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# Non-profit Groups in Superstorm Sandy: Local Surge Capacity or Long Term Recovery?

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**Abstract:**

Contrary to expectations that non-profits would provide important local 'surge capacity' in the aftermath of Superstorm Sandy in New Jersey, this paper shows that their role was dwarfed by the private and government sectors. Nonprofits contributed only 2 percent of overall resources and 1 percent of overall need in the recovery from Superstorm Sandy in New Jersey. The paper explores ways nonprofits could be more relevant by harnessing data. In the case of Superstorm Sandy, there was an unprecedented amount of data available, in part because nonprofits demanded it. The paper shows that tools developed for measuring impact from Sandy, particularly the Household Hardship Index, have proved accurate and useful to nonprofits for their work with those facing ongoing need.

## Introduction

Superstorm Sandy was a devastating storm that impacted virtually every household and business in New Jersey. In response, thousands individuals and local and national nonprofit groups donated money and goods, provided clean-up crews, and offered counseling as well as temporary housing. The participation of volunteers in disasters has a long tradition in the United States (Lohmann, 1992). In addition, with recent diffusion of governance to non-profits and civic organizations (Hood, 1991; Hall and Kennedy, 2008; Kettl, 2002; Peters and Pierre, 1998) and the increased role of non-profits providing local public sector service delivery (Nesbit and Brudney, 2012), we would expect volunteer groups to play a role a bigger role in disaster recovery from Superstorm Sandy. In the emergency management literature, non-profits are often mentioned as an important component of local 'surge capacity' (Kettl and Walters, 2005; McGuire and Silvia 2010). Surge capacity is primarily the necessary assets for a large-scale disaster that might never occur (Howitt and Leonard, 2006).

How large of a role did nonprofits play? Was it enough to meet the need? There have been few efforts in the disaster and nonprofit literature to compare the size and impact of disaster relief between sectors (Bryson, Crosby, and Stone, 2006; Weisbrod, Burton. 1998; Forgette, Dettry, Van Boening, and Swanson, 2009). It has been noted that local businesses are often better placed to assist local communities than non-profit organizations (Higgins, 2005; Sobel and Leeson, 2006). How did nonprofits compare in the case of Superstorm Sandy?

The poor collection and management of data has made it difficult to understand the role of nonprofits in the aftermath of a disaster as well as for them to do their job effectively (Hoopes Halpin, March 2013; Ross and Beller, 2011; and Mayer, Weitz and Nguyen, 2008). This paper fills part of this gap by quantifying the role played by nonprofits in the recovery after Superstorm Sandy, and demonstrates what can be accomplished when a wide range of data is combined and used to create analytic tools.

First, the paper analyzes the immediate and long term needs of NJ municipalities and residents in the aftermath of Superstorm Sandy and assesses the ability of outside groups, including federal and state government agencies, disaster relief organizations and businesses to meet those needs. This paper draws data from the Rutgers Sandy Municipal Survey sent to the mayors and administrators of New Jersey's 565 municipalities in conjunction with the NJ League of Municipalities and interviews with agency directors and state and local government officials, as well as financial data from the New Jersey Department of Community Affairs (NJCA), Federal Emergency Management Agency (FEMA), the National Flood Insurance Program (NFIP), the New Jersey Department of Banking and Insurance (DOBI), the US Small Business Administration (SBA) and foundations.

The results confirm findings from previous disasters that immediate response efforts of nonprofits are overshadowed by the federal, state and local government (Sobel and Leeson, 2006). Interestingly, the role of business was important in the Sandy recovery, and recognized by town managers and government agencies. It is now poised to increase in the future.

Second, the paper presents a data tool that could be used by nonprofits to locate immediate and ongoing need of vulnerable groups in the wake of a disaster. The Household Hardship Index, a measure of vulnerability in New Jersey after Superstorm Sandy, was developed with the support of two NJ nonprofits, the Fund for New Jersey and the United Way of Northern New Jersey and presented in the Rutgers-Newark, School of Public Affairs and Administration report, *The Impact of Superstorm Sandy on New Jersey Towns and Households*. This paper tests whether the Index is also an accurate indicator of ongoing need.

**The Size of Nonprofit Sandy Relief**

The outpouring of concern and assistance in the aftermath of Superstorm Sandy was multipronged. There was a celebrity concert, text donations, and truck loads of food and clothing. There were also carloads of volunteers from across the county to help clean up. However, fundraising for Sandy was less than other recent disasters. According to the Center on Philanthropy at Indiana University-Purdue University, in the three weeks following Superstorm Sandy charities raised \$219 million, compared to \$752 million for the 2010 earthquake in Haiti, \$876 million for 9/11, and \$1.3 billion for Hurricane Katrina in 2005 (Sullivan, 2012).

As of August 2013, the estimated amount raised for Sandy relief specifically in New Jersey was \$146 million, see Figure 1. The bulk of money was raised by large, national or statewide organizations that then make grants to smaller, local non-profits who provide the relief services. The top fundraiser was the American Red Cross with \$70 million, followed by the Hurricane Sandy New Jersey Relief Fund with \$38 million and the Robin Hood Foundation with over \$26 million. Small local fundraisers also raised money for Sandy relief, and many of those benefited these large organizations and are therefore included in these totals. For example, on CraigConnects' fundraising website, the Red Cross received \$54,000, more than twice the next charity.

<b>Figure 1: Sandy Relief - Amount Raised for NJ</b>	
	million
<b>American Red Cross</b>	\$ 70.6
<b>Hurricane Sandy New Jersey Relief Fund</b>	\$ 38.0
<b>Robin Hood Foundation</b>	\$ 26.0
<b>Salvation Army</b>	\$ 4.6
<b>New Jersey Recovery Fund</b>	\$ 3.8
<b>United Way Hurricane Sandy Recovery Fund</b>	\$ 3.2
<b>Total</b>	<b>\$ 146.2</b>

*Sources: Hurricane Sandy New Jersey Relief Fund, 2013; Robin Hood Foundation, 2013; Joslyn, 2012; Strickland, 2012; and Leamy, 2013. Note - for Salvation Army and American Red Cross only total funds raised were available. To determine amount allocated to New Jersey, the Robin Hood Foundation ration of 42 percent was used.*

In addition to money, there have been large numbers of volunteers. FEMA reports that 507 volunteer organizations participated in the recovery effort in New Jersey and 166,598 volunteers contributed 951,731 hours helping with flood debris cleanup, home repairs and

reconstruction, as well as providing short-term needs, such as food, clothing and shelter assistance, and counseling services (FEMA.gov, 2013).

While these efforts are significant, in comparison to total relief, the size of the non-profit role is small and overshadowed by government and other community partners. It is most obvious when the contribution of the nonprofit sector is compared to the scope of need and the resources from the government and business sectors.

### Financial Comparison

The total cost of damages from Superstorm Sandy in New Jersey exceeds \$37 billion: \$7.8 billion for residents, \$3.56 billion for businesses and \$2.2 billion for municipalities plus \$23.5 billion for immediate necessary hazard mitigation, see Figure 2. To meet that need, insurance

Figure 2: Financial Impact of Sandy on Communities			
	Residents	Businesses	Municipalities
<b>Expenses</b>			<b>\$ million</b>
<b>Cost of damage</b>	\$ 5,929	\$ 1,684	\$ 1,970
<b>Lost income</b>	\$ 1,383	\$ 1,873	\$ 77
<b>Extra expenses</b>	\$ 532		\$ 171
<b>Total expenses</b>	\$ 7,844	\$ 3,557	\$ 2,218 *
<b>Income</b>			
<b>Insurance payments</b>	\$ 5,365	\$ 1,161	
<b>Private assistance</b>	\$ 146		
<b>Public Assistance</b>	\$ 816		\$ 516
<b>Total income</b>	\$ 6,327	\$ 1,161	\$ 516
<b>Gap</b>	\$ 1,517	\$ 2,396	\$ 1,702
<b>Loans</b>	\$ 630	\$ 186	\$ -
<b>Remaining gap</b>	\$ 887	\$ 2,210	\$ 1,702*
<i>* Plus hazard mitigation cost of \$23.5 billion</i>			

Source: FEMA, 2013, DOBI, 2013; SBA, 2013; Star-Ledger, 2013.

has paid \$6.5 billion in claims, public assistance has provided \$1.3 billion, and relief agencies have raised \$146 million. In addition, the Small Business Administration provided \$816 million in disaster loans. The remaining unmet need in New Jersey is \$28.4 billion (Hoopes Halpin, October 2013). Thus, to put the nonprofit sector into perspective, they contributed 2 percent of overall resources and met 1 percent of overall need.

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Since nonprofits are geared primarily to assist families and individuals, the details of the residential sector are outlined in this section, and a subset, vulnerable households, are discussed further in the next section. Superstorm Sandy caused the greatest financial damage in the residential sector. Initial estimates were that damage totaled \$4.97 billion. However, insurance claim data from DOBI as of May 2013 reveal that the incurred loss for the residential sector was even higher, totaling \$5.9 billion. Since the DOBI estimate only includes insured properties, the true cost of damage with non-insured properties included is even greater. New Jersey residents were also impacted by lost jobs as well as lost wages due to closed businesses. Lost income totaled \$1.38 billion.

In terms of expenses, most households faced additional unexpected costs primarily damaged automobiles. The personal auto case incurred loss of private insurance claims was \$532 million. There were also additional expenses for spoiled food, a generator, or emergency travel or accommodation, for which there was no reimbursement. A smaller group of residents are still facing steep unexpected costs, those for immediate hazard mitigation, primarily to elevate homes to meet the new FEMA flood plain guidelines. To date, there has been no estimate for this cost and therefore no way to estimate if the amount of FEMA household hazard mitigation funds are sufficient.

Resources to meet the residential needs came from private insurance totaling \$5.37 billion which also includes payments from the National Flood Insurance Program, public assistance including FEMA and unemployment benefits totaling \$816 million, and relief organizations totaling \$146 million. The remaining gap is \$1.5 billion. However, the Small Business Administration (SBA) has provided \$630 million in home disaster loans, leaving unmet need of \$887 million.

### **View from the Municipal Level**

A more in-depth view from the municipal level from the Sandy Municipal Survey provides additional insight into the way outside groups met the immediate needs of communities after Sandy. The Sandy Municipal Survey was undertaken at the School of Public Affairs and Administration at Rutgers-Newark in co-operation with the New Jersey League of Municipalities in the spring of 2013, four months after Superstorm Sandy hit New Jersey. There were 140 complete surveys, a 25 percent response rate, see Appendix A for full methodology.

Because the storm path was so wide, all towns and counties were struggling, few had capacity to spare, especially in the days and weeks after the storm. over time, more assistance became available. According to responses to the Sandy Municipal Survey and further interviews, towns personnel felt that they were primarily on their own to deal with the crisis in their municipality.

Town officials recounted the way their municipal staff rose to the challenge, adapting quickly to changing circumstances, and displaying extreme dedication. They emphasized their ingenuity in the face of repeated challenges (Amoruso, 2013; Keen, 2013; Paul, 2013; Schneider, 2012). Towns seemed to be proud of their self-sufficiency following the storm. While they reported using resources that were available, the common perception was that they did not need them to maintain basic services. When asked directly in the Survey if they required assistance beyond their municipal staff to maintain municipal services (i.e. from the state or federal government or nonprofit groups), 96 percent said that they did not.

This sentiment is captured in some of the comments provided from the Survey respondents, for example, "We have to be more self-reliant as assistance did not come quickly enough."

Over time, towns did use outside resources. In fact, of the 140 towns responding to these questions 79 percent, used outside assistance, primarily from the government but also their local community. Towns reported 12 different sources for assistance, see Figure 3. Interestingly, much of the assistance was home-grown, coming from local residents, businesses, and groups. Other than local efforts, County Offices of Emergency Management provided the most assistance with 16 percent of the total, followed by FEMA with 11 percent. The utility companies provided 9 percent, the New Jersey Office of Emergency Management 8 percent, and the Red Cross and Salvation Army provided 6 percent. New Jersey departments, such as HUD or NJDCA, and social media each provided 5 percent, neighboring towns provided 4 percent and outside groups provided only 2 percent.

**Figure 3: Sources of Assistance to NJ Towns**

	<b>% of total assistance</b>
<b>County OEM</b>	16%
<b>Town residents</b>	11%
<b>FEMA</b>	11%
<b>Local businesses</b>	11%
<b>Local group</b>	10%
<b>Utility</b>	9%
<b>NJ OEM</b>	8%
<b>Red Cross or Salvation Army</b>	6%
<b>NJ Department</b>	5%
<b>Social media</b>	5%
<b>Neighbor town</b>	4%
<b>Outside group</b>	2%

*Source: Sandy Municipal Survey, 2013.*

The kind of assistance is also revealing. Most commonly, 53 percent of towns responded that they received information from outside sources, see Figure 4. In addition, 25 percent received supplies, 19 percent used manpower from outside groups, and only 4 percent received financial assistance.

Most assistance was in the form of information from county and state OEM, followed by supplies from county OEM and local businesses, and manpower from local community groups and town residents, and in only a few cases financial assistance from FEMA, town residents and local businesses. Even when information was not included as a category of assistance, 70 percent of towns reported receiving outside assistance.

<b>Figure 4: Types of Assistance for NJ Towns</b>	
<b>Information</b>	53%
<b>Supplies</b>	25%
<b>Manpower</b>	19%
<b>Finance</b>	4%

*Source: Sandy Municipal Survey, 2013.*

For the needs New Jersey was facing, several towns highlighted the effective role local businesses played. The most pressing need in the immediate aftermath of the storm for most towns was debris collection and removal. This was done primarily with town personnel though almost half also used contractors. In addition, businesses provided vital goods and services, notably, electricians tested power lines, gas stations provided petro during rationing, and other businesses made available emergency and building supplies. The useful role of businesses in disaster response was so clear, that the head of Morris County OEM noted that for the next disaster they would include a seat at the Emergency Operations Center for the local chamber of commerce (Hoopes Halpin, October 2013).

Delay in outside assistance is understandable, given the breadth and severity of the storm. Interviews suggest that non-profits were delayed in helping because of the impact of the storm on their volunteers, infrastructure and communications. Local volunteers were also victims and therefore had no capacity to provide assistance. With wide spread power outages, it was difficult to communicate what was needed to outside groups. As a result, the Red Cross, Occupy Sandy, and other non-profits were quickly overwhelmed with donations of used clothes and other items that no one needed (Chang, 2013; Fessler, 2013).

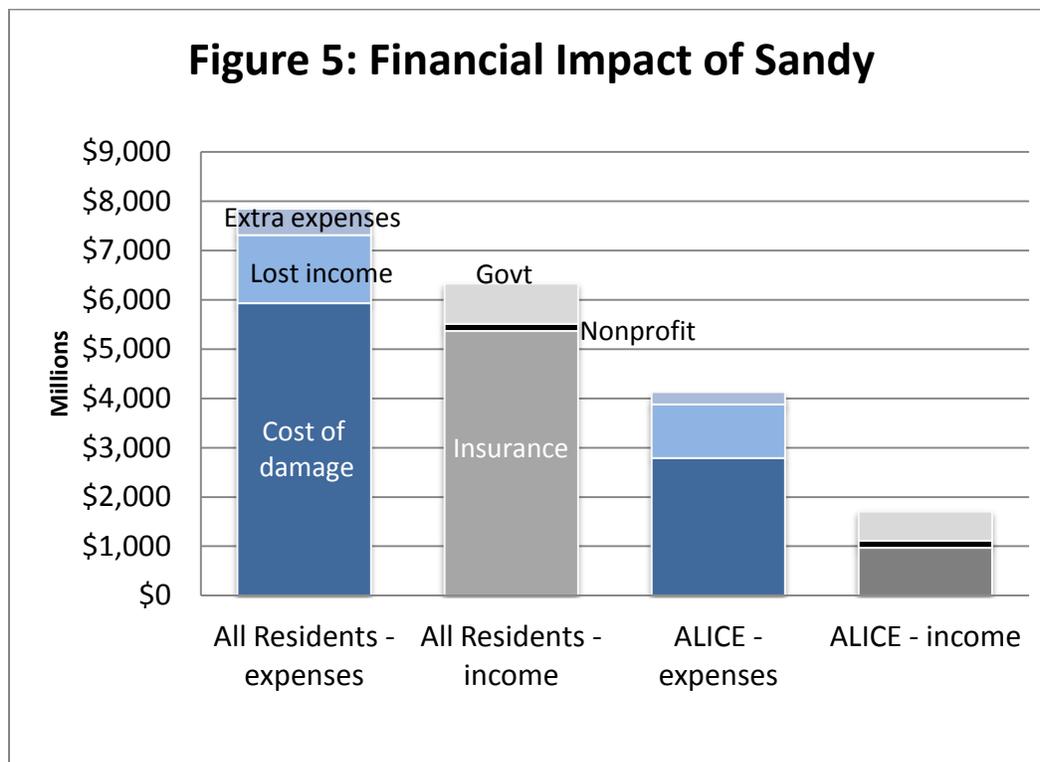
Significant amounts of aid from FEMA and relief agencies did not come until weeks or months after the storm. For example, only 4 percent of towns reported that they had received FEMA financial assistance at the time of the Sandy Municipal Survey in March. Yet by July, 81 percent of all New Jersey towns had received FEMA Municipal Public Assistance, according to the New Jersey State Comptroller.

### Impact on the Most Vulnerable

Of particular concern in a disaster are those with the least resources, defined here as ALICE, namely working families that do not earn enough to afford a basic household survival budget as documented in the 2012 report, *ALICE (Asset-Limited, Income-Constrained, Employed): A Study of Financial Hardship in New Jersey*. Notwithstanding a natural disaster, one-third of New Jersey households do not earn enough to afford a basic household survival budget. The ALICE Threshold is above the Federal Poverty Level but below financial stability. These households live in all towns in New Jersey. Typically family members work in service jobs essential to the state's economy. However, with low wage jobs and minimal or no savings, they are more likely to buy or rent in disaster prone areas, and are unable to invest in preventative measures, or save for a 'rainy day.'

With disaster damage data and the ALICE Threshold measure, for the first time it is possible to measure the impact of a disaster on vulnerable households. Households earning below the ALICE Threshold were disproportionately impacted by Superstorm Sandy.

The cost of residential damage and lost income for households with income below the ALICE Threshold was \$4.1 billion of the \$7.84 billion for the total residential sector. Figure 5 compares totals for all residents (left-hand columns) with households with income below the ALICE Threshold (right-hand columns); expense totals are in blue, income in grey. Expenses incurred by vulnerable households include \$2.79 billion in housing damage, \$832 million in lost wages, \$257 million in lost income from jobs lost, and \$250 million in auto damage.



Source: Hoopes Halpin, 2013.

In terms of meeting need, private insurance, non-profits, and public assistance provided \$1.7 billion for households with income below the ALICE Threshold compared to \$6.3 billion for all residents. Resources for vulnerable households includes \$966 million in insurance claims, \$146 million in disaster aid (estimating that all aid goes to households with income below the ALICE Threshold), and \$590 million in public assistance including \$164 million from FEMA, \$33.6 million from the Department of Human Services for Disaster SNAP, and \$392 million from unemployment benefits (Hoopes Halpin, 2013).

Thus, there is a gap of \$2.4 billion, which is partially filled with \$195 million in SBA disaster home loans. The remaining gap is \$2.2 billion for households with income below the ALICE Threshold, compared to a gap of \$887 million for the total residential sector. For families with the least resources, this gap is one they are unlikely to be able to fill, thereby threatening the recovery of the entire state.

With an estimated 40 percent of households with income below the ALICE Threshold incurring a loss of more than a quarter of their monthly income, it is surprising that only 11 percent applied for FEMA Individual Assistance, a program designed to help for those who "are unable to meet the needs through other means" (FEMA, "Assistance to Individuals and Households Fact Sheet").

Analysis of the geographic distribution of FEMA and SBA assistance registrations and recipients suggest that there was uneven distribution of the program in general and how to complete the process in particular (Hoopes Halpin, 2013). In addition, according to the Sandy Municipal Survey, only 24 percent of shelters disseminated FEMA information. These findings are reinforced by reports that the distribution of post-disaster benefits was an issue after Katrina and the Hurricanes in Florida (AP, 2009; and Brower and Word, 2012).

While there are clearly still many households struggling after Superstorm Sandy, there is no mechanism to identify where they are located. The current system relies on those in need to seek out government grants or loans or a wide range of assistance from non-profits and church groups. The majority of the aid has come in the form of food and shelter, 37 percent, followed by individual casework and assistance, 25 percent, and housing and community assistance, 19 percent (Mullen, 2013).

To help individuals connect to resources, there are Long Term Recovery Groups (LTRG) in 16 counties and a case work system. Headed by Catholic Charities, cases among participating nonprofits which identify the long term recovery needs of individuals and families, utilize community volunteers and assist in matching available resources (FEMA, May 2013). Ultimately, there are not enough financial resources to meet the need. For those who have exhausted their personal resources and insurance, are living in temporary accommodation, working full-time jobs and caring for family members, this is an added hardship. It has been a frustrating and unfulfilling experience (Nurin, 2013).

## How to Target Resources?

Disaster relief agencies face two serious charges of criticism: not providing enough assistance, especially financial resources, to meet the need (Sullivan, 2012; Leitsinger, 2013), and not targeting resources to those who need them most (Caruso, 2013; Neuhauser, 2013; Penton, 2013). If nonprofits had a transparent measure of need, they could better make their case for the amount of aid needed. And with a geographic identification of areas with on-going need, they could better demonstrate that resources were being properly targeted.

Two New Jersey nonprofits, the Fund for New Jersey and the United Way of Northern New Jersey, supported research to create measures to better understand the damage inflicted by Superstorm Sandy. *The Impact of Superstorm Sandy* report included two hardship indices, standardized measures of economic and physical damage that control for population differences so that the impact can be compared across all of New Jersey's 21 counties and 553 municipalities that lost power or reported damage, out of 565 New Jersey towns (Hoopes Halpin, 2013). The Community Hardship Index measures the economic and physical impact in the residential, commercial, and municipal sectors.

The second Index, the Household Hardship Index, quantifies the scope and severity as well as the resilience of New Jersey's most vulnerable households, those earning below the ALICE Threshold. A summary of the top 50 towns in the Community and Household Hardship Indices are presented in Appendix B.

Interestingly, these two indices produce different list of towns, though 13 towns are in the top 50 of both. Not surprisingly, households with income below the ALICE Threshold were severely impacted in communities that ranked high on the Community Hardship Index, primarily in Monmouth, Middlesex, Ocean, and Union counties. In addition, low-income households in counties with moderate community hardship were also strongly impacted, namely in Bergen and Essex counties, but also in other locations throughout the state. Thus, households with income below the ALICE Threshold were adversely impacted by even a moderate amount of damage.

These measures were designed to assess the immediate impact of Superstorm Sandy. Because the Household Hardship Index focuses on those with minimal resources of their own, it could also be a predictor of future hardship. To test the accuracy of the Household Hardship Index in predicting ongoing need, this paper compares the list to need 10 to 12 months after the storm. Towns with ongoing need are defined as those mentioned in the public testimony of the State of New Jersey's four Senate public hearings on the progress of Hurricane Sandy recovery efforts between August 15, 2013-October 21, 2013. The number of references to towns in the top 50 list of the Community Hardship Index is compared to the number of references to towns in the top 50 list of the Household Hardship Index. The results show that the towns in the Household Hardship Index were referenced almost twice as often as the Community Hardship Index, 97 to 53 times, see Figure 6.

The public hearings were conducted over a three month period in four different locations in the state: Atlantic City, Toms River, Trenton and Jersey City. The least difference between the two lists was at the hearings in Toms River, a coastal town in Ocean County where much of the worst overall community damage occurred. Interestingly, the greatest difference between the two lists was at the hearing in Jersey City, in northern New Jersey where the overall damage was less severe but vulnerability was high.

**Figure 6. Sandy - Ongoing Need - Legislative References 10 months later**

	Community Index - top 50	Household Index - top 50	Ratio
<b>Atlantic City - 08/15/13</b>	9	19	211%
<b>Toms River - 10/21/13</b>	27	36	133%
<b>Trenton - 9/30/13</b>	11	16	145%
<b>Jersey City - 9/16/13</b>	6	26	433%
<b>Total</b>	53	97	183%

Source: NJ Senate, 2013.

These findings are also anecdotally reinforced by media coverage on the anniversary of the storm. The ongoing needs of many of the top 50 Household Hardship towns were highlighted in Sandy anniversary news stories: “Superstorm Sandy: Recovery slow one year later” in the Asbury Park Press, “One Year Later: Tuckerton Residents Struggling To Recover After Sandy” on CBS Philly, and the Star Ledger's Page One: 'The Forgotten Shore' special report (APP, 2013; Quinones, 2013; Nutt, 2013).

### **Conclusion**

In a well-developed market economy such as the United States, is it not surprising that the size and scope of the private sector resources available after a storm like Sandy dwarf not only the nonprofit sector but also the government. It is more surprising that the business sector was seen as a useful community partner in the immediate aftermath of the storm at the same time there was a decline in the amount of aid donated from previous disasters. The fact that the nonprofit sector contributed only 2 percent of overall resources and 1 percent of overall need in the recovery from Superstorm Sandy in New Jersey, may reflect concerns about the efficacy of the nonprofit sector.

Over the last decade, disaster relief and long term recovery agencies have been criticized for diverting funds from those most in need to fund their organizational infrastructure. Coined the "disaster industrial complex," Michael Lewis criticizes politicians, news media, first responders and relief agencies for feeding on disasters and consuming limited resources (Lewis, 2008). Of course nonprofits need organizational capacity to deliver relief services and financial assistance, but public perception of ineffective relief are not without some basis and perception is important.

To overcome these criticisms, nonprofits could fill a void in disaster relief, that of managing the collection of that data. Nonprofits uniquely possess the attributes necessary to create useful analytic tools: a broad network, technical skills and independent judgment.

In the case of Superstorm Sandy, there was an unprecedented amount of data available, in part because nonprofits demanded it. For example, Fair Share Housing had to make numerous OPRA requests for individual FEMA records. Collating it into something useful was also spearheaded by nonprofits, namely the Fund for New Jersey and United Way's support for the *Impact of Superstorm Sandy* report which included the most up-to-date and comprehensive compilation of data yet. Such data is essential for both immediate action and future planning.

Data tools could also improve disaster response. The success of the Household Hardship Index in measuring not only damage to low-income households but also predicting ongoing need in New Jersey in the wake of Superstorm Sandy is such an example. It, therefore, can help direct aid where it is most needed. Similar indices could be developed for other vulnerable groups, such as small businesses.

Data tools could also provide a mechanism for nonprofits to better communicate their work - help them make the case for more donations, provide transparency and even show impact over time. The data and tools from the *Impact of Superstorm Sandy* report are already being used by housing nonprofits in New Jersey to advocate for more funding and better housing policies (Gordon, 2013; Brown, 2013), and government organizations to improve social service information availability (Marx, 2013) and policing practices (Reinhart, 2013).

## **Appendix A - Sandy Municipal Survey – methodology**

The Sandy Municipal Survey was undertaken at the School of Public Affairs and Administration at Rutgers-Newark in co-operation with the New Jersey League of Municipalities in the spring of 2013, four months after Superstorm Sandy hit New Jersey. The initial request to complete the Sandy Municipal Survey was sent by the New Jersey League of Municipalities on March 5, 2013 to their complete e-list of Mayors and top administrators. Reminders were sent by Rutgers throughout the month of March to 468 municipalities with populations greater than 2,500.

There were 140 complete surveys, a 25 percent response rate. Initially there were 265 responses; however 125 were duplicates or empty surveys. In cases where towns responded two times, only the most complete survey was included. In a few cases, where there were multiple responses, and it was clear that the second picked up where the other left off, the responses were combined into one.

There are three slight biases in the Survey, the first is geographic distribution. Morris, Middlesex and Union Counties are slightly over represented, see Figure 39. And Atlantic is slightly underrepresented, which is not surprising because Atlantic is the one county where municipalities are highly coordinated by the county government. The second is bias towards larger towns. The towns responding represent 32 percent of all households, but only 19 percent of towns with household populations below 2,500. This bias is inevitable with a survey because larger towns more likely to have the resources to receive and complete a survey, and with an e-survey because they are more likely to have the electronic communication. The third is a slight bias towards higher income municipalities. The median income for the towns responding was \$83,461 while the median income for the towns that did not respond was \$75,652.

## Appendix B - Scores for Sandy Hardship Index

The left-hand columns compare the rank of towns in the **Community** Hardship Index with number of times the town was referenced for ongoing need in the public testimony of the State of New Jersey's four on the progress of Hurricane Sandy recovery efforts between August 15, 2013-October 21, 2013. The right-hand columns compare the rank of towns in the **Household** Hardship Index with number of times the town was referenced for ongoing need in the Senate public hearings. References are limited to one per speaker.

Sandy Hardship Index vs. Ongoing Need					
	Community Index RANK	Legislature references		Household Index RANK	Legislature references
<b>Mantoloking, Ocean</b>	1	2	Newark, Essex	1	8
<b>Moonachie, Bergen</b>	2	4	Jersey City, Hudson	2	5
<b>Little Silver, Monmouth</b>	3	0	Paterson, Passaic	3	0
<b>Atlantic Highlds, Mon</b>	4	0	Franklin Twp,Warren	4	0
<b>Toms River, Ocean</b>	5	17	Elizabeth, Union	5	0
<b>Shrewsbury, Mon</b>	6	0	Brick, Ocean	6	3
<b>Flemington, Hunterdon</b>	7	0	Green Twp, Sussex	7	0
<b>Califon, Hunterdon</b>	8	0	Toms River, Ocean	8	17
<b>Tuckerton, Ocean</b>	9	1	Berkeley Twp,Ocean	9	3
<b>Vernon, Sussex</b>	10	0	Passaic, Passaic	10	0
<b>Stockton, Hunterdon</b>	11	0	Bayonne, Hudson	11	1
<b>Far Hills, Somerset</b>	12	0	Moonachie, Bergen	12	4
<b>Allenhurst, Monmouth</b>	13	0	Sayreville, Middx	13	6
<b>Belmar, Monmouth</b>	14	1	Seaside Hts, Ocean	14	7
<b>S. Toms River, Ocean</b>	15	0	Lakewood, Ocean	15	1
<b>Union Beach, Mon</b>	16	11	Bay Head, Ocean	16	0
<b>Aberdeen, Monmouth</b>	17	0	Atlantic City, Atlantic	17	9
<b>Carlstadt, Bergen</b>	18	0	Union Beach, Mon	18	11
<b>Millstone, Monmouth</b>	19	0	Long Branch, Mon	19	1
<b>Green Brook,Somerset</b>	20	0	Deptford, Gloucester	20	0
<b>Rumson, Monmouth</b>	21	0	Keansburg, Mon	21	2
<b>Kinnelon, Morris</b>	22	0	Mullica, Atlantic	22	0
<b>Long Branch, Mon</b>	23	1	Middletown, Mon	23	0
<b>Seaside Hts, Ocean</b>	24	7	Hoboken, Hudson	24	5
<b>Jamesburg, Middlesex</b>	25	0	Irvington, Essex	25	0
<b>Lavallette, Ocean</b>	26	3	Little Egg Hbr,Ocean	26	1
<b>Sea Bright, Monmouth</b>	27	0	Glassboro, Glouc	27	0
<b>Monmouth Beach, Mon</b>	28	1	Highlands, Mon	28	4
<b>Haworth, Bergen</b>	29	0	Penns Grove, Salem	29	0
<b>Pt Pleasant Beach, Ocean</b>	30	0	Little Ferry, Bergen	30	2
<b>Howell, Monmouth</b>	31	0	Trenton, Mercer	31	1
<b>Saddle River, Bergen</b>	32	0	Port Republic, Atl	32	0
<b>Manasquan, Mon</b>	33	0	Union City, Hudson	33	0

<b>East Rutherford, Ber</b>	34	0	South River, Middx	34	1
<b>Washington, Warren</b>	35	0	Belmar, Monmouth	35	1
<b>Green Twp, Sussex</b>	36	0	New Brunswick, Middx	36	0
<b>Chester Boro, Morris</b>	37	0	PtPleasantBch,Ocean	37	0
<b>Matawan, Monmouth</b>	38	0	Sea Bright, Mon	38	0
<b>Hopatcong, Sussex</b>	39	0	Marlboro, Monmouth	39	0
<b>Highlands, Monmouth</b>	40	4	Ocean Gate, Ocean	40	0
<b>Pennington, Mercer</b>	41	0	Salem, Salem	41	0
<b>Little Egg Harbor, Ocean</b>	42	1	Carteret, Middlesex	42	2
<b>Milford, Hunterdon</b>	43	0	Asbury Park, Mon	43	1
<b>Bay Head, Ocean</b>	44	0	Lawrence, Cumb	44	0
<b>Lebanon Boro, Hunt</b>	45	0	West NY, Hudson	45	0
<b>S. Hackensack, Bergen</b>	46	0	Harrison, Hudson	46	0
<b>Stanhope, Sussex</b>	47	0	Weehawken, Hudson	47	0
<b>Brielle, Monmouth</b>	48	0	Hackensack, Bergen	48	0
<b>Sussex, Sussex</b>	49	0	Maurice River, Cumb	49	0
<b>Andover Boro, Sussex</b>	50	0	Tuckerton, Ocean	50	1
<b>Total references</b>		<b>53</b>			<b>97</b>

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