"Home Rule in NJ and Hurricane Sandy Recovery: Managing Power Restoration, Gas Rationing, Debris Removal and Temporary Housing"

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Superstorm Sandy was a devastating storm that impacted virtually every household and business in New Jersey. However, the type of damage varied greatly across the state; some towns faced severe flooding while others faced high winds and fallen trees. Most of the state experienced power outages, but even that ranged from 2 to 14 or even more days. In addition to the range of damage, New Jersey's 565 municipalities have a wide range of capability. However, they all had to perform the same basic functions of garbage collection, road maintenance and safety. Not surprisingly, the way they responded varied, some were completely self-sufficient, others were completely overwhelmed and relied entirely on outside assistance; most were somewhere in between. As such, the municipal response to Superstorm Sandy provides an ideal 'natural experiment' to test which municipal parameters impacted the use of collaborative networks and types of outside assistance.

This paper lays the foundation for identifying the key parameters. The first section examines the case of Superstorm Sandy in New Jersey in light of the 'home rule' tradition. The next section investigates the provision of four basic municipal services: power restoration, gas rationing, debris removal and temporary housing. The last section reviews the emergency response and resilience literature and identifies four hypotheses and the data needed to test them.

New Jersey's Home Rule tradition

Does New Jersey's tradition of home rule make it an anomaly in municipal response to disasters? We consider the question here briefly. Because "there is perhaps no term in the literature of political science or law that is as susceptible to misconception and variety of meaning than 'home rule'" (Chicago Home Rule Commission 1954), it is defined here simply as local autonomy.

New Jerseyans identify strongly with their local communities and are concerned with protecting their local autonomy (Zukin, 1989). However, New Jersey municipalities do not have an unusually high level of local autonomy compared to other U.S. states. New Jersey municipalities are ranked 25th nationally in a scale by George Washington Institute of Public Policy. New Jersey was one of nine states with a low level of revenue diversity (highly reliant on property taxes), and average scores for structural and functional autonomy (Wolman, McManmon, Bell, and Brunori, 2010, Table 4.1, p.82). In an earlier study by the U.S. Advisory Commission on Intergovernmental Relations, New Jersey municipalities ranked 36th in degree of local autonomy (USACIR, 1980).

With 565 municipalities in New Jersey, some argue that the home rule tradition has created too many towns and boroughs. When compared nationally, New Jersey is the 8th most populous state and has the 17th highest number of towns and municipalities according the US Census in 2007. (Illinois had the most with 2,731 and Hawaii, Nevada and Rhode Island each had less than 50.) With an average of 153,46 population per municipality, New Jersey has the 21st most number of people per town.

Thus, there is nothing extraordinary about New Jersey's municipal laws, size or number of towns that would make their response to disaster unique or exceptional. Nor would it prevent their municipal response activities from being compared to municipalities across the country.

The Provision of Municipal Services in the Wake of Superstorm Sandy

New Jersey was directly hit by Superstorm Sandy on October 29, 2013. According to the recently released *Community Development Block Grant Disaster Recovery Action Plan* by the New Jersey Department of Community Affairs:

> The storm surge, which measured 8.9 feet at its highpoint in Sandy Hook, inundated and severely affected regions of the State's shore from Cape May to Raritan Bay, including the barrier islands and many areas along the Hudson River. Other overland flooding, wind damage, and an ensuing snowstorm further damaged these communities as well as other communities throughout New Jersey. Superstorm Sandy affected, in some way, virtually every household, business and community in New Jersey (2013, p. 1.1).

A powerful nor'easter a week later lowered the temperature making the lack of power a greater issue as well as slowing already difficult commutes and threatening a fragile region.

The severity of damage varied across the state due to the vagaries of the storm's path. While there are many exciting features of recovery and resilience, none are more important than the provision of local daily functions. While not very exciting, garbage collection, road maintenance and safety are the foundation for all other actions to occur (Mayer, Weitz and Nguyen, 2008). This was true in the case of Superstorm Sandy; this section focuses on the cases of power restoration, gas rationing, debris removal, and temporary housing.

A. **Power Restoration**

At the peak, more than 2.6 million customers, out of 3.6 million, were without power in New Jersey after Superstorm Sandy. The average customer was without power for six days, but many were without power for two weeks. The implications were far-reaching, The estimated

cost of business interruption was $1.9 billion. In addition, power outages impacted hospitals, nursing and special needs facilities causing reduced services or evacuation (DCA, 2013).

In the immediate aftermath of Superstorm Sandy, the loss of power was the largest impediment to the provision of local government services. Thus, local governments focused on two aspects of power: finding ways to deliver services without power, primarily generators, and aiding power restoration, primarily clearing roads. In a Catch-22, downed power lines also caused serious safety issues and prevented clean-up and clearing roads. In some areas they were in flood waters, in others they were tangled in fallen trees and houses; in all cases they made the evacuation of those with special needs more difficult.

Making the situation more frustrating was the fact that communication from the power companies was limited, especially in the JCP&L service area. Without a clear timetable of power restoration, towns did not know how long they needed generator capacity, or how to advise their citizens. Once cell service was restored, most residents found the same information that the town admistrators used on the power company websites or Twitter feeds.

Power restoration was hampered by the severity of the damage across 1,000 mile geographic swath which included whole substations in addition to millions of downed lines. Local repair crews were overwhelmed, assistance came from crews across the country from Florida to Ohio. While not impacted by the storm, these crews had to drive long distances and worked long hours in towns they had never seen before. Progress was slowed by the fact that these non-state crews had no where local to stay. Many were housed in hotels in Pennsylvania, more than an hour from where they were working. Towns had local shelter options but these offers were not accepted.

For future preparation, local logistics for repair crews might be considered as a low cost alternative to a more resilient utility infrastructure, estimated by the NJ Department for Community Affairs to cost $21.1 billion.

B. **Gas Rationing**

Within days of Superstorm Sandy and the widespread power outages, most gas stations in the New York–New Jersey metro area were either closed or without gasoline. According to FEMA, on November 2nd, 67 percent of gas stations were without gasoline. That declined to 28 percent by November 8th and most gas stations were fully operational by November 14th though FEMA continued to provide gasoline and diesel fuel through November 18th. During Superstorm Sandy major pipelines and refineries in the Northeast were shut down, and power outages and

hurricane related damage delayed efforts to restart fuel production equipment (FEMA timeline).

The limited supply of gasoline exacerbated problems caused by the power outages for local government. While most towns have some gasoline storage, none had the supply to meet demands for generators, overtime police and emergency vehicles, and large debris removal equipment. Gasoline rationing presented a new problem for many towns as well: maintaining order as residents queued for fuel. There were reports of short tempers, fist fights and even guns drawn at gas stations. Notifying residents of which stations were open and when became another point in local government messages to residents (town daily briefings).

State and federal level actions aided the restoration of the gas supply starting with odd-even rationing and waiving regulations regarding fuel from out-of-state suppliers and fuel type requirements. The National Guard was also helpful in transporting fuel from out of state. Ultimately intervention at the port of Newark (which was closed for three full days) allowed the flow of fuel to return to normal (FEMA timeline). In addition, the New Jersey Economic Development Authority launched a phone and email hotline for owners and operators to notify officials if they needed generators or fuel (FEMA timeline).

Governor Christie is reported to have used his connection with President Obama to spur federal assistance for fuel: "'Mr. President, Hi, it's Chris. Remember yesterday when you told me if I needed anything to call you on this line? I need gas.'" (Portnoy, 2013).

C. Debris Removal

In the wake of Superstorm Sandy, there was a wide range of debris: tons of sand on roads, collapsed houses, thousands of fallen trees. As mentioned above, fallen telephone poles were part of the power problem as well as the debris removal problem. Debris was on land as well as in the waterways. According to Stewart Farrell, director of Coastal Research Center at Stockton College, "We've got everything from freezers to air-conditioning units to barbecue grills" (Mulshine, 2013). In total, there were approximately 10 million cubic yards of debris. By December 18th only 30 percent had been removed, compared to New York where approximately 70 percent of debris removal had been completed. There was approximately 4.2 million cubic yards removed of 6.01 million total (FEMA timeline).

The sheer volume of debris quickly overwhelmed local public works departments along the Jersey shore and many wooded communities inland (Osborne, 2012). In some cases, debris delayed the deployment of resources and restoration of essential services. As houses were

gutted, more debris piled up causing additional problems. “What we know is that a sense of depression can quickly set in if we let the debris pile up,” said Mayor Matthew J. Doherty of Belmar, N.J. “We cannot allow the debris to sit on the sidewalks.” (Lipton and Semple, 2012).

Local governments’ first short-term recovery priorities were to clear debris from thoroughfares connecting critical facilities such as hospitals, fire and police stations, and community shelters. Department of Public Works employees worked overtime, local contractors were called in and in many cases new contracts were made through government co-operative purchase programs. One of the biggest challenges was coordinating with the power companies. If electrical wires were touching debris, workers were instructed by the power companies not to move it. This delayed opening roads and buildings throughout the state.

The most publicized role played by the state of New Jersey in debris removal was the contract signed just days before the storm with Ashbritt, Inc., a contractor based in Florida that also played a major role in the Hurricane Katrina cleanup. Initial estimates were that about 15 towns hired AshBritt, later estimates showed 45 had hired the firm. After extensive coverage in the press and outcry from the public and legislature, state officials hired a separate contractor, Arcadis US, to monitor each load of waste to make sure the government was not being overcharged. The controversy focused on two points, first that AshBritt charged more than local contractors, $21.25 a cubic yard versus $10.35 or even $8.72 a cubic yard. The second was that they brought in outside workers to do the job when there was high unemployment in New Jersey (Renshaw, 2013).

Other measures by the state also assisted the clean-up. The Department of Environmental Protection allowed recycling facilities to accept and process authorized solid waste and recyclable materials 24 hours a day. State and federal agencies worked to clear tons of drift and debris from New York and New Jersey harbors. U.S. Forest Service deployed more than 100 chainsaw crew teams to storm-affected states to assist with debris removal and road clearance for power personnel. Army and Air National Guard Soldiers and Airmen from 11 states assisted in debris removal (FEMA timeline).

The fastest assistance, and perhaps the most appreciated was financial aid from FEMA. Just days after the storm, FEMA announced that towns could be reimbursed by FEMA for 75 percent of the cost of the salaries and benefits of employees who are involved in debris and wreckage removal cleanup efforts. To monitor the work, FEMA Debris and Damage Assessment Teams were on the ground by November 3rd making debris assessments (Tovo, 2013). Promises are one thing, payments are another; state and local governments are still waiting for checks from past hurricanes (Starks, 2012) which creates cash flow management problems for many towns.

D. **Temporary Housing**

According to government estimates, there were 67,977 owner and 18,729 rental units damaged in the wake of Superstorm Sandy. As a result, there were more than 73 shelters operating with at least 2,395 occupants. Approximately another 1,500 Sandy-displaced New Jersey residents are still being housed through the TSA program (FEMA timeline). Many more displaced residents moved into temporary accommodation – hotels, rentals or with friends and family. Even for those with no housing damage, but without power and heat, were in need of assistance.

Local government provided local shelter to meet the needs of their community including food, charging stations and information. There were also special needs populations that needed shelters with unique features – nursing homes, hospitals, mental health housing, and a surprisingly large group of residents with pets. In addition, towns provided protection for damaged housing units from looters. There were limited reports of robberies during the power outage and some heavily damaged shore towns implemented curfews. Towns also worked to facilitate repairs – clearing roads, driveways and connections to contractors.

Within the first week, state and federal government provided an online housing portal that consolidated rental resources identified and provided by various federal agencies in one website. FEMA also distributed housing and rental assistance in the first few weeks and into the following months. FEMA increased by 125 percent the amount of rental assistance that it provided to eligible disaster survivors in New York and New Jersey. The rental amount, based on existing HUD Fair Market Rates (FMR) for fiscal 2013 are rental cost estimates that include the cost of the shelter and all other tenant-paid utilities except telephone, cable, and internet services. HUD designs annual FMR levels to be high enough to allow for a wide selection of available units, yet low enough so that as many units as possible may be rented and provided to low-income families. The approved FMR increase is expected to make an additional 1,800 rental resources available for temporary housing of disaster-impacted families in New York, and an additional 1,200 rental resources available for similar families in New Jersey. (FEMA timeline) The deadlines were repeatedly extended for two week periods until the end of February.

FEMA employed housing inspectors were on the ground in New York, New Jersey and Conneticut; inspecting more than 300,000 homes (Halpin, 2013) But even the maximum amounts did not go far in a very expensive housing market; most residents were struggling to afford repairs let alone rebuild.

Other problems included finding housing for federal workers. Many stayed at the military base Fort Dix once it was set up, others lived in tent cities in Oceanport or Linden. There were also complaints of workers taking up the best hotels in the area.

Complicating the situation is the fact that New Jersey is in the most expensive housing market in the county and supply was already tight. “Prior to Sandy, finding an affordable place to live for the many low-income households we serve was difficult,. Now, with the number of Shore rentals decreased by Sandy’s destruction, affordable rental homes are almost impossible to find in Ocean and Monmouth counties” (NLIHC, 2013).

Building a model of Municipal Capacity for Disaster Response and Recovery

Using the case studies above and the literature of emergency management and also collaborative networks, we are building a model of municipal capacity for disaster response and recovery. There are two reasons why New Jersey’s municipal response to Superstorm Sandy an ideal ‘natural experiment.’ First, New Jersey has 565 municipalities with a wide range of capability, budgets range from $549 million in Newark to $695,529 in Greenwich township, and populations range from 280,00 in Newark to 5 in Tavistock. Second, as discussed above, there was also a wide range of impact from Superstorm Sandy.

With these two sets of variables, there is the constant of time, October-November 2012, and the same requirement for basic municipal service delivery. What makes the case so interesting is the wide range in the way services were delivered: some towns were completely self-sufficient, others were completely overwhelmed and relied entirely on outside assistance; most were somewhere in between.

Building on the literature of emergency management and collaborative networks, we have identified four basic hypotheses to test:

H1: The larger the town budget, the less outside help towns will use (Kettl and Walters, 2005).

H2: The more damage to the town, the more help towns will use (Kettl and Walters, 2005; McGuire and Silvia 2010).

H3: If an outside contractor has been used by theh town before the disaster, they more likely the town is to use them during a disaster (McEntire and Myers 2004; Kettl and Walters, 2005; McGuire and Silvia 2009).

H4: If a town receives useful information from government agencies, they are more likely to use their assistance (McGuire and Silvia, 2010).

H5: The more previous disasters that have occurred in the municipality, the better towns will be at using outside assistance (Mayer, Weitz and Nguyen, 2008).

The test of the hypotheses rely on several sources of data. The first set of data is from public sources including FEMA, HUD, DOBI, DCA, EDA and the power companies. The second set is from interviews with state and local officials. The third set is from a survey of New Jersey's mayors and administrators; a 50 question e-survey on Qualtrics sent in conjunction with the NJ League of Municipalities.

Because there is a range in types of damage to each municipality, we are building an "Index of impact" to enable comparison between them. The index is based on the number and percent of houses and businesses damaged, number of trees down, miles of roads closed, days without power, amount of debris collected, public health issues, and loss of ratables.

Key measures of outside assistance will be the survey responses that quantify the number of personnel and types of assistance from outside agencies and organizations including: NJ OEM, FEMA, NJ state departments, utility companies, neighboring towns, Red Cross/Salvation Army, local community groups, community groups from outside the county/state, and local businesses.

Table 1. Data on Superstorm Sandy by source	
Data	**Source**
Storm destruction estimates	1. Aerial assessment by NOAA Aircraft Operations Center and the Civil Air Patrol 2. NOAA's hydrographic survey vessels 3. FEMA estimates 4. NJ municipalities - survey
Days without power	JCP&L, PSEG, ACE and Rockland daily record of number of customers without power by municipality
Gas stations closed	Number of calls from gas stations to NJ Economic Development Authority toll free hotline
Collection and removal of debris	1. FEMA estimates 2. NJ municipalities - survey
Houses and businesses damaged	1. New Jersey Manufacturers Insurance Co, Travelers Companies, Allstate, Munich Re 2. NJ Division of Banking and Insurance data call 3. 3D mapping technology - Rutgers
People displaced	1. Numbers housed at shelters – Red Cross, towns, 2. Number apply for FEMA housing assistance
Available housing	1. Public sector housing - HUD 2. Private sector housing – real estate listings 3. Current market rents - HUD
Number and types of residents with special needs	Number registered on "NJ Register Read"
Roads closed - number and miles	1. NJ Department of Transportation 2. NJ municipalities - survey
Commute times	NYU Rudin Center's survey of 315 commuters
Commuters information	1. Web hits on transportation sites including NJ Transit, Port Authority of New York and New Jersey (PANYNJ), Lakeland Bus company, Amtrak, 2. Tweets responding to transport updates 3. Number of downloads of MTAs adaptable map
Loss of ratables	1. Tax reassessment, i.e. Monmouth county 2. Town estimates – budget presentations

The initial case studies from New Jersey municipalities as well as reports from other disasters across the United States in recent years suggest other variables may also be factors (Edwards

and Goodrich, 2007; Henstra, 2010; Waugh, 2007; Sobel and Leeson, 2006). We will also investigate the impact of the following variables:

1) The range of types of damage to the town. While the extent of damage is important, the kind of damage may also be a factor. Whether the damage was caused by wind, rain or flooding may impact the way towns respond.
2) Different types of help. Most disaster recovery focuses on the role of federal, state and local government. The role of volunteer groups has gained recent attention more recently (Sobel and Leeson, 2006). And the usefulness of the private sector is being recognized by local government (Higgins, 2005; Sobel and Leeson, 2006), but a theoretical understanding of the role of these players needs to be enhanced.
3) Sources and types of information for town officials. Information sharing between levels of government improved in Sandy, especially as compared to Katrina (Ridge, 2013; Fuentes, 2013). Technology facilitated the timeliness of information as well as improved mapping capabilities. Layers of data layers and real-time data from various sources can be mapped and viewed in a GIS environment. Gaps still remain because some data was not collected. For example, towns did not know how many people evacuated and how many remained.
4) Communication with citizens. Perhaps the biggest difference between Sandy and previous storms is the technological capability of government AND citizens. Access to real time information used to be the domain of official command centers. During Sandy, information was being aggregated on open websites and through social media, and was available to anyone with access to the internet. Managing the collection of that data remains a challenge for both immediate action and future planning, (Mayer, Weitz and Nguyen, 2008).
5) Window of autonomy. In the immediate aftermath of the crisis, street level bureaucrats have the most autonomy. In recounting the events, they seem to cherish these moments. Further investigations is needed into how long this autonomy lasts, and how it sets the stage for the amount and kinds of assistance afterwards.

Conclusion

New Jersey like most states relies on municipal employees and first responders for on the ground immediate response to disasters. With more than 50 years' worth of actuarial data, state and local government can predict fairly well what natural disasters will occur within their jurisdictions each year. After all, it is state and local governments that continue to let people build houses near forests, in flood plains, or on beaches (Mayer, Weitz and Nguyen, 2008). The way communities use this information varies; some build redundancy and collaborative

networks; others make minimal plans. As a result, depending on the type of disaster, towns use different kinds of assistance.

The findings will provide the basis for a gap analysis to help planners identify where more assistance was needed during Superstorm Sandy, and where surge capacity was effective. Of course no local municipality can bear the expense of having the necessary assets in reserve for a large-scale disaster that might never occur or to create a disaster proof infrastructure (Howitt and Leonard, 2006). For example, the NJ Department of Community Affairs estimates that the cost to create a more resilient utility infrastructure in the wake of Superstorm Sandy would be $21.1 billion. With tight budgets and finite resources, good governance demands targeting resources, including surge capacity, where they are most needed.

SPECIAL SANDY EDITION

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HISTORIC DEVASTATION

Monster storm leaves destruction throughout the state, millions without power and a still-rising death toll

Debris litters the beach at Seaside Heights while what remains of the Casino Pier teeters in the background yesterday, less than one day after Hurricane Sandy crashed into the state.

TO OUR READERS

Publishing today's edition of The Star-Ledger was a unique challenge. We moved our newsroom three times, yesterday because of power and internet outages. Our building in Newark went dark at 8:55 Monday night, and as of our press start last night, we were still without power for our editorial, advertising and circulation staffs.

Throughout the storm, we had teams of reporters, photographers and videographers reporting around the clock to nj.com. We hope as many of you as possible were able to receive that coverage.

Our production team and circulation staff worked exceptionally hard throughout the night and into the morning to ensure delivery of today's paper to you.

We hope to produce the full edition of the Thursday Star-Ledger tonight.

Richard Vezza, Publisher

WILLIAM PEDEN/THE STAR-LEDGER

Daniel Cruz holds his 8-month-old daughter, Alana, at a shelter yesterday at Bergen County Technical High School in Teterboro after they were rescued from their flooded Little Ferry home.

By Mark Mueller and Ted Sherman
STAR-LEDGER STAFF

Calamitous. Incalculable. Unthinkable.

New Jersey officials and residents have run out of words to describe the damage wrought by Hurricane Sandy, a behemoth of a storm that more than lived up to its hype.

Up and down the coast, the ocean roared ashore, dislodging homes from their foundations, ripping away piers, swallowing entire neighborhoods, and leaving millions in the dark — many who are now being told to expect to remain without power for a week or longer.

With a full accounting yet to be made, the monster storm is being blamed for the deaths of more than 100 people, including at least seven people in New Jersey. Along the path of devastation carved by the storm, authorities say Sandy took the lives of as many as about 50 people in seven states — 31 in New York City. Another 69 people were killed in the Caribbean, before Hurricane Sandy roared north along the East Coast.

"I think the losses are going to be almost incalculable," said Gov. Chris Christie yesterday, as daylight brought graphic testimony to the damage and devastation caused by a record-setting storm that drove inland near Atlantic City early Monday night.

In the aftermath, Christie toured coastline devastation via helicopter.

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Sources

Chicago Home Rule Commission, Modernizing a City Government: Report of the Chicago Home Rule, 1954. http://collinsinstitute.fsu.edu/files/pdf/seminar-2010-02-25/FINAL%20PAPER-RICHARDSON.pdf

Edwards, Frances L., and Daniel C. Goodrich, Organizing for Emergency Management. In *Emergency Management: Principles and Practice for Local Government*, 2nd ed., edited by William L. Waugh, Jr., and Kathleen Tierney, Washington, DC: ICMA Press, 2007.

FEMA, "Hurricane Sandy: Timeline," 2013. http://www.fema.gov/hurricane-sandy-timeline

Fuentes, Col.Rick, Head of NJ State Police comments at the Police Institute Distinguished Lecture Series, Rutgers School of Criminal Justice, March 5, 2013.

Henstra, Daniel, "Evaluating Local Government Emergency Management Programs: What Framework Should Public Managers Adopt?" *Public Administration Review* (Washington, D.C.), Vol. 70, Issue 2, March/April 2010.

Halpin, Stephanie, "FEMA Moving Faster in New York than New Jersey," NJ DataBank, February 2013. https://njdatabank.newark.rutgers.edu/sites/default/files/files/Report%20-%20NJDataBank%20-%20Sandy%20-%206%20Feb%2013%282%29.pdf

Higgins, Sean, "Wal-Mart is Lauded for Fast Relief Aid to Katrina Victims," *Investor's Business Daily*, September 9, 2005.

Howitt, Arnold M., and Herman B. "Dutch" Leonard, "Katrina and the Core Challenges of Disaster Response," The Fletcher Forum of World Affairs, Vol. 30:1 Winter 2006. http://www.hks.harvard.edu/var/ezp_site/storage/fckeditor/file/pdfs/centers-programs/programs/crisis-leadership/katrina_core_challenges.pdf

Kaufman, Sarah, Carson Qing, Nolan Levenson and Melinda Hanson, "Transportation During and After Hurricane Sandy," Rudin Center for Transportation, NYU Wagner Graduate School of Public Service, November 2012. http://wagner.nyu.edu/rudincenter/publications/sandytransportation.pdf

Kettl, Donald F and Jonathan Walters, The Katrina Breakdown, Coordination and Communication problems between levels of government must be addressed before the next disaster strikes," *Governing*, December 2005. http://collinsinstitute.fsu.edu/files/pdf/seminar-2010-02-25/FINAL%20PAPER-RICHARDSON.pdf

Kettle, Donald, Ronald J. Daniels, Howard Kunreuther, *On Risk and Disaster: Lessons from Hurricane Katrina,* University of Penn press, 2006.

Light, Paul, "The Katrina Effect on American Preparedness," Information Brief, Center for Catastrophe and Preparedness and Response, New York University, 2005. http://www.nyu.edu/ccpr/katrina-effect.pdf

Lipton, Eric and Kirk Semple, "At Landfill, Storm Cleanup Is Military-Style Effort," *New York Times,* November 16, 2012. http://www.nytimes.com/2012/11/17/nyregion/cleanup-from-hurricane-sandy-is-military-style-operation.html?pagewanted=all&_r=0

Liu, Amy, Roland V. Anglin, Richard M. Mizelle, Jr., and Allison Plyer, eds., *Resilience and Opportunity: Lessons from the U.S. Gulf Coast after Katrina and Rita***,** The Brookings Institution, 2011.

Mayer*,* Matt A., Richard Weitz, Ph.D. and Diem Nguyen, "The Local Role in Disaster Response: Lessons from Katrina and the California Wildfires," Heritage Foundation, June 4, 2008. *http://www.heritage.org/research/reports/2008/06/the-local-role-in-disaster-response-lessons-from-katrina-and-the-california-wildfires*

McGuire, Michael and Debra Schneck**, "**What if Hurricane Katrina Hit in 2020? The Need for Strategic Management of Disasters," Public Administration Review, Special Issue, December 2010. http://www.indiana.edu/~spea/research/focus_newsletter/mcguire_katrina.pdf

McGuire, Michael, and Chris Silvia, "The Effect of Problem Severity, Managerial and Organizational Capacity, and Agency Structure on Intergovernmental Collaboration: Evidence from Local Emergency Management," *Public Administration Review* 70(2): 279–88, 2010.

Mouton, Judy, Carle Jackson, and Michael Ranatza, executive staff of the Louisiana Commission on Law Enforcement, Managing Catastrophic Events: The Lesson of Katrina," 2005. http://www.lcle.la.gov/programs%5Cuploads%5Ckatrina_managing.pdf

Moynihan, Donald P., *Leveraging Collaborative Networks in Infrequent Emergency Situations*. Washington, DC: IBM Center for the Business of Government, 2005.

Mulshine, Paul, "No man is an island, but this house is," *Star Ledger*, January 6. 2013, section 2, p.1.

Nagin, Mayor Ray C., Memo to the Federal Emergency Management Agency, August 29, 2005. http://www.nytimes.com/packages/pdf/national/20060210KATRINA/document13.pdf

National Low Income Housing Coalition (NLIHC) and the Housing and Community Development Network of New Jersey, *Out of Reach,* 2013. WWW.NLIHC.ORG/OOR/2013

New Jersey Department of Community Affairs, *Community Development Block Grant Disaster Recovery Action Plan*, March 2013. http://www.state.nj.us/dca/announcements/pdf/CDBG-DisasterRecoveryActionPlan.pdf

Osborne, James, "Volume of Hurricane Sandy Debris at Jersey Shore Overwhelms Officials, Cleanup Crews," *Philadelphia Inquirer*, November 20, 2012.

Portnoy, Jenna, "Christie gives hospital executives an inside look at life during Sandy," *Star Ledger*, January 25, 2013. http://www.nj.com/politics/index.ssf/2013/01/gov_christie_addresses_nj_hosp.html

Ridge, Thomas J., "Hometown and Homeland Security: Public and Private Partnerships," Police Institute Distinguished Lecture Series, Rutgers School of Criminal Justice, March 5, 2013.

Renshaw, Jarrett, "As Sandy approached, two N.J. towns were prepared for cleanup, The Star-Ledger, March 17, 2013. http://www.nj.com/politics/index.ssf/2013/03/ashbritt_townships_christie_mo.html

Ross, Ashley and Melissa Beeler, "The Role of Local Governments In Disaster Resiliency: Findings From A Survey Of Gulf Coast Municipal Officials," THC-IT Conference & Exhibition, 2011. http://www0.egr.uh.edu/hurricane/events/thc_guest_fin_2011/11.pdf

Smith, G., & Wenger, D., "Sustainable disaster recovery: Operationalizing an existing framework." in H. Rodriguez, E. Quarantelli, & R. Dynes (Eds.), *Handbook of disaster research,* New York: Springer, 2006, p. 234–257.

Sobel, Russell S. and Peter T. Leeson**, "**Government's response to Hurricane Katrina: A public choice analysis," *Public Choice,* 127**:** 55–73, 2006. http://www.peterleeson.com/hurricane_katrina.pdf

Starks, Tim, "Katrina's Lessons Seen in Response to Sandy," *CQ Weekly – In Focus,* Congressional Quarterly, December 29, 2012. http://public.cq.com/docs/weeklyreport/weeklyreport-000004197197.html

Tovo, Robert, Borough Administrator, Mountain Lakes, NJ, Interview, January 7, 2013.

U.S. Advisory Commission on Intergovernmental Relations, "Measuring Local Discretionary Authority." USAICR, M-131. Washington, DC, 1981.

U.S. Census, 2007. http://www.census.gov/govs/cog/GovOrgTab03ss.html

U.S. Government Accountability Office (GAO), Statement of Gene L. Dodaro, Comptroller General of the United States, Testimony Before the Committee on Homeland Security and Governmental Affairs, U. S. Senate 'Government Transparency: Efforts to Improve Information on Federal Spending' report number GAO-12-913T, July 18, 2012. http://www.gao.gov/assets/600/592592.pdf

Waugh, William L., Jr., "Local Emergency Management in the Post 9/11 World," in *Emergency Management: Principles and Practice for Local Government*, 2nd ed., edited by William L. Waugh, Jr. and Kathleen Tierney, 4–22. Washington, DC: ICMA Press, 2007.

Wolman, Hal, Robert McManmon, Michael Bell, David Brunori, "Comparing Local Government Autonomy Across States," George Washington Institute of Public Policy Working Paper 035, 2008. ttp://www.gwu.edu/~gwipp/Comparing%20Local%20Governments%20Across%20States%20GWIPP%20working%20paper%201-17-091.pdf

Wolman, Hal, Robert McManmon, Michael Bell, David Brunori, "Comparing Local Government Autonomy Across States," in *The Property Tax and Local Autonomy*, Michael Bell, David Brunori and Joan Youngman, eds., Lincoln Institute of Land Policy, Cambridge, MA, 2010.

Zukin, Cliff, "Political Culture and Public Opinion," in *The Political State of New Jersey*, ed. Gerald M. Pomper, ed. Rutgers, The State University, 1989. http://books.google.com/books?id=udNpqRMaP1AC&pg=PA9&lpg=PA9&dq=local+autonomy,+new+jersey&source=bl&ots=boHolKyy33&sig=w4Hxz1Uqar_cKJ6rzaGBC_8bBH8&hl=en&sa=X&ei=Uo08UZyHI8mH0QGRn4CADw&ved=0CDkQ6AEwAzgK#v=onepage&q=local%20autonomy%2C%20new%20jersey&f=false