foundation would contribute to fill the void in information and, in doing so, allow for the planning and the contingency preparations of nonprofit organizations, municipalities and schools in the Greater Hartford Region.

Specifically, the Hartford Foundation sought information about the expectations Connecticut-based relatives and friends of those displaced by the hurricanes in the Caribbean had about their moving to Connecticut, the location those displaced by the storm would be travelling from, the expected time of arrival, the number and the ages of people that might relocate to the state, the expected needs they might have in the areas of housing, medical care, schooling, the length of time they might remain in Connecticut. Because of the focus on the impact of the hurricanes on the displacement of residents from the Caribbean to Connecticut, the emphasis in the selection of respondents laid on those most likely to provide information about the likelihood of potential migrants from the Caribbean; that is, respondents with active ties to people in Puerto Rico and/or the United States Virgin Islands. The responses to this survey, therefore, reflect the information provided by these informants with particular knowledge and insight into the prospect of migration of friends and relatives from the Caribbean.

El Instituto: The Institute of Latina/o, Caribbean and Latin American Studies (UConn-Storrs), and The Center for Puerto Rican Studies (Hunter College-CUNY) joined efforts to respond to the request for proposals. With more than four decades of dedicated and singular university-based academic research, El Instituto and Centro, as the Center for Puerto Rican Studies is commonly known, offered a unique combination of assets that made them ideal proponents. El Instituto, based in North Central Connecticut, with institutional and organic ties throughout the Greater Hartford Region, and culturally competent personnel well-versed in Puerto Rican vernacular, provided entry into the community under study with greater ease, which allowed for reaching successfully the target number of intended interviews. Centro is the leading Puerto Rican Studies research institute, with both a research unit and a data center dedicated exclusively to interdisciplinary study and interpretation of the Puerto Rican experience in the United States. The Center for Puerto Rican Studies has been singularly focused on monitoring the developments around the relief and recovery efforts after the storms as well as the rebuilding of the island in the context of the larger economic crisis. Centro has done so gathering data, analyzing results and making them accessible to the academic and broader communities, in an effort to inform policy debates. Centro launched *Rebuild Puerto Rico*, an online information clearinghouse for the stateside Puerto Rican community and other allies. *Rebuild Puerto Rico* is an extension of the work that Centro has been conducting for more than forty years, especially since the unfolding of the fiscal and economic crisis in Puerto Rico in 2006.

Contained herein are the findings of the survey conducted by El Instituto and Centro on behalf of the Hartford Foundation (see a methodological description in the Appendix). In order to contextualize this report, we divide the information in three parts. The migration of Puerto Ricans to the Greater Hartford Region is not new. The first part provides a note on the economic conditions of Puerto Rico to help contextualize the case of Connecticut within a broader perspective. The second part provides a profile of the Puerto Rican population in Connecticut and the Greater Hartford region. The third part releases the findings from the survey, providing an overview of the conditions of those displaced by the storms and the kin that receives them in the Greater Hartford area, as well as detailed analysis of the different segments of both the displaced and their hosts.

## PUERTO RICO'S ECONOMIC CONTEXT

To understand the full extent of the impact of the hurricanes on Puerto Rico and its people, we outline the context in which the cyclones hit, to understand how they magnify exponentially the economic crisis.

Since the United States annexed Puerto Rico in the aftermath of the Spanish-American War of 1898, the federal government has ruled the island, and all subsequently annexed territories including the U.S. Virgin Islands, as unincorporated territories. Therefore, the federal government can enact laws and policies selectively treating

declining trend in the general business cycle that had peaked in 2004, coupled with the complete phase-out of tax incentives the U.S. government had granted companies that established shop in Puerto Rico (see Figure 2). Under section 936 of the Internal Revenue Code, companies doing business in Puerto Rico were exempt from federal taxes on the income they earned in Puerto Rico. However, in 1995, the U.S. Congress eliminated those incentives, phasing them out over a ten-year period, which culminated in 2006. Consequently, companies benefitting from those federal tax exemptions began reducing their workforce in Puerto Rico or ceased operations altogether, with the concomitant increase in unemployment.



Puerto Rico as a foreign territorial possession in a domestic or constitutional sense. Because Puerto Rico remains an unincorporated territory—that is, it is not designed in and of itself to be granted admission into the federal union—the Supreme Court has repeatedly affirmed the power of Congress to enact discriminatory federal funding legislation that provide less resources to the U.S. citizens residing in the island.<sup>13</sup> This status has also contributed to the historical and continuing uneven economic development of the island.

When the hurricanes hit, Puerto Rico had been in economic decline since 2006, two years before the Great Recession hit the United States and the world economy. The trigger for that economic decline in 2006 was a

**Figure 2: Government of Puerto Rico, Government Development Bank, “Economic Activity Index (‘GDB-EAI’): September, October, November and December 2017.** Downloaded on June 13, 2018, <http://www.gdb.pr.gov/documents/2017-SepOctNovDec-GDB-EAI.pdf>

In order address the resulting economic crisis, and to close the budget deficit in the operating budget that a reduction in economic activity created, successive administrations of the Commonwealth government began to borrow money. The ability to borrow money in bond markets in the United States came from Puerto Rico’s ability to issue bonds that were exempt from taxes at the federal, state/Commonwealth and local levels, making them very attractive to large as well as small investors. This triple tax exemption was established by the same Jones Act that made

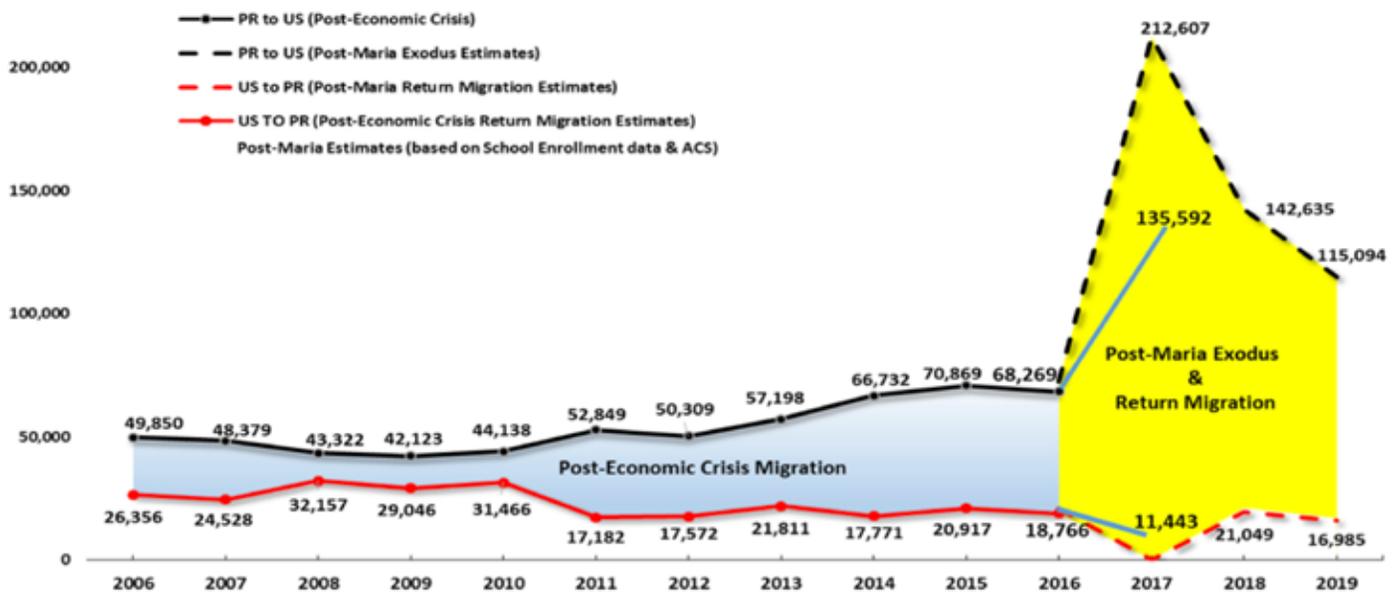
U.S. citizens out of Puerto Ricans in 1917. Moreover, the bonds issued by the Commonwealth government were attractive to investors because they were backed by the full faith and credit of the Commonwealth government as established by its constitution. This meant that in case of an economic crisis, those bonds were to be paid ahead of any other obligation the Commonwealth government had.

Because of the depth and length of the economic crisis that started in 2006, by 2016, the different governmental entities of Puerto Rico, including the Commonwealth government, the municipal governments and the public corporations that provide among other things public utilities, had collectively accumulated \$72 billion in debt and another \$40 billion in government obligations to pension funds and others. By 2014, the Government of Puerto Rico was unable make payments on its debt obligations. However, the government was unable to declare bankruptcy in U.S. federal court because in 1984 the U.S. Congress removed the ability for Puerto Rico to do so. In light of a disorderly default of government obligations and its inability to establish a locally crafted bankruptcy process (cf. Puerto Rico v. Franklin California Tax-free Trust, 2016), the U.S. Congress passed in 2016 the Puerto Rico Oversight, Management, and Economic Stability Act, which among other things allowed for a process parallel to federal bankruptcy under the oversight of a U.S. federal judge, as well as the creation of the Financial Oversight and Management Board (i.e., La Junta). The passing of *PROMESA* allowed a stay in debt payments until the government of Puerto Rico reorganized its finances under the oversight of La Junta.

The economic crisis in Puerto Rico prior to the hurricanes in 2017 has had an impact on migration of Puerto Ricans

from the island to the United States that the Center for Puerto Rican Studies has been documenting. Figure 3 traces the migration pattern of Puerto Ricans to and from the island between 2006 and 2016, using data produced by the U.S. Census Bureau and estimates produced by the Center for Puerto Rican Studies for 2017 through 2019. The data indicate a general pattern of emigration from Puerto Rico fluctuating between nearly 50,000 people beginning in 2006 with a trough of about 42,000 people in 2009 as both Puerto Rico and the United States were in the throes of the Great Recession. As the economy in the United States recovered, while that on the island remained stagnant, emigration from the island increased from 44,000 in 2010 and peaking around 70,000 in 2015 and 2016, as Puerto Rico entered a decade of economic crisis. Figure 3 also shows the pattern of return migration to the island that similarly fluctuates with the vagaries of the economy of both the United States and Puerto Rico. In 2006, about 26,000 people returned to Puerto Rico from the United States, with the figure increasing to about 30,000 per year between 2008 and 2010 as the Great Recession made the United States less of an attractive settlement site. Return migration to Puerto Rico, however, diminished to less than 20,000 people a year between 2011 and 2016, as economic conditions in Puerto Rico continued to deteriorate after a decade of a veritable economic depression.

**Figure 3. Post-Maria Migration from Puerto Rico to the United States 2006 to 2019.** Source: American Community Survey, various years. Note: Lower bound estimates are double the lowest number of migrants registered during the prior three years. Upper bound estimates are three times the highest number of migrants registered during the prior three years. Since the ACS estimates are based on random sampling of the population, the smaller the numbers reported in this table the larger the margin of error for the estimates.



Then, hurricanes Irma and Maria struck Puerto Rico in late summer 2017. Population data from the U.S. Census Bureau for Puerto Rico in 2017 and 2018 is not yet available. But using existing state level data, the Center for Puerto Rican Studies has estimated that in the six months after the cyclones hit the island, approximately 135,000 people had left the island, with another 11,000 returning from the United States.

Hurricanes Irma and Maria exponentially exacerbated and magnified the economic and humanitarian crisis the people of Puerto Rico were already experiencing as a result of the economic crisis.

## PUERTO RICANS IN CONNECTICUT

In 2016, the last year for which data are available, the U.S. Census Bureau estimated there were more than 298,000 Puerto Ricans in the state of Connecticut. Puerto Ricans, therefore, represented more than 8 percent of the state's population and more than half of the state's Hispanic population. Puerto Ricans are settled everywhere in Connecticut, but with greater concentrations in the state's urban centers. More than one-third of Connecticut's Puerto Ricans are settled in Hartford. Puerto Ricans in the Hartford metropolitan area also represented nearly 10 percent of its 1.2 million residents. The more than 113,000 Puerto Ricans in the metropolitan area made up more than two-thirds of its Hispanic population. Puerto Ricans represented not only a sizable segment of the state and metropolitan area's population; Puerto Ricans were also among the fastest growing population groups in the state. Between 2010 and 2016, Puerto Ricans in the state grew at a rate of 17.8 percent, compared to 0.1 percent rate of growth for the entire state's population. The rate of growth for Puerto Ricans in Hartford was 9.1 percent during the same period, compared to 0.6 percent for the overall metropolitan population.

While a sizable segment of Connecticut's population, Puerto Ricans as a group exhibit a socioeconomic profile that underscores their tenuous hold in Connecticut's society. Generally, Puerto Ricans tend to have lower educational attainment levels, lower labor force participation and employment rates, lower household income and earnings, and higher poverty levels than the state's overall population. For instance, in 2016, more than one quarter (26.8%) of Puerto Ricans 25 years of age and older had not earned a high school diploma. While this was an improvement from 2010, when fully one-third (33.6%) of Puerto Rican adults reported not having earned a high school degree, this level of educational attainment is nevertheless seventeen percentage points higher than the rate for Connecticut's overall population (9.5%). At

the higher end of the educational attainment spectrum, while 38.6 percent of people 25 years of age and older had reported having earned a bachelor's degree or higher in 2016, only 13.4 percent of Puerto Ricans in the state indicate they had reached this level of attainment. While a clear improvement over the 8.4 percent that reported this level of attainment in 2010, it is nevertheless a much lower level of educational attainment than that of the population as a whole. Puerto Ricans are therefore greatly overrepresented in the lower educational attainment categories and greatly underrepresented in the higher educational attainment categories.

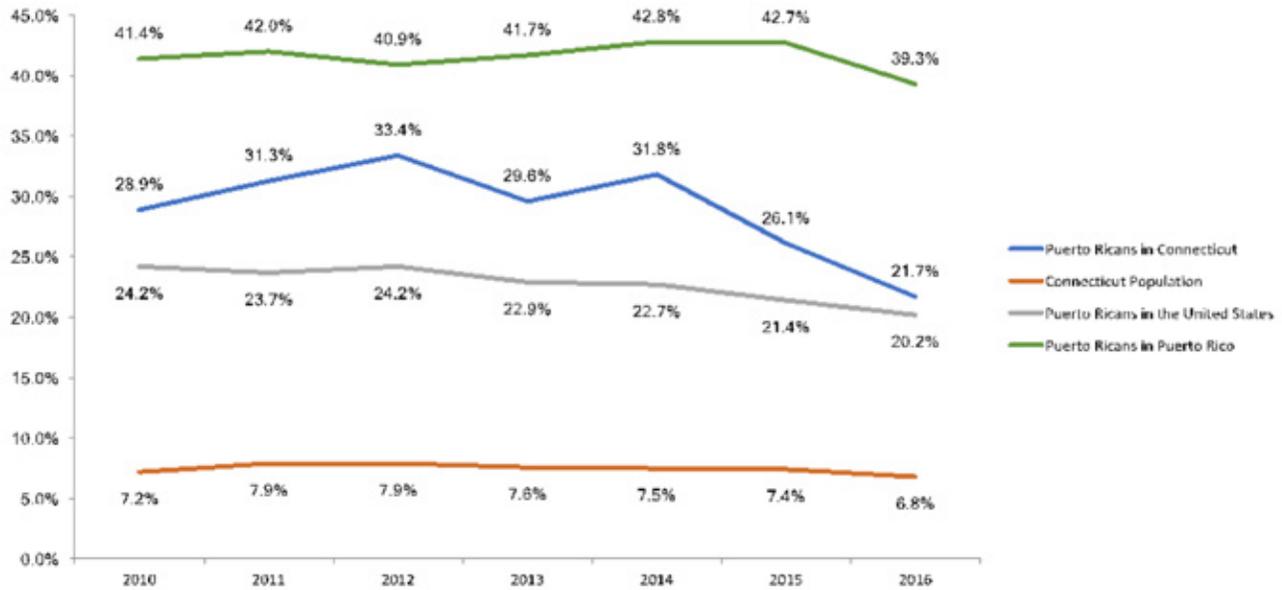
Puerto Ricans' civilian labor force participation rate in 2016 was relatively lower (63.8%) than that of the state's population 16 years and over as a whole (66.3%), and their employment rate was lower (55.8%) than that of the Connecticut's population as a whole (62.1%). These comparative statistics are reflected in Puerto Ricans' generally lower levels of income and higher levels of poverty. Puerto Rican median household income in 2016 (\$40,769) was nearly half as low as that of the state's median household income (\$73,433). Their poverty rate (24.9%) was two and a half times higher than the state's population as a whole (9.8%). For families, poverty rates had declined notably, from 29 percent in 2010 and 33 percent in 2012 to 22 percent in 2016; high by any measure or standard but improving (see Figure 4). Conditions were starker for Puerto Ricans in the Hartford metropolitan area in 2016, with a median household income that is half that (\$36,153) of the metro areas population as a whole (\$72,559), and a poverty rate (29.5%) that is nearly three times as high as the population overall (10.1%).

Puerto Ricans in Connecticut are not only in a lower socioeconomic position than the state's population as a whole. They are also relatively worse off than Puerto Ricans in the country as a whole. While 26 percent of Puerto Ricans in Connecticut have not earned a high school diploma, nationally 21 percent of Puerto Ricans were in that category of educational attainment; 13 percent of Puerto Ricans in Connecticut had a bachelor's degree or higher, compared to 18.6 percent nationally. Connecticut's Puerto Ricans had a slightly higher labor force participation rate (63.8%) and comparable rates of employment (55.8%) than Puerto Ricans nationally (61.5% and 56%, respectively). Yet, their median household income (\$40,769) and poverty rates (24.9%) show a relatively worse socioeconomic standing than Puerto Ricans nationally (\$42,856, and 23.5%, respectively).

This brief socioeconomic profile shows a segment of the state's population in a precarious position to provide

**Figure 4. Poverty rates for Puerto Rican families, 2010-2016**

**Poverty Rates for Families, 2010-2016**



Source: U.S. Census Bureau, 2010 to 2016 American Community Survey 1 Year Estimates.

assistance to relatives and friends displaced by the storms in Puerto Rico. Yet, it is a population that is indeed responding to the call for help from their kin. It is a segment of the population that is bearing down in the face of adversity and making use of limited and committed individual, familial and community resources at their disposal to help those in even greater need.

## THE GREATER HARTFORD AREA SURVEY: FINDINGS

### Respondents' profile

The sample of respondents to the Greater Hartford Survey exhibit the following characteristics: the average size of the household is 3.39 persons, with 2.37 adults present per household (see Table 1). Households with only one person in them represented 12 percent of the sample; those with two household members were 22 percent of the sample; 20 percent lived in three-member households; 20 percent lived in four-member households; 12 percent lived in households with five members and nearly 14 percent lived in households with six members or more (see Table 2).

By and large, the profile of respondents indicates that they reside in very poor households. The overwhelming majority of survey respondents (88%) lived in low income households, with two-thirds (69.9%) living in households with an annual income of \$24,999 or less, indicating *extremely low income*; 12 percent living with income between \$25,000 and \$39,999 a year, indicating *very low*

*income*; and another 6 percent living with incomes between \$40,000 and \$59,999, indicating *low income* (see Table 3).<sup>14</sup> In fact, fully two-thirds of respondents (65.8%) lived in households below the federal poverty rate. Another 12 percent of respondents lived in households earning more than \$60,000 a year, of which approximately 4 percent earned more than that median family income for the metropolitan area.

This very low household income profile among respondents holds even when the vast majority of respondents report living in households with at least one employed household member. About one-fifth of respondents indicated that no one in their household was employed. Yet, 35 percent indicated that one household member was employed; 28 percent lived in households with two employed people; 10 percent lived in households with three members employed; 3 percent lived with four employed members; and about one percent of respondents lived in households with five employed members (see Table 4). Moreover, the vast majority of respondents (91.5%) were of working age (18 to 64 years of age) and two-thirds of respondents were of prime working age (25 to 54 years of age) (see Table 5). Most respondents to the survey (61.5%) were women, with 38 percent identifying as men, and 0.4 percent identifying with another gender category. The majority of the survey respondents (52%) lives in Hartford, followed by respondents who reside in the towns beyond the immediate vicinity of the city of Hartford, as well as the residents of Hartford's inner ring suburbs (15%) and then residents of Hartford's outer suburbs (2%) (see Table 6 and Figure 5).

	All responses	Total all responses	Hartford sample	Sample total
Average number of residents in respondent's household	3.33	895	3.39	789
Average number of adults in respondent's household	2.36	887	2.37	783
Percentage of Puerto Rican respondents	92	893	94.8	788
Percentage of U.S. Virgin Islander respondents	0.5	893	0.6	793
Percentage of Rs reporting HH residents displaced by storms	25.6	888	28.1	782
Percentage R reporting kin in PR or USVI	93.6	879	93.6	776

	1	2	3	4	5	6 or more	Total
All responses	12.4	22.2	20.8	18.9	11.1	12.6	895
Hartford sample	12.3	22.2	19.8	20	11.8	13.9	789

	Percentage All responses	Percentage Hartford sample
\$24,999 or less	67.1	69.9
\$25,000 to \$39,999	12.1	11.6
\$40,000 to \$59,999	6.9	6.2
\$60,000 to \$99,999	8.9	8.2
More than \$100,000	5	4.1
Total responses		708

	0	1	2	3	4	5	6 or more
All responses	21.6	34.8	29.5	9.4	3.1	1.1	0.7
Hartford sample	22.7	35.2	28.3	9.5	2.8	0.9	0.6

	Percentage All responses	Percentage Hartford sample
18 to 24 years of age	9.4	9.7
25 to 34 years of age	22.2	22.6
35 to 44 years of age	23.8	24.7
45 to 54 years of age	20.8	20
55 to 64 years of age	15.1	14.5
65 years of age an older	8.8	8.4

The lower socioeconomic status of these respondents is also reflected in the needs they identify as afflicting them most prominently. In response to the question “what is the most important need in your home for you and your family?” one-quarter of respondents (26.1%) pointed to economic conditions of their home, whether their finances, economic stability, assistance in paying their utilities and other bills or stagnant financial mobility (see Table 7). One-fifth (19.7%) mentioned housing as their most important problem, whether it related to their need for more space or affordable rent or repairs to their home. Saliently, food is the most important need to nearly one-fifth of respondents (18.8%). Ten percent of respondent mentioned employment as their most important household need, and another nine percent pointed to healthcare as their biggest need. Notably, nearly nine percent of respondent offered they did not have an important need in their home.

### **Hartford residents, their kin and their needs**

Respondents to the Hartford survey are very connected to Puerto Rico. The percentage of Puerto Ricans in the sample is 95 percent, with an additional 0.5 percent describing their origin or descent as being from the U.S. Virgin Islands (see Table 1).<sup>15</sup> Moreover, 94 percent of respondents reported having relatives or friends in Puerto Rico or the U.S. Virgin Islands and maintaining contact with those kin. In response to whether their household included relatives or friends displaced by the hurricanes, more than one-quarter (28%) responded that they already had kin staying with them (see Table 1). Most of those kin arrived from *municipios* in Puerto Rico that were either on the direct path of the storm or immediately to its north (e.g., Caguas, Humacao, Juncos, Dorado, San Juan), municipalities that suffered the most damage (see Figure 6). Most of those kin (81%) had been staying in the respondent’s household for a few months (see Table 8). Another 16 percent had been staying in Connecticut for a few weeks, while approximately 3 percent has been in Connecticut for a few days. According to most respondents (37%), these displaced relatives and friends were uncertain as to how long they would remain in Connecticut, while 31 percent mentioned their kin would remain in the state for a few years (see Table 9). Another 23 percent of respondent reported their relatives and friends would remain in the state for a few months; 5 percent would remain for a few weeks and 4 percent would remain for a few days. Therefore, the anticipated stay of kin displaced by the storms in the Caribbean already present in the state of Connecticut is long-term.

Respondents also indicated a great likelihood that relatives and friends will migrate from the Caribbean

to Connecticut. Indeed, more than half of respondents mentioned that it was very likely (36%) or somewhat likely (22%) that kin would relocate from the Caribbean to Connecticut, with most of those relatives and friends staying with respondents (see Table 10). Expected relatives and friends would also come from *municipios* largely on the path of the storm, but with a slightly broader dispersion encompassing the eastern third of the island (see Figure 7).<sup>16</sup> Since most respondents indicated potentially displaced kin would stay with them, the expected geographic distribution of settlement of those relatives and friends reflects the geographic distribution of respondents, with most indicating the city of Hartford and its immediate vicinity as the site of relocation (see Figure 8). Moreover, these respondents expected these displaced kin to remain in Connecticut into the medium and long terms. Nearly a third of respondents (32%) reported that kin would stay in Connecticut for a few months, and a quarter (26%) would remain for a few years (see Table 11). About 30 percent of respondents did not know how long those displaced relatives would remain in the state, while 10 percent expected their kin to remain for a few weeks and about 3 percent expected them to stay for a few days.

Respondents report more than 650 people displaced by the storms residing presently in Connecticut. Of these 650 people, most tend to be adults (ranging in age between 18 and 64 years), with women (227) slightly outnumbering men (174). Children and teenagers (214) make up the next segment of the displaced population, with a generally even gender distribution. The elderly makes up the balance of the displaced population with about 13 males and 26 females in this age category (see Table 12). Anecdotally, we can share that many respondents to the survey indicated that many of those displaced had already returned to Puerto Rico, after spending a number of weeks in Connecticut. However, we are unable to report actual figures as this information was not systematically collected.

In addition to asking all survey respondents to identify their most important household need, respondents with displaced kin already staying with them were asked to determine their home needs now that they were sheltering those relatives or friends. By and large, the most pressing need for respondents hosting displaced Puerto Ricans is lodging, with fully one-third of them indicating that housing was one the biggest needs they face (see Table 13). This need was followed by lack or insufficient access to food, with one quarter of respondents mentioning it as a pressing need, along with clothing and healthcare, which one in eight respondents indicated as needs. In addition, respondents were also asked to identify the needs of their displaced kin already in Connecticut. These categories of need were prioritized by respondents when asked to rank them in order of importance (see Table 14). Nearly three-

Figure 5: Distribution of respondents to post-Maria survey

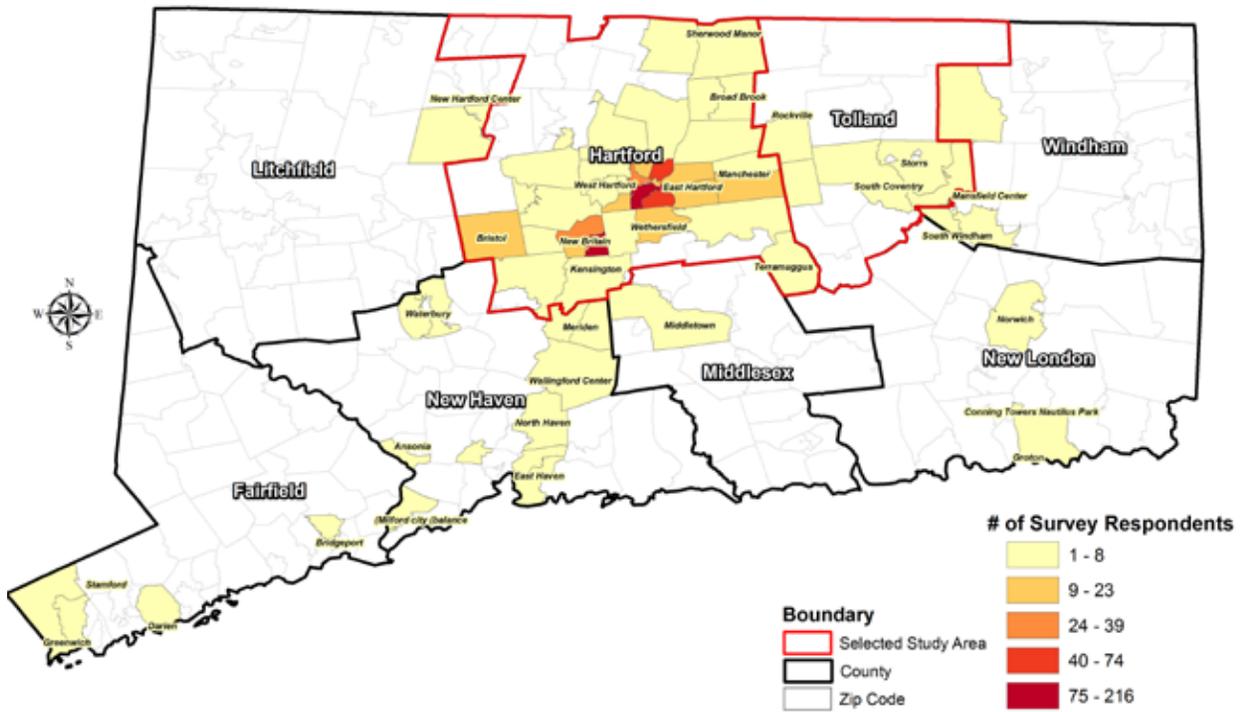


Figure 6: Distribution of respondents to post-Maria survey

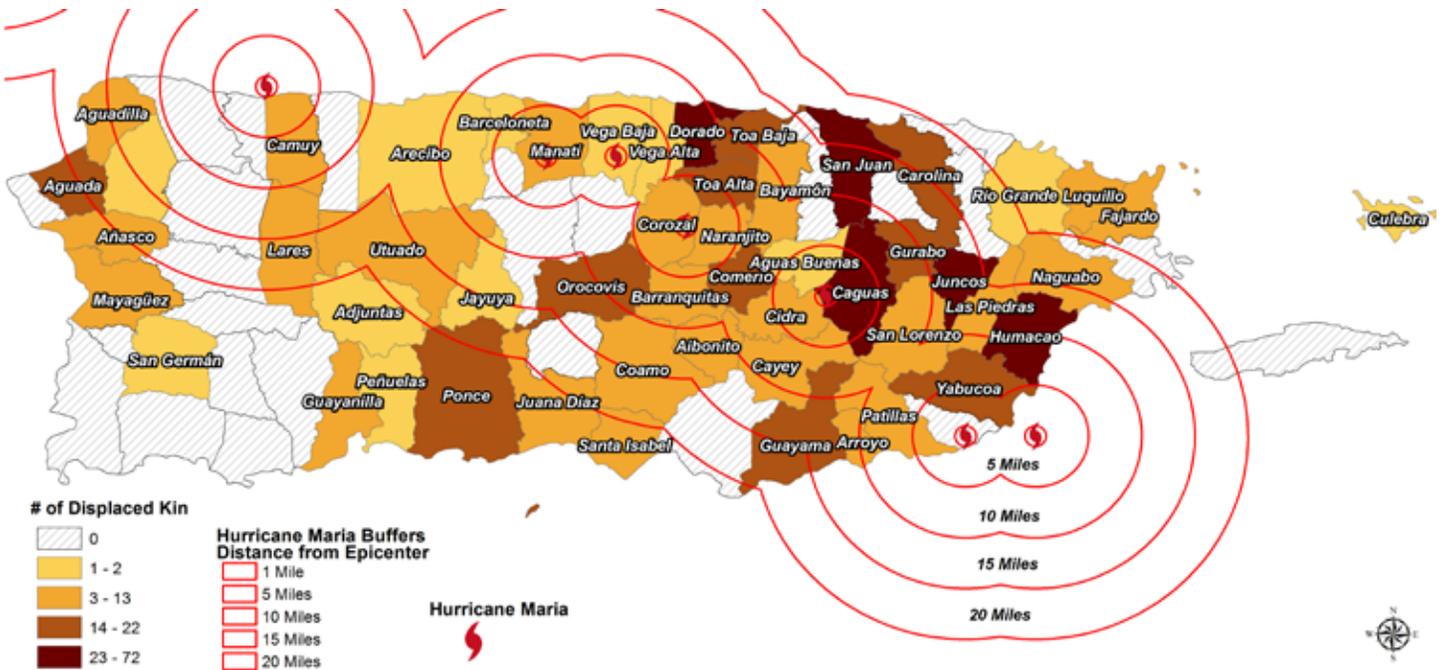


Figure 7: Municipio of provenance for displaced kin in Connecticut

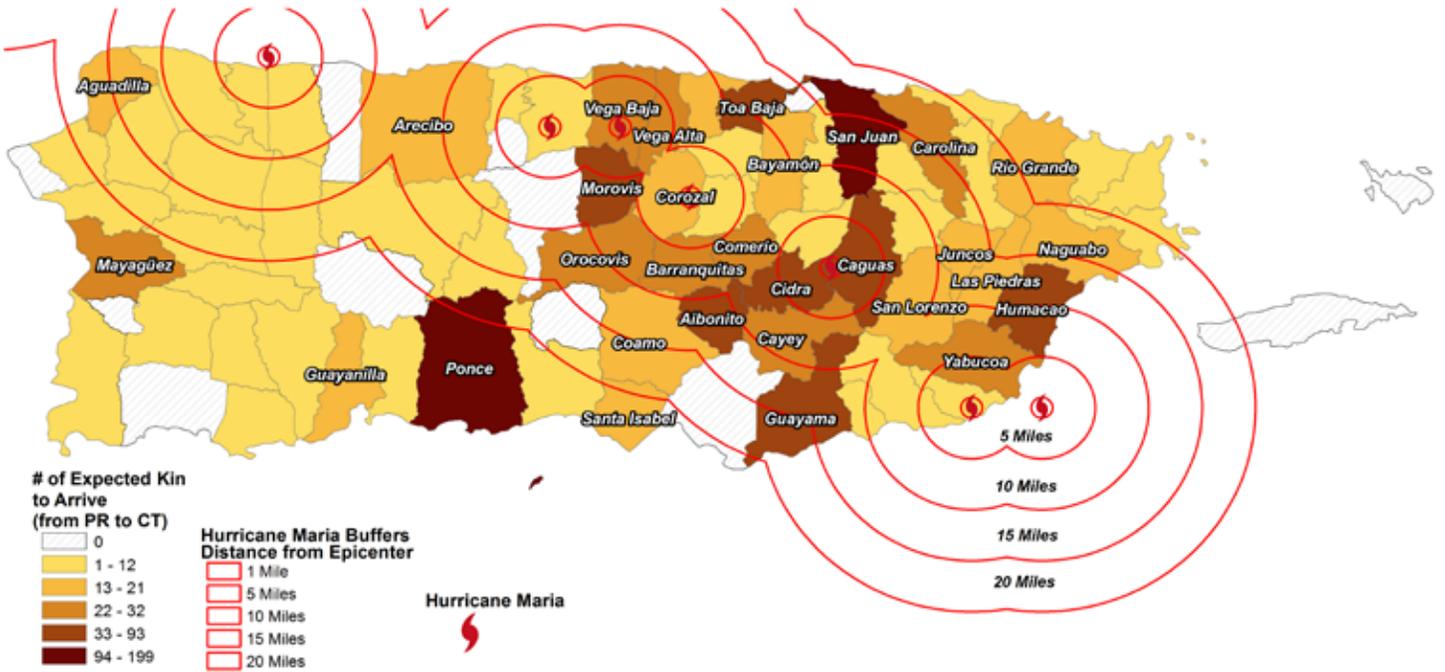


Figure 8: Expected site of relocation in Connecticut for displaced kin

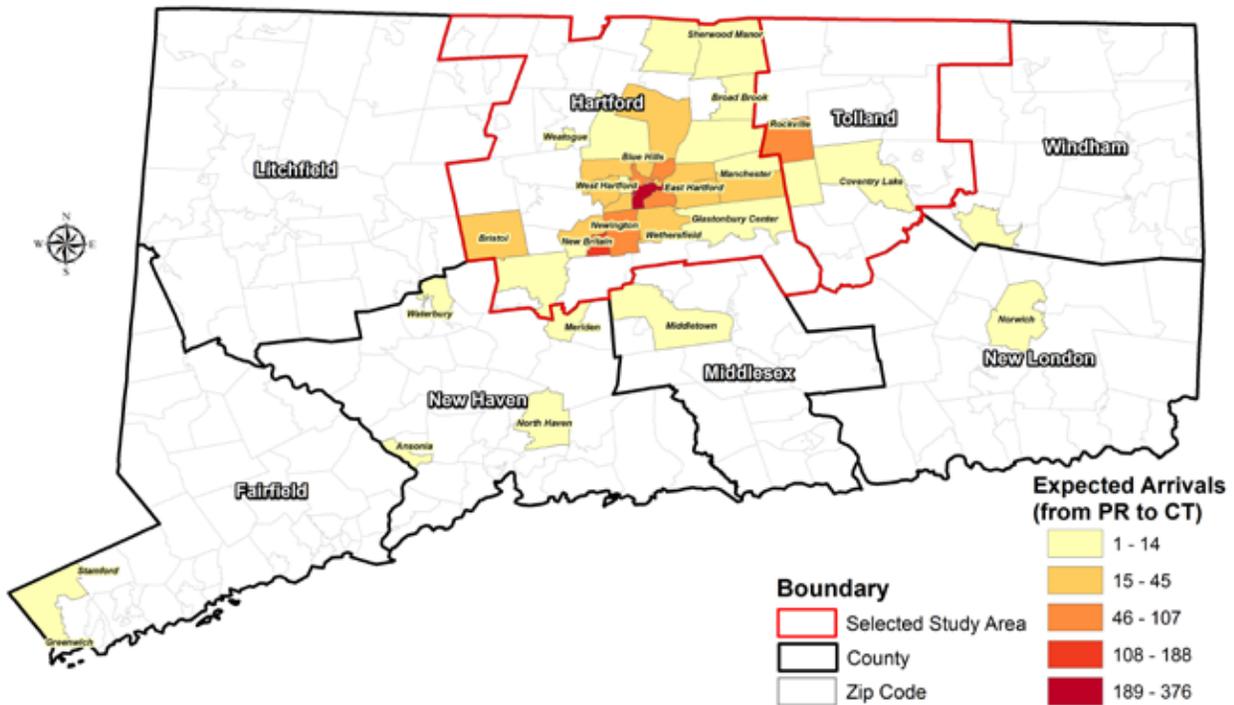


Table 6. Respondent's geographic distribution		
	Percentage All responses	Percentage Hartford sample
	n=913	n=793
Outside Hartford area	40	30.9
Hartford	45.2	52.1
Hartford inner suburbs	12.7	14.6
Hartford outer suburbs	2	2.4

Table 7. Most important need in R's home (irrespective of kin presence)	
	Percentage Hartford Sample
Financial situation	26.1
Housing	19.7
Food	18.8
Employment	9.6
Healthcare	9.3
Education	2.6
Transportation	2.2
Other	2.9
None	8.5
(n=680)	

Table 8. Percentage actual length of stay of displaced kin				
	A few days	A few weeks	A few months	Total respondents
All responses	3.6	16.5	79.9	224
Hartford sample	3.3	15.7	81	210

Table 9. Percentage expected length of stay of displaced kin						
	A few days	A few weeks	A few months	A few years	Don't know	Total respondents
All responses	4.5	5.4	23.1	30.3	36.7	221
Hartford sample	4.3	5.3	22.7	30.9	36.7	207

Table 10. Likelihood kin will leave Caribbean for CT					
	Very likely	Somewhat likely	Somewhat unlikely	Very unlikely	Total respondents
All responses	34.7%	22.7%	14.1%	28.6%	816
Hartford sample	36.5%	22.3%	13.4%	27.8%	726

Table 11. Percentage expected length of stay of displaced kin						
	A few days	A few weeks	A few months	A few years	Don't know	Total respondents
All responses	2.8	9.6	32.2	26.4	29	397
Hartford sample	2.7	9.7	31.5	26.3	29.8	372

Table 12. Number of households residents displaced by storms						
	1	2	3	4	5	6 or more
Hartford sample						
Adult males (18-64 years of age)	91	28	4	1	1	1
Adult females (18-64 years of age)	109	37	10	2	0	1
Male teenagers (13-17 years of age)	21	3	0	0	0	0
Female teenagers (13-17 years of age)	12	9	2	0	0	0
Male children (0 - 12 years of age)	34	13	3	0	0	0
Female children (0 - 12 years of age)	31	15	2	1	0	0
Elderly males (65 years or age or more)	8	1	1	0	0	0
Elderly females (65 years or age or more)	22	2	0	0	0	0

Table 13. Current needs for R's with kin in their homes			
	Hartford sample	Percentage Hartford sample (n=793)	Percentage R's with displaced kin (n=220)
Housing	72	9.1	32.7
Food	57	7.2	25.9
Help with bills	7	0.9	3.2
Employment	31	3.9	14.1
Financial	17	2.1	7.7
Healthcare	27	3.4	12.3
Clothing	28	3.5	12.7
Transportation	7	0.9	3.2
Transition to Independence	5	0.6	2.3
None	9	1.1	4.1
Other	19	2.4	8.6

Table 14. Rank of current needs of displaced kin by order of importance				
	1	2	3	Total responses
Hartford sample				
Housing	59.1	16.2	6.5	154
Food	20	35.2	11.7	145
Clothing	2.6	15.7	24.3	115
Employment	10.9	20.2	19.3	119
Transportation	2.6	15.4	13.7	117
Healthcare	16.1	10.2	24.8	137
Schools for children	1.8	2.7	7.2	111
Child care	0.9	9.3	8.4	107
Other	5.2	5.2	8.6	116

**Table 15. Number of R's kin likely to relocate in CT**

	1	2	3	4	5	6 or more
All responses						
Adult males (18-64 years of age)	156	56	23	13	6	9
Adult females (18-64 years of age)	157	80	32	9	6	11
Male teenagers (13-17 years of age)	27	16	2	0	0	1
Female teenagers (13-17 years of age)	28	9	4	0	0	1
Male children (0 - 12 years of age)	42	25	9	0	1	0
Female children (0 - 12 years of age)	42	18	11	2	1	1
Elderly males (65 years or age or more)	25	6	0	0	0	0
Elderly females (65 years or age or more)	35	6	1	0	0	0

**Table 16. Needs R's expect with likely displaced kin**

	Hartford sample	Percentage Hartford sample (n=793)
Hartford sample		
Housing	142	17.9
Food	125	15.8
Employment	60	7.6
Financial	75	9.5
Healthcare	57	7.2
Clothing	34	4.3
Transportation	16	2
Education	1	0.1
Don' Know	8	1
None	4	0.5
Other	16	2

**Table 17. Rank of expected needs of likely displaced by order of importance**

	1	2	3	Total responses
Hartford sample				
Housing	69.4	16.5	7.5	255
Food	13.1	45.4	21	229
Clothing	3.2	15.6	23.7	186
Employment	17.6	22.1	26.6	222
Transportation	3	5.9	17.2	169
Healthcare	14	16.7	25.6	215
Schools for children	1.3	1.9	10.2	157
Child care	0.7	1.3	2	151
Other	3.1	5	5.6	161

**Table 18. Does R know where to turn for assistance with needs**

	Yes	No	Total responses
Hartford sample	83.9	16.1	330
All responses	34.9	6.7	793

**Table 19. Where to turn for assistance with needs**

	Source of assistance	Total responses
Hartford sample		
Federal resources	0.5%	4
State agencies	19.0%	151
Local non-profits	4.9%	39
Family and personal networks	3.4%	27
Church	1.1%	9

**Table 20. Actual length of current stay by displaced kin by income level (in percentage)**

	A few days	A few weeks	A few months
\$24,999 or less	4.5	16.5	78.9
\$25,000 to \$39,999	0	8.3	91.7
\$40,000 to \$59,999	0	0	100
\$60,000 to \$99,999	0	10	90
More than \$100,000	0	25	75
Distribution of stay	3.2	14.3	82.5

**Table 21. Actual length of current stay by displaced kin by gender (in percentage)**

	A few days	A few weeks	A few months
Female	2.5	13.4	84
Male	2.8	16.9	80.3
Distribution of stay	2.6	14.7	82.6

**Table 22. Length of expected stay by displaced kin by gender (in percentage)**

	A few days	A few weeks	A few months	A few years	Don't know
Female	5.1	6.8	17.9	37.6	32.5
Male	1.4	1.4	29.6	23.9	43.7
Distribution of stay	3.7	4.8	22.3	32.4	36.7
<small>(n=188; Chi-square= 11.085**; *p&lt;.1; **p&lt;.05; ***p&lt;.01)</small>					

fifths of respondents indicated housing was their kin's first order need, followed by 16 percent who mentioned it in second order. Food was a first order need for one-fifth of survey respondents' displaced friends and relatives and second order need for 35 percent. Healthcare was a first order need for 16 percent of respondents' kin and a third order need for 25 percent more. Similarly, clothing was a third order need for 25 percent of friends and relatives displaced by the storms and already living in the state, a second order need for 16 percent and a first order need for 3 percent.

The survey provides evidence of the expectation that the emigration for displaced Puerto Ricans is not over. Rather, respondents expect nearly 1,500 additional people to arrive from Puerto Rico in the wake of the hurricane (see Table 15). However, this on-coming flow is expected to be somewhat different from the one that has already arrived in Connecticut. This is evident in the matrix of needs respondents offered as what may be expected. In response to the question of the needs respondents expected to have with the anticipated arrival of kin housing (18%) and food (16%) continue to be mentioned prominently (see Table 16). However, financial assistance (10%) and employment considerations (8%) appear top of mind among respondents as well. These answers as to needs for respondents expecting friends and/or relatives were also reflected in expected needs of those kin. Indeed, in the ranking of needs of expected arrivals in the state, respondents mentioned housing as the leading need (69%), with it as a second order need for another 17 percent of respondents (see Table 17). However, employment consideration follows housing in order of leading importance, with 18 percent of respondents indicating this item to be a leading need, 22 percent deeming it a second order need and 27 percent ranking it in third place. Food is leading need for 13 percent, but a second order need for 45 percent of respondents, and a third order need for another 21 percent.

Survey respondents indicate by and large they know where to turn for assistance as they face the influx of relatives and friends into their households. Five times as many respondents indicated they knew where to go for assistance (84% who knew, compared with 16% who did not know) (see Table 18). Moreover, the state agencies of the State of Connecticut featured prominently as the location survey respondents would turn for assistance, with nearly one-fifth of respondents mentioning this category (see Table 19). After state agencies, respondents mentioned local non-for-profit organizations (5%), family and personal networks (3%), communities of faith (1%) and federal entities (0.5%).

## Comparative analysis

There appears to be very little difference in respondents' answers based on some leading distinguishing characteristics in the sample, such as gender or income level; that is, differences that may be statistically significant. In other words, when comparing some responses along dimensions of income or gender, there might be differences in the proportions in response categories, but they are not differences that may be attributed to income or gender with any statistical confidence. For instance, on average, 83 percent of respondents indicated that kin displaced by the storms had stayed with them in their homes for *a few months*. For 79 percent of those making less than \$25,000, the modal income category, this was the case (see Table 20). However, 92 percent of those making between \$25,000 and \$39,999 indicated their kin had stayed with them for *a few months*; while all respondents (100%) making between \$40,000 and \$59,999 mentioned this was the case.

A similar result obtains along gender lines. Eighty-four percent of women indicated kin stayed with them for *a few months*, 13 percent mentioned kin stayed with them for *a few weeks* and 2.5 percent had said their friends and relatives stayed with for *a few days* (see Table 21). For men, the responses were 80 percent, 17 percent and 2.8 percent, respectively. While these differences are evident and "real," they cannot be attributed confidently to gender (or income level). There may be other variations that may account for these differences, but not gender (or income level). This lack of statistically significant difference in many of the bivariate result also indicate that the averages presented are fairly consistent reflections of respondents' answers.

However, there are a few variables that do show statistically significant differences along gender and income levels, for instance, in terms of the expected length of stay for displaced kin yet to arrive in Connecticut, the number of bedrooms in a respondent's residence, or the number of employed people living with a respondent. On average, respondents expect kin yet to arrive in Connecticut stay with them for *a few days* at a rate of 3.7 percent; for *a few weeks* at 4.8 percent; for *a few months* at 22.3 percent; for *a few years* at 32.4 percent; with 36.7 percent not knowing how long their relatives and/or friends will stay with them (see Table 22). Men have less of the sense than women of how long their kin will stay with them; 43.7 percent for men compared to 32.5 percent for women. There are other disparities in their responses to the expected length of stay of displaced family and friends, so that 24 percent of men think their kin will stay for *a few years*, while 38 percent of women think this will be the case. Similarly, 30 percent of men think their kin will stay with them for *a few months*, but 18 percent of women think so.

Differences in terms of income level are evident in the number of people living with a respondent, the number of those people living with respondents who are employed and the number of bedrooms in a respondent's home. On average, 12.5 of respondents lived by themselves; 21.4 percent lived with another person; 21.1 percent lived with two people; 19.6 percent lived in a household with three people; 11.9 percent lived with four people and 13.6 percent lived with 6 people or more (see Table 23). While 14.9 percent of respondents with a household income of less than \$25,000 a year; and 13 percent of those living in households with incomes between \$40,000 and \$59,999 lived by themselves; 8.5 percent of those with incomes between \$25,000 and \$39,999; 5.7 percent of those with incomes between \$60,000 and \$99,999; and 2.6 percent of those earning more than \$100,000 lived by themselves. For those respondents whose household composition included three residents—the median size of a household in the survey—the proportions also varied by household income level. Therefore, 17 percent of respondents in households with incomes between \$25,000 and \$39,999; 18.5 percent of those in households with incomes between \$40,000 and \$59,999; 20.2 percent of those in households with less than \$25,000; 27.1 percent of those making between \$60,000 and \$99,999; and 35.9 percent of respondents in households with more than \$100,000 in income lived in households with three people. The number of bedrooms per household also varied according to the income level, where those living in higher income households lived in homes with more bedrooms, and those in lower income households lived in homes with fewer bedrooms (see Table 24). Similarly, higher income household tended to include more working people than lower income households, but up to certain point (see Table 25). A greater proportion (31.3%) of extremely low household income (i.e., less than \$25,000 for a family of three) live in households in which no one worked. But no household with incomes of more than \$60,000 had five or more people in them working.

We also observe a number of differences in response categories based on the residence of the respondent within the Greater Hartford region. Dividing the study in four distinct areas—Hartford, its inner suburbs, its outer suburbs, and areas beyond Hartford—we observe differences in the proportion of respondents who mentioned they had relatives or friends in the Caribbean, the number of bedrooms in a respondent's home, the number of employed people residing in a respondent's home. Variations to responses to these questions along where a respondent resides are statistically significant. They are also driven by the disparity in income evident by the geographical distribution of respondents, whereas those in the lowest income categories are disproportionately located in Hartford, while those in the highest income categories located disproportionately in Hartford's outer

ring suburbs, with those in mid-level categories of income for this largely impoverished sample residing in inner ring suburbs or beyond the Hartford area (see Table 26). Therefore, respondents living in Hartford's outer ring suburb were relatively less likely (72%) to have kin in the Caribbean than those living in Hartford, its immediate suburbs or those beyond the Hartford area (see Table 27). Respondents from Hartford's inner ring suburbs tended to have more members in the household who worked than those in the outer suburbs or Hartford, particularly in the working household members with two and three residents (see Table 28). Similarly, more respondents from inner suburbs resided in homes with two or three bedrooms, while more residents in outer suburbs tended to live in homes with four or five bedrooms than other respondents (see Table 29).

The geographic distribution of survey respondents also shows statistically significant differences in the needs identified by respondents as affecting their households, regardless of whether kin are staying with them or whether respondents expect relatives or friends to stay with them. Therefore, whereas 18 percent of Hartford respondents and 16 percent of respondents from outside the Hartford area identified housing needs as the most pressing issue, housing is not mentioned as a problem for respondents from Hartford's outer suburbs (see Table 30). Similarly, while 10 percent of Hartford's outer suburbs mentioned improving their housing situation, that was only the most important concern for 5 percent of Hartford respondents and less than that for respondents living elsewhere in the survey area. Food was the most important need for one fifth of respondents residing in the city of Hartford, those in its inner suburbs and those beyond the Hartford area, but only for 10 percent of those residing in Hartford's outer suburbs. On the other hand, employment was the most serious issues affecting a respondent's household among 30 percent of respondents in Hartford's outer suburbs, but less than 10 percent among respondents from Hartford and its inner suburbs.

The bivariate analysis, or analysis of two variables, along geographic distribution also showed differences in responses in terms of the number of people living in a respondent's home and in the expected length of stay displaced kin already in Connecticut (see Tables 31 and 32). However, results for these two variables should be interpreted with caution since the level of statistical significance is lower than customary, increasing the probability of accepting as accurate differences in proportions when none may in fact be present.<sup>17</sup>

**Table 23. Number of people living in R's residence by income level (in percentage)**

	1	2	3	4	5	6+
\$24,999 or less	14.9	23.2	20.2	17.9	9.5	14.3
\$25,000 to \$39,999	8.5	19.1	17	26.6	14.9	13.8
\$40,000 to \$59,999	13	14.8	18.5	24.1	18.5	11.1
\$60,000 to \$99,999	5.7	18.6	27.1	11.4	21.4	15.7
More than \$100,000	2.6	15.4	35.9	33.3	10.3	2.6
Resident distribution	12.5	21.4	21.1	19.6	11.9	13.6
<small>(n=782; Chi-square= 43.235***; *p&lt;.1; **=p&lt;.05; ***=p&lt;.01)</small>						

**Table 24. Number of bedrooms in R's residence by income level (in percentage)**

	1	2	3	4	5	6+
\$24,999 or less	27.9	35.4	27.5	6.4	1.1	1.7
\$25,000 to \$39,999	11.4	20.3	48.1	13.9	3.8	2.5
\$40,000 to \$59,999	9.1	31.8	40.9	15.9	2.3	0
\$60,000 to \$99,999	5.2	20.7	55.2	13.8	3.4	1.7
More than \$100,000	0	20.7	37.9	31	6.9	3.4
Bedroom distribution total	21.6	31.5	33.6	9.6	1.9	1.8

**Table 25. Number of employed people living in R's residence by income level (in percentage)**

	1	2	3	4	5	6+	0
\$24,999 or less	39.1	21.8	5.6	0.9	0.4	0.9	31.3
\$25,000 to \$39,999	38.5	38.5	11.5	3.8	2.6	0	5.1
\$40,000 to \$59,999	27.3	43.2	15.9	11.4	2.3	0	0
\$60,000 to \$99,999	24.1	41.4	25.9	6.9	0	0	1.7
More than \$100,000	3.4	55.2	24.1	10.3	0	0	6.9
Distribution employed residents	35.4	28.4	9.6	2.9	0.8	0.6	22.5
<small>(n=659; Chi-square= 153.805***; *p&lt;.1; **=p&lt;.05; ***=p&lt;.01)</small>							

**Table 26. Geographical distribution by income level**

	Hartford	Inner Suburb	Outer Suburb	Not Immediate Hartford area	Total income distribution
\$24,999 or less	74.9	47.2	38.5	32.3	69.9
\$25,000 to \$39,999	11.5	17.9	0	9.3	11.6
\$40,000 to \$59,999	6.4	5.7	7.7	6	6.2
\$60,000 to \$99,999	5.3	15.1	38.5	7.9	8.2
More than \$100,000	1.9	14.2	15.4	17.2	4.1
Geographic distribution	52.8	15	1.8	30.4	
<small>(n=708; Chi-square= 78.696***; *p&lt;.1; **=p&lt;.05; ***=p&lt;.01)</small>					

**Table 27. Percentage of respondents with kin in Puerto Rico or U.S. Virgin Island by geographic distribution (in percentage)**

	Yes	No	Geographic distribution total
Hartford	94.8	5.2	51.9
Inner suburb	95.7	4.3	14.8
Outer suburb	72.2	27.8	1.8
Not in Hartford area	92.1	7.9	30.9
(n=776; Chi-square= 16.308***; *p<.1; **p<.05; ***p<.01)			

**Table 28. Number of employed people living in R's residence by geographic distribution (in percentage)**

	1	2	3	4	5	6+	0	Geographic distribution total
Hartford	39.3	28.2	7.4	7.4	0.9	0	21.4	52.3
Inner suburb	29.5	37.1	15.2	5.7	1.9	1.9	8.6	15.6
Outer suburb	38.5	30.8	7.7	7.7	0	0	15.4	1.9
Not in Hartford area	30.7	23.8	10.4	1	0.5	1	32.7	30.1
Distribution employed residents	35.2	28.3	9.5	2.8	0.9	0.6	22.7	30.1
(n=671; Chi-square= 46.389***; *p<.1; **p<.05; ***p<.01)								

**Table 29. Number of bedrooms in R's residence by geographic distribution (in percentage)**

	1	2	3	4	5	6+	Geographic distribution total
Hartford	23	30.2	33.2	10.2	2.5	0.8	52.3
Inner suburb	9.6	33.7	41.3	12.5	2.9	0	15.6
Outer suburb	15.4	30.8	30.8	15.4	7.7	0	1.9
Not in Hartford area	25.9	30.8	29.7	6.6	0.5	4.2	30.1
Bedroom distribution	21.7	31.6	33.3	9.6	2	1.7	30.1
(n=690; Chi-square= 32.889***; *p<.1; **p<.05; ***p<.01)							

**Table 30. Most important need in R's home (irrespective of kin presence) by geographic distribution**

	Hartford	Inner Suburb	Outer Suburb	Not Immediate Hartford area	Distribution of needs
Housing	18	6.7	0	15.8	15.3
Improve housing situation	5.3	2.9	10	3.3	4.4
Utilities and bills	4.8	2.9	0	2.9	3.8
Food	19.9	19	10	17.2	18.8
Employment	8.1	8.6	30	11.5	9.6
Financial	14.3	22.9	10	22	17.9
Financial stability/mobility	3.7	5.7	0	5.3	4.4
Healthcare	9.3	11.4	0	8.6	9.3
Transportation	1.7	1.9	0	3.3	2.2
Adult Education	0.3	1	0	1.4	0.7
Education and childcare	1.7	1	0	2.9	1.9
Don't know	0	0	0	0.5	0.1
Other	2.5	3.8	20	2.4	2.9
None	10.4	12.4	20	2.9	8.5
<small>(n=680; Chi-square= 61.07**; *p&lt;1; **=p&lt;.05; ***=p&lt;.01)</small>					

**Table 31. Number of people living in R's residence by geographic distribution (in percentage)**

	1	2	3	4	5	6+
Hartford	12.9	18.2	20.4	20.9	12.4	15.1
Inner suburb	7.8	20.7	18.1	10.9	15.5	13.8
Outer suburb	0	33.3	16.7	24.1	5.6	11.1
Not in Hartford area	14.3	28.7	19.7	15.6	9.4	12.3
<small>(n=789; Chi-square= 23.472*; *p&lt;1; **=p&lt;.05; ***=p&lt;.01)</small>						

**Table 32. Length of expected stay for displaced kin by geographic distribution (in percentage)**

	A few days	A few weeks	A few months	A few years	Don't know	Geographic distribution total
Hartford	4.3	6.8	21.4	36.8	30.8	56.5
Inner suburb	0	0	23.1	46.2	30.8	12.6
Outer suburb	0	0	33.3	33.3	33.3	1.4
Not in Hartford area	6.6	4.9	24.6	13.1	50.8	29.5
Expected stay distribution	4.3	5.3	22.7	30.9	36.7	29.5
<small>(n=207; Chi-square= 18.547*; *p&lt;1; **=p&lt;.05; ***=p&lt;.01)</small>						

## CONCLUSION

The main objective of the survey was to identify the impact of the post-Irma and Maria displacement/migration of Puerto Ricans and U.S. Virgin Islanders on households in the Greater Hartford Region. More specifically, the survey sought to identify current and anticipated needs of current and future migrants to the Greater Hartford Region. Puerto Ricans in Connecticut are already feeling the aftermath of hurricanes Irma and María. A substantial number of households with link to the Caribbean—220—is already sheltering in Connecticut over 660 people displaced by the storms. The overwhelming majority of these displaced arrivals in Connecticut have been staying with friends or relatives for a few months. Moreover, their likely stay in Connecticut appears indefinite, with one-third unsure of how long they will remain in the state and nearly another third expecting to remain for a few years. In addition, the majority of survey respondents expect approximately 1,500 more relatives or friends to arrive in the state and remain here for months or years.

The influx of displaced Puerto Ricans has resulted in pressing needs for survey respondents, who highlight housing and food as the most critical needs they are facing in Connecticut, along with healthcare, in the aftermath of the crisis. These are needs among not only those who are in the state already, but for those who are very likely to arrive in the short-term. These needs are adding a heavy responsibility on an already over-extended and resource-limited Puerto Rican community in Connecticut, given the extreme levels of need that are present in the community, even before the storms. Survey findings indicate a great level of poverty among respondents, with an overwhelming majority of them living in households classified as low income and two-thirds meeting the federal definition of poverty. Survey respondents report need everywhere they reside, though it appears most critically concentrated in the city of Hartford and radiating from there to the surrounding towns in the region. For those yet to arrive, however, there is an expectation evident in survey responses that indicate their plans to remain in the state long-term, as their expected needs shift somewhat from those already in the state in that they will be in need of employment.

To reiterate, the main purpose of this report is to provide a summary of the key findings of the survey. Although the report includes additional information to help contextualize the migration of Puerto Ricans from the island to the Greater Hartford Region, as well as relevant background information on the status of Puerto Ricans in Connecticut, this report does not attempt to provide a comprehensive understanding of the situation of Puerto Ricans in Connecticut. The report is primarily intended

to discuss the relevant survey data of the current and anticipated needs of Puerto Ricans in the aftermath of hurricanes Irma and Maria.

This report is also missing a substantive discussion of the key law and policy debates framing the relevant post-hurricane migrations. This report does not address the island, federal and state law and policy vacuums that have shaped, and in some cases exacerbated, the crisis affecting Puerto Rican migrants and the host households in the Greater Hartford Region. A substantive analysis of the law and policy debates framing the response to the migration of Puerto Ricans to the Greater Hartford Region is needed and would greatly help frame effective responses to the current crisis. This report does not include a list of policy recommendations.

Nonprofit organizations and groups have assumed a disproportionate burden in support of displaced/migrants in the Greater Hartford Region. Nonprofits have more often than not filled the vacuums created by the lack of an effective federal response to the crisis. Although we benefited from the support of various nonprofit organizations, this report does not include a substantive analysis of the work that nonprofits are doing. Another report should document the roles of nonprofit organizations in responding to the crisis and their suggestions for best practices.

Respondents were interviewed between mid-February and mid-May 2018. This is an important period because it captures or documents the responses of households are impacted by the decisions of Puerto Ricans either stay or attempt to stay in the Greater Hartford Region, the state of Connecticut, and/or the mainland more generally. However, given the fragile economic and structural conditions in Puerto Rico, as well as the new migration of Puerto Ricans, we anticipate that we will see other waves of island residents migrating to the Greater Hartford Region sometime between August and September 2018, with the conclusion of the 2017-2018 school year and in anticipation of the 2018-2019 school year. We recommend conducting another round of interviews between August and September 2018 and have the ability to conduct a larger-scale survey in the event of a major crisis affecting the island.

## APPENDIX

The survey collected 1,300 questionnaires between February, 16, 2018 and May, 16, 2018, but we used 913 responses. We excluded responses that were not part of or were located outside of the Greater Hartford Region. For the more detailed analysis of findings presented in this report we focused exclusively on the responses from 793 respondents that resided within zip code clusters selected systematically, with the probability of selection into the sample cluster proportional to the size of the Puerto Rican community in the zip code area. The size of respondents to be recruited per zip code served to establish the quota of recruitment.

The goal of the survey was to conduct interviews with 1,050 respondents from systematically selected zip codes in the Hartford area using a random procedure which sought to represent proportionately the settlement pattern of Puerto Ricans in Hartford and Tolland. Hartford and Tolland are divided into 90 non-PO Box zip codes (75 in Hartford, 15 in Tolland). Of these 90 zip codes, the Census Bureau provides Puerto Rican population information for 67 zip codes.

The 2016 (American Community Survey 5-year estimate) count for Puerto Ricans in both Hartford and Tolland contained in these 67 zip codes was 108,692. The zip code served as the cluster containing Puerto Ricans. The sample of zip codes from which to yield respondents was selected systematically, based on the Nth Puerto Rican residing in any given zip code. The Puerto Rican population in these zip codes ranged from 1 to 18,820.

To attempt to collect 1,050 interviews, we divided the Puerto Rican population by the expected sample size and we obtained 103. This number represents the sampling interval that allows the selection of zip codes from which to procure respondents as well as the number of respondents to recruit per zip code. This interval sampling procedure yielded a sample size of 1,057 from 55 zip codes, with a target number of respondents ranging from 1 to 183. The survey staff collected questionnaires from 793 respondents from selected zip codes.

In addition, the survey was announced electronically and available for wider response. This effort yielded an additional 120 questionnaires, for a grand total of 913 unique responses. The results for frequency distributions presented in this report include results from both the 913-response sample as well as the 793-response sample from systematically selected zip codes, as noted in the tables and/or graphs. The narrative of the analysis, however, focuses on the responses from respondents in the systematically selected zip codes described above.

The sample, however, is not a true random sample, and therefore, caution must be used in generalizing to the entire Puerto Rican population in Connecticut or even the Hartford area. The sub-sample used for the analysis nevertheless provides an accurate reflection of residents of the Greater Hartford area with linkages and connection to the Caribbean who could provide information about the likelihood of relocation by people affected by the cyclones and their needs—the subject of the study.

The unit of analysis is the household, as the established household in Connecticut is the social unit expected to receive emigrants from Puerto Rico. Knowledgeable individuals from singular households (e.g., the head of household or another responsible adult) were identified to answer alternatively a face-to-face questionnaire or an Internet-based questionnaire. Respondents had the choice to answer the survey at the moment of contact using a portable web-based application. Respondents in face-to-face interviews provided with a nominal incentive (\$10 gift card or cash) to encourage their participation and response.

Respondents were selected at key institutional sites (e.g., non-for-profit organizations, providing education and para-educational services, social services, medical services, retail establishments, etc.). Therefore, these sites served as primary sampling units. The Center for Puerto Rican Studies and El Instituto have standing linkages and relationships with many of these key institutional sites, creating the opportunity to assist in the promotion of the survey. Since the goal of the survey is to determine the extent to which the anticipated migrant population is expected to use locally-based services, and since current users of the services at key institutional sites are likely to channel the migrants through the networks current users already know and use, the expectation is that those migrants related to current users will be more likely to resort to using the services provided in key institutional sites.

The questionnaire was provided in both English and Spanish, with 56.4 percent of respondents answering the questionnaire in English and a corresponding 43.6 percent responding in Spanish.



Survey on Impact of Post-Disaster Displacement on the Hartford Region (English Version)

1) What is the zip code of your physical address in Connecticut? (Primary address)

2) How many people, including yourself, live with you in the place you currently live in?

- a. 1   b. 2   c. 3   d. 4   e. 5   f. 6+

3) How many of them are adults?

- a. 1   b. 2   c. 3   d. 4   e. 5   f. 6+

4) Are you Puerto Rican? (By Puerto Rican we mean, were you born in Puerto Rico, or do you have parents and/or grandparents who were born in Puerto Rico?)

- a. Yes (skip to question #6)   b. No

5) Are you a Virgin Islander? (By Virgin Islander we mean, were you born in the U.S. Virgin Islands, or do you have parents and/or grandparents who were born in the U.S. Virgin Islands)

- a. Yes   b. No

6) Is there anyone staying with you, including yourself, because they were displaced by Hurricane Irma or Maria?

- a. Yes   b. No (skip to question # 13)



7) How many?

Age	Male	Female	Other
Adult (18-64)			
Teenagers (13-17)			
Children (0-12)			
Elderly (65+)			

8) What "municipio" or town in Puerto Rico (or USVI district) did they come from? [ask: if they came from more than one municipio, from which municipio did most of them come from?]

9) How long have they been staying with you?

- a. A few days  
b. A few weeks  
c. A few months

10) How much longer will they stay with you?

- a. A few days  
b. A few weeks  
c. A few months  
d. A few years  
e. I don't know



11) What are the needs of you and your family have right now, given that those relatives and/or friends are staying with you?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12) What are the three leading needs, in order of importance, that your relatives and/or friends have while in Connecticut?

- a. Housing  
b. Food  
c. Clothing for Winter  
d. Jobs  
e. Transportation  
f. Healthcare  
g. Schools for children  
h. Childcare  
i. Other: \_\_\_\_\_

Order	
1	
2	
3	

13) Do you currently have relatives or friends that live in Puerto Rico or the U.S. Virgin Islands?

- a. Yes   b. No [TERMINATE]



14) How likely is it that those relatives or friends leave Puerto Rico or the U.S. Virgin Islands for the state of Connecticut?

- a. Very likely  
b. Somewhat likely  
c. Somewhat unlikely  
d. Very unlikely

[If they have already arrived in CT (CONFIRM ANSWER TO Q.6)]

15) What "municipio" or town in Puerto Rico (or USVI district) will they be coming from? [ask: if coming from more than one municipio, ask, "which municipio will most of them be coming from?"]

16) How likely is it that those relatives or friends coming to Connecticut will stay with you?

- a. Very likely  
b. Somewhat likely  
c. Somewhat unlikely  
d. Very unlikely  
e. They are already staying with me/us (CONFIRM ANSWER TO Q.6)

17) If they are very likely or somewhat likely to come, how many do you think will come?

	Male	Female	Other
Adult (18-64)			
Adolescent (13-17)			
Children (0-12)			
Elderly (65+)			

18) How long do you think those relatives and/or friends will stay in Connecticut?

- a. A few days
- b. A few weeks
- c. A few months
- d. A few years
- e. I don't know

19) What needs do you believe you and your family will have if those relatives and/or friends stay with you?

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20) What do you believe are the three leading needs, in order of importance, those relatives and friends will have once they arrive in Connecticut?

- a. Housing
- b. Food
- c. Clothing for winter
- d. Jobs
- e. Transportations
- f. Health Care
- g. Schools for children
- h. Childcare
- i. Other: \_\_\_\_\_

Order	
1	
2	
3	

21) Where would you turn for assistance or help in dealing with those needs you and your family will have if those relatives and/or friends stay with you?

---

22) How many bedrooms does the place where you currently live have?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. 6+

23) How many people who live with you have a job?

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. 6+
- g. 0

24) What do you do for a living?

---

25) What is the most important need in your home for you and your family?

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26) Which category represents the total annual income from any source, before taxes, for all the members of your household combined in the past 12

- a. less than \$5,000
- b. \$5,000 to \$7,499
- c. \$7,500 to \$9,999
- d. \$10,000 to \$12,499
- e. \$12,500 to \$14,999
- f. \$15,000 to \$19,999
- g. \$20,000 to \$24,999
- h. \$25,000 to \$29,999
- i. \$30,000 to \$34,999
- j. \$35,000 to \$39,999
- k. \$40,000 to \$49,999
- l. \$50,000 to \$59,999
- m. \$60,000 to \$74,999
- n. \$75,000 to \$99,999
- o. \$100,000 to \$149,999
- p. \$150,000 or more

27) What is your age?

- a. 18-24
- b. 25-34
- c. 35-44
- d. 45-54
- e. 55-64
- f. 65+

28) What is your gender?

- a. Female
- b. Male
- c. Other

## Endnotes

- 1 Kishore et al. 2018. Mortality in Puerto Rico after Hurricane Maria. *New England Journal of Medicine*. DOI: 10.1056/NEJMsa1803972, downloaded on June 12, 2018.
- 2 El Nuevo Día. 2017. “El número de muertes asociadas a María aumentó a 49.” October 20.
- 3 Puerto Rico Hurricane Maria (DR-4339), downloaded on October 20, 2017, [https://www.fema.gov/disaster/4339?utm\\_source=hp\\_promo&utm\\_medium=web&utm\\_campaign=disaster](https://www.fema.gov/disaster/4339?utm_source=hp_promo&utm_medium=web&utm_campaign=disaster)
- 4 Kishore et al. 2018. Mortality in Puerto Rico after Hurricane Maria. *New England Journal of Medicine*. DOI: 10.1056/NEJMsa1803972, downloaded on June 12, 2018.
- 5 El Nuevo Día. 2017. “El número de muertes asociadas a María aumentó a 49.” October 20.
- 6 Puerto Rico Hurricane Maria (DR-4339), downloaded on October 20, 2017, [https://www.fema.gov/disaster/4339?utm\\_source=hp\\_promo&utm\\_medium=web&utm\\_campaign=disaster](https://www.fema.gov/disaster/4339?utm_source=hp_promo&utm_medium=web&utm_campaign=disaster)
- 7 As of April 2018, FEMA provided Temporary Shelter Assistance (TSA) to displaced Puerto Ricans in 43 states. Kathya Severino, Policy Brief: *Post-Hurricane Maria: Transitional Shelter Assistance (TSA) and Other Housing Assistance*. CENTRO PB 2018-01, downloaded May 6, 2018, <https://centropr.hunter.cuny.edu/events-news/rebuild-puerto-rico/policy/post-hurricane-maria-transitional-shelter-assistance-tsa>
- 8 Meléndez, Edwin and Carlos Vargas-Ramos, eds. 2017. *State of Puerto Ricans 2017*. New York: Center for Puerto Rican Studies.
- 9 Birson, Kurt. 2014. Puerto Rican migration and the brain drain dilemma. In pp. 2-22, Meléndez, Edwin and Carlos Vargas-Ramos, eds., *Puerto Ricans at the Dawn of the New Millennium*. New York: Center for Puerto Rican Studies.
- 10 New Estimates: 135,000+ Post-Maria Puerto Ricans Relocated to the States. Centro DS2018-01. March 2018. New York: Center for Puerto Rican Studies. Downloaded on May 13, 2018, [https://centropr.hunter.cuny.edu/sites/default/files/data\\_sheets/PostMaria-NewEstimates-3-15-18.pdf](https://centropr.hunter.cuny.edu/sites/default/files/data_sheets/PostMaria-NewEstimates-3-15-18.pdf) It is important to note that estimates vary depending what source of data is used. For an example of estimates based on U.S. Bureau of Transportation Statistics, Air Carrier Statistics see Puerto Rico Institute of Statistics, Press Release: *Passenger Movement Disrupted After Hurricanes*, December 19, 2017. Accessed on May 13, 2018, available at: <https://estadisticas.pr/en/comunicados-de-prensa/trastocado-el-movimiento-de-pasajeros-tras-huracanes> For an analysis based on U.S. Postal Service change of address data, see John D. Sutter and Sergio Hernández, *La guía visual del éxodo en Puerto Rico: ¿a dónde están llegando sus habitantes?* CNN, February 23, 2018. Accessed on May 13, 2018, available at: <https://cnnespanol.cnn.com/2018/02/23/puerto-rico-exodo-huracan-maria-estados-unidos-datos-fema-inmigracion/> Alternatively, some information has been calculated based on cell phone data, see Martín Echenique and Luis Melgar, *Mappin Puerto Rico's Migration with Cell Phone Data*, CityLab, September 2017. Accessed on May 13, 2018, available at: <https://www.citylab.com/environment/2018/05/watch-puerto-ricos-hurricane-migration-via-mobile-phone-data/559889/>
- 11 Situation Report #31, *Regional Update Reports on Evacuee Support (Week of June 11, 2018)*.
- 12 Note on scope of PR and US Virgin Islanders (but not enough reliable data and numbers?).
- 13 See generally *Califano v. Torres*, 435 U.S. 1 (1978) and *Harris v. Santiago-Rosario*, 446 U.S. 651 (1980).
- 14 According to the U.S. Department of Housing and Urban Development's 2018 income guidelines for the Hartford metropolitan area households with \$26,150 in annual income for a family of three are described as *extremely low-income*; those with annual incomes of \$43,600 for a family of three are described as *very low-income* and those with annual incomes of \$64,750 for family of three are described as *low-income*. The Median Family Income in the Hartford metropolitan area is \$96,600 for 2018. Downloaded on May 30, 2018, [http://www.ct.gov/doh/lib/doh/2018\\_ami\\_limits.pdf](http://www.ct.gov/doh/lib/doh/2018_ami_limits.pdf)
- 15 The Greater Hartford survey sought to include in its sample as broad a selection of people with kin in the Caribbean affected by hurricanes Irma and Maria. While Census Bureau data indicates that there are large and well-defined settlements of Puerto Ricans in urban centers in the state of Connecticut, the estimate of the population with origin in the U.S. Virgin Islands is rather small. The 2016 5-year estimates of the American Community Survey indicate there were 146 people in the state with U.S. Virgin Island ancestry and 24 in Hartford (with 4,290 indicating a broader “West Indian” ancestry in the state and 1,362 in Hartford). Moreover, the 2010 census of the population indicates that 10 percent of the population in the U.S. Virgin Island identified as Puerto Rican, with up to 18 percent of residents of St. Croix doing so.
- 16 It is difficult to disentangle the reason for the geographic provenance of displaced kin. Certainly, the distribution reflects the path of the storm at its most destructive capacity. However, the geographic distribution of these displaced kin and potentially displaced kin may simply reflect the provenance of Puerto Ricans in the study area and the linkages they maintain with specific geographic regions of the island.
- 17 The level of statistical significance for these two response categories in the Chi-square test was greater than 0.05; indeed, greater than 0.075.

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