Zoning and Disaster Recovery

By Donovan Finn

For planners, it is a harrowing thought: what if substantial portions of your community were suddenly and severely damaged by a catastrophic flood, earthquake, industrial accident, or other disaster? What role would the local planning agency play in the rebuilding and recovery process? What challenges would you face as you attempted to help residents and business owners rebuild their lives and livelihoods? How effective would your efforts be?

These are vitally important questions, since people across the community aren’t likely to wait around for planners to help answer them soon after a natural disaster. Within hours of the event, property owners and businesses will begin to make their own decisions about how to proceed. Many will try to rebuild or repair their homes and businesses just as they were. Some will start over and build something new. Others may leave the community altogether. The policies enacted and enforced by planners in the days, weeks, and months after the disaster—including updates to the zoning code—will play a critical role in these decisions.

Not only that, says Clare Hartman, AICP, planning can play a valuable role by helping inspire a community to feel like it can, and must, rebuild. As Interim Assistant City Manager for Santa Rosa, California, Hartman has helped lead the city’s recovery from the 2020 Glass Fire and was deputy planning director during the city’s recovery from the 2017 Tubbs and Nuns fires, which destroyed more than 3,000 homes (approximately five percent of the city’s housing stock) in a matter of days. “An effective recovery program is also a mental health, economic, and equity issue,” she explains. “It’s unfair to the moment to wait around. You have to be nimble, and you can’t be afraid to act.”

As Santa Rosa and other communities have found, though, an effective recovery process means more than merely rebuilding what existed before. Disasters also provide important opportunities for proactive planning in which economic, infrastructural, and social systems are restored such that past inequities are addressed, unexpected opportunities for betterment are seized, and the community emerges more resilient to subsequent hazard events. This opportunity is fleeting, and local policies and ordinances like the zoning code can either facilitate or impede effective and resilient recovery.

This article summarizes some of the zoning-related challenges planners face in post disaster situations, discusses how communities might think about preparing now for future disasters, and highlights what other communities have achieved. The overarching message is simple and clear: buried within most zoning codes are seemingly insignificant items that, in moments of crisis and urgency, can emerge as roadblocks to an effective recovery. Identifying and addressing these issues today can save valuable time later, while also setting the stage for a recovery effort that does not merely replicate the status quo but instead actually advances pre-disaster goals. Sometimes this may require changes to the zoning code itself, but just as often it will mean finding ways to overcome inherent challenges that enforcing the code will expose. In both cases, being proactive can pay immense dividends when and if a crisis strikes.

WHY SHOULD COMMUNITIES THINK ABOUT POST-DISASTER RECOVERY PLANNING?

No community wants to experience a disaster, and it may seem wasteful to spend precious time and resources on an issue that may never happen. But disasters can take many forms, from floods and tornadoes to wildfires, industrial accidents, and earthquakes, and every community faces the risk of a potential disaster at some point. Research shows that communities that have engaged in planning in advance of a disaster bounce back more quickly and with more positive outcomes. In fact, this is true not just for disaster contingency planning, but for all kinds of planning. The more systems and resources for planning that are in place, and the more engaged the local population is about planning-related issues, the better the odds of effective recovery. But even for places with a robust planning infrastructure, thinking specifically about the post-disaster recovery context can strengthen an already advantageous position, and an updated and streamlined zoning code is a critically important part of that strategy.

The disaster recovery context turns the normal process of urban planning and development on its head, creating an urgent, high-stakes, information-limited environment in which planning becomes even more complicated than usual. Researchers Rob Olshansky, Laurie Johnson, and Lewis D. Hopkins call this phenomenon “time compression” when activities that normally spool out sequentially and over many years instead must happen in parallel and at high speed. After a disaster, planners will need to do all of the tasks they do in normal times, only they will have to do them faster, while doing additional new jobs at the same time, and all at once, as opposed to spread out over time. For example, zoning applications and site plan reviews may increase exponentially while, simultaneously, new recovery-oriented public engagement processes and recovery policies need to be developed and implemented.

But disasters cause disruptions in the normal flow of bureaucratic functions and expose weak points in the system. Thaddeus Pawlowski was Senior Urban Designer with New York City’s Department of City Planning and had a major role in New York City’s recovery from 2012’s Hurricane Sandy. Pawlowski, now the Managing Director of Columbia University’s Center for Resilient Cities and Landscapes, describes the post-disaster period as “a time of massive confusion because maps are out of date, there are debates about where the datum line should be established, and there are...
disconnects between the building code and zoning code.” These types of chaos are common, and they add a layer of increased complexity at exactly the moment complexity is least wanted. The last thing that is needed in the frantic period after a disaster—when the stakes are high and the local government is under intense scrutiny—is for a previously benign element of the community’s zoning code to suddenly emerge as a barrier to effective recovery.

For most planners, disaster recovery is a topic barely covered in their education, if at all. Nonetheless, they will need to quickly learn how to navigate state and federal programs, develop local recovery mechanisms in real time, and assist anxious residents and business owners while continuing to do their pre-event jobs. All of this will be happening in a situation in which the local government is generally overwhelmed, besieged with requests for assistance and under heightened pressure to react effectively and equitably. It is worth remembering that local government resources, including offices and technology systems, as well as planners own lives, may be disrupted by the disaster as well. While most communities rise to the occasion, advance preparation makes it much easier to pivot to an effective recovery mindset when the need arises.

WHAT CAN PLANNERS DO TODAY TO PREPARE FOR A POSSIBLE DISASTER TOMORROW?
Planning for a future disaster is often relegated to local emergency managers with emergency services credentials. But urban planners should be involved in developing a community’s strategic response even before a hazard event occurs. Along with agencies concerned with buildings, transportation, and education, planning departments play an important role in helping their community rebound quickly and move forward after a disaster. It is more common for planners to be involved after a disaster strikes, and many cities have created ambitious post-event recovery plans to coordinate the expenditure of federal reconstruction funds and rebuild strategically and in line with community-based visions.

Increasingly, therefore, many communities are recognizing the need to develop pre-event disaster recovery plans. Probably the most famous example of recovery planning after a major disaster continues to be New Orleans after Hurricane Katrina in 2005. Based on lessons learned from that experience, the city has recently begun a new effort to create a comprehensive anticipatory post-disaster planning strategy that will include infrastructure systems, land use, housing, economic development, public health, and other aspects necessary for an effective recovery. Publication of the nation’s National Disaster Recovery Framework (NDRF) in 2011 has also motivated communities to undertake these preemptive efforts, which are also gaining state support. The Maryland Emergency Management Agency (MEMA) and Minnesota Division of Homeland Security and Emergency Management (HSEM) both now provide guidance documents and other tools for preparing local and regional all-hazards recovery plans, while all eleven coastal counties in Georgia have created or are currently creating disaster recovery and redevelopment plans.

Zoning can play a critical role in either facilitating or hampering effective recovery. New Orleans is an instructive example. At the time of Katrina in 2005, the city’s zoning code had been in place since the 1970s, with some revisions in the 1990s and sporadic subsequent amendments. The lack of a useful and effective zoning ordinance, as well as an effective political and regulatory structure necessary to enforce it, has often been cited as one of the reasons for the city’s contentious post-Katrina recovery process. And so most guidance documents for creating anticipatory recovery plans now mirror the North Central Texas Council of Governments’ 2020 Recovery Framework, which suggests that local jurisdictions, “Review existing zoning and ordinance provisions to identify possible roadblocks and ways to lift restrictions to expedite recovery efforts” (p. 95).

WHY IS ZONING SO IMPORTANT TO EFFECTIVE RECOVERY?
An updated zoning code and streamlined zoning process can contribute to effective disaster recovery in a variety of ways. A code that functions effectively in a complex recovery context provides clarity for property owners at a time of heightened emotional and financial stress. Freed from the need to address zoning issues on an ad hoc, case-by-case basis, planners can focus on other important recovery issues. Often, cities impose building moratoriums after disasters to allow time to assess damage; consider how, where, and if to rebuild; and develop recovery policies. While this is a rational response, property owners are typically anxious to begin reconstruction. Delays create frustration and can have deleterious effects on the local economy if they are lengthy. Careful scrutiny of zoning and related policies before a disaster even occurs can help minimize the need for (and length of) moratoriums and mitigate their negative effects.

But what should cities look for when they look to review their existing zoning? What are the potential gaps, roadblocks and unmet needs that will be most salient in the post-disaster period? Many useful answers can be found by looking at communities that have already endured these challenges. Among the most ambitious examples of efforts to update local zoning to facilitate recovery and post-event resilience occurred after 2012’s Hurricane Sandy in New York City. Within days of the storm, the NYC Department of City Planning immediately began analyzing the city’s complicated zoning code looking for potential conflicts with National Flood Insurance (NFIP) rebuilding requirements, and then-Mayor Michael Bloomberg quickly issued an executive order suspending a number of zoning rules to allow rebuilding in compliance with the NFIP. The city then adopted a set of temporary (five-year) zoning text amendments in 2013 to address some of these challenges. Finally, in May 2021 the city council approved a new Zoning for Coastal Flood Resiliency (ZCFR) ordinance codifying resilient construction standards for more than 80,000 buildings, which should streamline the recovery process if another major storm strikes the city in the coming decades. But the issues addressed in the ZCFR became salient only because they caused delays and confusion after Sandy, when efforts like the city’s Build It Back housing recovery program were hobbled by the city’s own zoning and building codes directly contradicting federal rebuilding requirements. Had a robust analysis of the city’s code been undertaken before Sandy, the recovery outcomes might have been much better for many residents.

While each community faces different hazards and local political, social, and
economic contexts vary widely, a few common themes can be identified and provide a starting point for other communities considering preemptive review of existing zoning in light of future risks.

**THE REVIEW PROCESS**

In many jurisdictions, zoning review—and associated processes like subdivision review, site plan review, and building code permit applications—may have become needlessly complex and cumbersome over time, simply because it is easier to make incremental changes to a program than to redesign it from the ground up. Unfortunately, the moment after a major disaster is exactly the wrong moment to make that realization. Instead, communities can start the process now. One of the first questions a planning department should ask is how well the zoning review process is set up to handle a rapid and unexpected surge in activity at a time when the planning staff may be stretched thin with other urgent responsibilities.

These challenges were so widespread in New Jersey after Sandy, especially in smaller coastal communities, that the state created a Zoning Code Enforcement Grant Program as part of its recovery strategy, providing funds for municipalities to hire additional staff specifically to process zoning applications. After the 2017 wildfires, Santa Rosa, California, created a Resilient City Permit Center to provide technical assistance and expedited processing for zoning code and building code applications while also waiving fees for discretionary planning, demolition, and temporary housing permits. The city worked with an outside contractor who in turn hired a team of plan reviewers including many retired planning officials from throughout northern California. At its peak, the permit center was providing more than 6,000 hours of monthly staff time, reducing plan review sometimes to less than a day.

Modernizing the review process can also pay immediate dividends that will be even more important in a post-disaster context. This means making sure that all necessary forms and instructions are accessible online, along with options for online submission, teleconference meetings, and other tactics to make zoning application processes faster and more flexible.

Technology can provide other advantages as well. “Possibly the most important thing you can do now is have a properly capitalized IT department,” says Dave Genaway, AICP. Currently the Deputy Planning Director and GIS Manager for the Town of Huntington, New York, Genaway was Commissioner of the Town of Islip, New York, Department of Planning during and after Sandy, and was later a Senior Community Planner in the New York Governor’s Office of Storm Recovery. The recovery process creates an intense demand for high quality data. “Gathering information is incredibly important,” Genaway explains, “from conducting damage inventories to analyzing policy options and making required reports to the state and FEMA, so if your GIS system can do sophisticated geospatial analysis, it will absolutely help improve your recovery.”

Empowering lower levels of review can also speed up approvals. To expedite post-wildfire permit processing, Santa Rosa downgraded the level of scrutiny on all types of permits by one level. For instance, the city’s planning director was given authority to approve discretionary permits for hillside development, which would have normally required zoning administrator or planning commission approval. After Hurricane Sandy, the small coastal city of Long Beach, New York, approved more than ninety variances for housing reconstruction and elevation projects in the floodzone through a time-consuming zoning board process before the city council passed an ordinance in 2016 allowing staff-level approval for such projects if located in the city’s highest risk zones.

These types of expedited review processes not only help property owners recover more quickly, they can also help retain residents or businesses who might otherwise choose to relocate, and planning departments can take steps now to facilitate these shifts when the need arises. Staff can be trained in the intricacies of post-disaster challenges and empowered to make at-the-counter decisions. Contingency plans can be developed to move site plan review meetings or zoning board hearings online in emergency situations, which can also reduce travel time for residents who have been temporarily displaced from the region and are attempting to rebuild from afar. Refining these processes now, with the luxury of time to experiment and refine them,
can have critically important benefits in a time of crisis, when time and resources to make these kinds of measured changes will be constrained.

**SOCIAL EQUITY**

The social science research after major disasters has shown convincingly that more affluent households and larger businesses typically fare better after a disaster than those with fewer resources. Zoning is an important component of this dynamic. Low-income populations, non-English speaking residents and other vulnerable groups often live and own businesses in high-risk areas, especially floodzones, because of low land costs. Homes and buildings also tend to be older and are less likely to be built to modern seismic, flooding, or tornado resilience standards. But onerous application processes and other restrictions on federal disaster recovery programs tend to favor middle- and upper-income single-family homeowners, exacerbating recovery challenges for renters and low-income residents in these areas.

Conversely, disaster induced gentrification can also displace low-income households and small businesses. When widespread damage forces large-scale renovation or rebuilding in areas with a high concentration of low-income households, landowners—especially rental landlords—may choose to maximize current zoning by constructing larger buildings or catering to different uses than existed previously. Speculators may also acquire property cheaply in the aftermath of a disaster and then leverage the value added by subsequent publicly funded recovery and hazard mitigation projects to flip these properties for a profit. In all of these situations, renters, small businesses, and even low-income homeowners may find themselves forced to relocate to new areas as their former neighborhoods gentrify.

After a mile-wide tornado killed 53 residents and caused more than $1 billion in damages to Tuscaloosa, Alabama, in April of 2011, the city of 100,000 worked quickly to begin recovery. But, driven in part by demand from University of Alabama student renters, much of the housing built in the wake of the tornado was too expensive for low- and moderate-income renters, who have been forced to find other housing in a region short on affordable housing options. Similar dynamics were evident after Hurricane Sandy, with coastal neighborhoods in New York City and along the New Jersey shore experiencing an influx of speculative development that drove up housing costs and pushed out some longstanding residents.

Cities should carefully evaluate the specific risks faced by vulnerable population groups and the potential implications of zoning on effective and equitable recovery. If vulnerable residents predominate in high-risk areas or in areas that have recently been upzoned, the city can develop programmatic frameworks that can be implemented quickly, if necessary, to help these residents successfully navigate the recovery process. This might include locally funded bridge loan programs that require less paperwork and have more flexible conditions than federal programs or developing long-term strategic partnerships with nongovernmental organizations who can act as trusted information brokers in vulnerable neighborhoods. Planning and zoning staff should also be trained to understand the specific needs of populations in high-risk areas, such as language or educational barriers, cultural norms, technological limitations, or other challenges for which tailored assistance will be important.

**EMERGENCY HOUSING**

One of the most urgent issues after a disaster is providing emergency housing quickly and effectively. Although each recovery situation is unique, federal, state, and local programs have increasingly begun to focus on emergency repairs instead of, or in addition to, offsite temporary housing. After Sandy, programs like FEMA’s Sheltering and Temporary Essential Power (STEP) and New York City’s Rapid Repairs allowed affected residents to remain in their primary residences while more extensive repairs were being made. These approaches, however, require a willingness by the municipality to overlook some code-related issues. In Staten Island and parts of southern Brooklyn and Queens, many New York City residents were essentially living in their garages while they undertook post-storm repairs, a fact well-known to local officials but accepted because of the high costs and low supply of emergency housing options in the region. But more than just turning a willful blind eye to code violations, cities can also implement
for landowners at a particularly precarious moment and may appear overly punitive to the broader public. Strict interpretation of nonconformity regulations may also exacerbate existing regional housing supply challenges. These thorny questions are complicated by the fact that nonconforming uses may predominate in communities that are most vulnerable to a hazard event, and where economic conditions already complicate effective recovery. This conflict is not easy to reconcile. After the Cedar Rapids, Iowa, floods of 2008, smaller lots in older neighborhoods like Wellington Heights created conflicts with setback requirements and other components of the current zoning at the time of the floods. As part of the ReZone Cedar Rapids code update of 2018, the zoning code was clarified to specifically allow for in-kind replacement of hazard-damaged structures even if the lot is nonconforming. But this process took 10 years and many owners undoubtedly suffered under the old rules.

These types of issues were also widespread after Hurricane Sandy, especially in older coastal communities where conflicts arose between rebuilding and resiliency goals. Ocean City, New Jersey, used a post-Sandy recovery grant from the state to undertake a Permit and Application Process Quality Improvement study, passing an ordinance allowing nonconforming buildings to elevate in conformance with FEMA requirements without a variance. In Hoboken, New Jersey, a small, densely developed city of 52,000 residents on 1.25 square miles across the Hudson River from New York City, over half of the city’s 18,688 parcels do not conform to existing zoning regulations. After Sandy, the city faced a consistent backlog of variance requests and finally amended the zoning code by eliminating a variance requirement for elevation of structures on these lots. In New York City, many Sandy-affected neighborhoods had developed ad hoc from bungalow communities or other unplanned developments, and noncompliant lots and structures were common. A set of Special Regulations for Neighborhood Recovery developed after Sandy is aimed at streamlining the process for documenting nonconformities and establishing new zoning envelopes for small lots.

CONFLICT BETWEEN ADAPTATION MEASURES AND ZONING
The challenges of rebuilding do not end with nonconforming lots and structures. As new risks from climate change become increasingly salient, harnessing the opportunity to “build back better” (as the slogan often goes) may be problematic in the face of rigid

NONCONFORMITIES
After a destructive disaster, one of the most common challenges faced by planning departments relates to nonconforming uses. In addition to some citywide issues, certain neighborhoods may exhibit unique challenges because of their geographic, social, or architectural character. Often, zoning for neighborhoods with many nonconforming uses will encourage redevelopment that results in new land-use patterns. However, overly strict enforcement of reconstruction prohibitions for disaster-damaged properties may cause undesirable financial hardship.
zoning. Many homeowners in New York and New Jersey were required to elevate their homes or take other adaptation measures to qualify for rebuilding assistance after Hurricane Sandy. Other owners took similar measures voluntarily to protect their investments from future storms. But often these efforts created conflicts with local zoning codes. Elevating homes often meant that structures would exceed the height limit in residential zones or require staircases and ramps that encroached into zoning-mandated front or side yards. New York City, Long Beach, Hoboken, and other municipalities were eventually forced to update their zoning to address these conflicts.

But while cities can and should take proactive efforts to revise zoning to better accommodate adaptation measures, these are not always simple fixes. Hoboken’s 2015 effort to revise the city’s 40-foot residential height limit to accommodate new design flood elevations (DFE) established by a 2013 ordinance received pushback from residents and activists fearful of incentivizing rampant over-development. New York City’s post-Sandy Resilient Neighborhoods Initiative allocated a dedicated staff of 20 planners to conduct detailed planning and zoning studies in 10 of the city’s most vulnerable neighborhoods, each of which will require tailored strategies for addressing adaptation goals. Neighborhoods with historical significance may present similar challenges due to building design and lot layout, and sometimes the best solution may just be to hope for the best, as part of their own post-Sandy zoning analysis, Ocean City, New Jersey, amended its zoning code to exempt some historic properties from elevation requirements altogether.

CONCLUSION

Disaster recovery is a complex and daunting challenge that most communities will only become expert at once they have gone through the experience. But planners can still prepare their community for a more effective recovery by taking a few important steps now. High on that list is spending the time to think carefully about how the current zoning code might impede or facilitate recovery, and in particular how it will fare when rebuilding needs to conform to requirements of federal programs like the NFIP. The preceding examples point out some important types of issues that planners should think carefully about, but there are many more issues to consider, from the fate of condominium owners under the NFIP to the needs of commercial landowners and small businesses.

While it’s comforting to think of zoning as a rational technical tool that can be finely calibrated for maximizing effective recovery, every planner knows this is not really true. Human nature, competing interests, and economic concerns all play a role in the development of rules and regulations governing development. Wesley Sternberg, AICP, Senior Planner with the Town of North Hempstead on New York’s Long Island notes that in a recovery situation sometimes seemingly technical challenges are, in reality, even more complex than they might first appear. “You have market demands, which become political, and those intersect with the regulatory system. Even something as simple as defining ground level is a policy choice,” he explains.

One of the most important things planners can do to overcome these kinds of conflicts is to harness the time available to them in the absence of an imminent disaster to educate local elected officials, developers, and landowners about the potential challenges that may emerge in a recovery context and build consensus around which policy directions the community will take if the need arises. “You have to embrace the future,” as the former NYC planner Pawlowski explains, “Do you really want to go back to the status quo, just with a slightly higher set of standards, or do you take time to have hard conversations?”

ABOUT THE AUTHOR

Donovan Finn is an Assistant Professor of Environmental Design, Policy and Planning at Stony Brook University in the School of Marine and Atmospheric Sciences and the Sustainability Studies Program. His research focuses on coastal adaptation and resilience, long term community recovery from disasters, and environmental justice. He has an MUP and PhD in Urban and Regional Planning, both from the University of Illinois at Urbana-Champaign.

RESOURCES

Cedar Rapids (Iowa), City of. 2018. “ReZone Cedar Rapids.” bit.ly/2coPDyy


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