



Annotated Model Codes for New York Coastal Communities¹

Overview²

Recent events have highlighted the need for a local approach to coastal resiliency. From Superstorm Sandy in the Northeastern U.S. in 2012 to Hurricane Harvey in Texas in 2017 and Hurricane Florence in the Carolinas this fall, recent storms have shown that hurricanes and other extreme weather events are becoming more frequent, as well as much deadlier and costlier. New York is no exception. In 2012, Superstorm Sandy caused the State \$32 billion in damage and loss, while Hurricane Irene made landfall in August 2011, causing \$1.3 billion in damage.³ Research shows a possible “ . . . long-term northward shift of hurricanes in the Atlantic Ocean” as GHG emissions “affect the major air currents that steer tropical storms.”⁴ At the local level, many communities are failing to respond to these heightened risks as they continue to build and rebuild in areas with increased exposure to extreme weather events.⁵ To mitigate and manage these risks, New York communities should amend their land use policies, plans, and regulations in ways that increase resiliency of their coastal areas.

Local land use policy, planning, and regulation offer a significant opportunity to create more resilient communities. Local land use authority is “the foundation of the planning that determines how communities and natural resources are developed and preserved, and how disaster resilient

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² This section is in part an excerpt from Jessica A. Bacher and Tiffany B. Zezula, *Increasing Coastal Community Resiliency through Facilitated Land Use Training, Assessment, and Amendments*, New York Zoning Law and Practice Report, vol. 19, Issue 3 (November-December 2018).

³ Brian Tumulty, *Cuomo: Sandy Cost N.Y. \$32B in damage and loss*, Nov. 26, 2012, <https://www.usatoday.com/story/news/nation/2012/11/26/superstorm-sandy-new-york-disaster-aid/1727839/>; The Associated Press, *Hurricane Irene one year later: Storm cost \$15.8 in damage from Florida to New York to the Caribbean*, N.Y. Daily News, Aug. 27, 2012, <http://www.nydailynews.com/new-york/hurricane-irene-year-storm-cost-15-8-damage-florida-new-york-caribbean-article-1.1145302#>.

⁴ Bob Berwyn, *Global Warming May Send More Hurricanes to Northeast U.S.*, Inside Climate News Dec. 1, 2016, <https://insideclimatenews.org/news/01122016/global-warming-hurricanes-northeast-us-coast>.

⁵ John Schwartz, *Humans are Making Hurricanes Worse. Here’s how*, N.Y. TIMES (Sept. 19, 2019), <https://www.nytimes.com/2018/09/19/climate/humans-hurricanes-causes-effects.html>.

communities are created.”⁶ Local land use policies, plans and law control where and how buildings and other development are placed on a community’s landscape. Zoning laws often have allowed landowners to build in coastal areas and floodplains that are now at heightened risk for hurricanes and other extreme weather events, but this trend can be reversed. Because the addition of substantial new building stock and infrastructure is anticipated over the next few decades, local governments that regulate the placement and, in some respects, design aspects of building stock and other infrastructure have an opportunity to avoid locking in development and infrastructure that increases flood and other climate-related risks.⁷

Given this, New York municipalities would benefit from decision-support tools that could help them amend their existing land use plans, codes, and policies in a way that avoids disaster-related risks and improves their marine community resiliency and coastal storm preparedness. Such decision-support tools may include models and web-tools that facilitate coastal, riverine, and estuarine communities in assessing and amending their policies, plans, and zoning codes to increase resilience. Post Superstorm Sandy, the NYS Legislature passed the Community Risk and Resiliency Act (CRRRA),⁸ which creates a foundation for the municipal decision-support tools. CRRRA requires NYS to adopt sea level rise projections and mandates specified state programs to consider sea level rise and other climate-related events. Additionally, CRRRA requires DOS, in cooperation with the NYS Department of Environmental Conservation (DEC), to develop model local laws that include consideration of future risk due to sea-level rise, storm surge and flooding.⁹

In 2017, the Environmental Protection Agency (EPA) and Federal Emergency Management Agency (FEMA) partnered to create the *Community Resilience: Implementation and Strategic Enhancements (C-RISE) Local Assessment Tool*,¹⁰ a decision-support tool that helps communities assess how their existing plans, codes, and policies currently support resilience. The C-RISE Local Assessment Tool then helps these communities identify planning and regulatory strategies they can implement to improve coastal storm preparedness and resiliency.

As extreme weather events have increased in intensity and frequency, municipalities at risk have begun to respond by amending their land use plans, codes, and policies to become more resilient; however, these communities often encounter challenges with understanding and assessing their current land use practices as they make these changes. To assist communities with this process, the Land Use Law Center has selected a group of strategies from C-RISE Resilience Goal Area 3

⁶ John R. Nolon, Disaster Mitigation Through Land Use Strategies, in *Losing Ground : A Nation on Edge* 14 (John R. Nolon & Daniel B. Rodriguez eds., 2007), <http://digitalcommons.pace.edu/lawfaculty/606/>.

⁷ John R. Nolon, *The Land Use Stabilization Wedge Strategy: Shifting Ground to Mitigate Climate Change*, 34 Wm & Mary Env'tl. L. & Pol'y Rev. 6 (2009) (reporting that sixty-six percent of the buildings in existence in the United States by the year 2050 are projected to be built between now and then).

⁸ Community Risk and Resiliency Act (CRRRA), Ch. 355 of the Laws of 2014.

⁹ Community Risk and Resiliency Act (CRRRA), DEC, <https://www.dec.ny.gov/energy/102559.html> (last visited Dec. 27, 2018).

¹⁰ EPA & FEMA, *Community Resilience: Implementation and Strategic Enhancements (C-RISE) Local Assessment Tool* (2017), on file with author.

Reduce risk to people, buildings, and facilities in vulnerable areas and developed annotated model codes based on 1) the State's DRAFT Model Local Laws under development by DOS and 2) community examples and other models that provide the foundation for the State models. The strategies selected for these annotated model laws were chosen based on priorities identified through technical assistance and training programs hosted with New York Sea Grant funding on Long Island.

For each annotated model, the C-RISE strategy is listed, followed by a brief description of the issue, and the code approach employed through the model. The last section is language from models and examples that other local governments can adapt to local circumstance for adoption. In order to identify local priorities, it is suggested that municipalities first use the C-RISE Local Assessment Tool to assess how their existing plans, codes, and policies currently support resilience. Because the C-RISE Local Assessment Tool depends on local leaders and staff to champion resiliency efforts, communities must cultivate leaders interested in resiliency efforts before embarking on the C-RISE Local Assessment and adoption of new laws.

Below are the following Model Laws:

- Substantial Damage Definition
- Dry Access Definition
- Limitations on Nonconforming Uses and/or Structures
- Pre-event Recovery Law

Community Resilience: Implementation and Strategic Enhancements (C-RISE) Local Assessment Tool Strategy

3.14	A plan or program is in place for strategic acquisition (buyout) of repetitive loss properties in hazard areas and their re-use as open space and/or green infrastructure
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C-RISE Strategy 3.14 advises communities to adopt a plan or program for strategic acquisition (buyout) of repetitive-loss properties in hazard areas and to facilitate their reuse as open space and green infrastructure. To implement this strategy, a local government should begin by evaluating the number of properties that have experienced repetitive loss in the municipality's hazard areas. Upon request, FEMA can provide a local government with a list of National Flood Insurance Program (NFIP) repetitive-loss properties. Once the municipality evaluates the number of these properties located within the municipality, it must determine the amount of resources necessary to convert these properties, develop a funding source, and create a system of acquiring these properties and converting them to achieve open space and green infrastructure goals. The City of Portland, Oregon provides a helpful example. Portland's Environmental Services Department administers the Johnson Creek Willing Seller Land Acquisition Program, which acquires land in areas that frequently flood by offering willing, volunteer sellers, fair market value for their property.¹¹ Once purchased, deed restrictions are placed on these properties, designating them as open space in perpetuity and prohibiting the properties from benefiting from federal disaster assistance funds in the future. Once restored, acquired land contributes to increased flood storage, improved fish and wildlife habitat, restored wetlands, and passive recreational activities.

Often communities lack resources to move directly to development of an acquisition program. In order to develop a plan or program for strategic acquisition or repetitive loss properties in hazard areas, local governments can explore opportunities to first amend their local code to address repetitive loss properties.

The primary approach is for a municipality to add a repetitive damage clause to the "*Substantial Damage*" definition in its flood damage prevention law by replacing the existing definition of "*substantial damage*" with the definition found in the Model below.

Other Considerations:

- Local governments can also add a Cumulative Substantial Improvement Definition and include it in the definition of Substantial Improvement. "*Substantial improvement also means cumulative substantial improvement.*" Then cumulative substantial improvement can be defined as: "*Cumulative Substantial Improvement*" - *any reconstruction, rehabilitation, addition, or other improvement of a structure that equals or exceeds 50*

¹¹ Willing Seller Program, City of Portland, Oregon, Environmental Services, <https://www.portlandoregon.gov/bes/article/106234> (last visited Sept 29, 2018).

percent of the market value of the structure at the time of the improvement or repair when counted cumulatively for 10 years.

- Local governments can consider amending Zoning Board of Appeals criteria for overturning the findings of an administrator that are related to permits for building within the Coastal Erosion Hazard Area (CEHA). These would incorporate the repetitive loss and cumulative substantial improvement language.

MODEL LANGUAGE

SUBSTANTIAL DAMAGE

Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. Substantial damage also means flood-related damages sustained by a structure on two separate occasions during a ten-year period for which the cost of repairs at the time of such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

Town of Wappinger (NY) Municipal Code, Chapter 133 Flood Damage Prevention, Section 133-4 Definitions, <http://ecode360.com/11071693>

Community Resilience: Implementation and Strategic Enhancements (C-RISE) Local Assessment Tool Strategy

3.23	New commercial or industrial facilities are required to have dry land access to ensure emergency personnel and employees can reach facilities in the event of a flood
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C-RISE Strategy 3.23 requires dry land access for new commercial or industrial facilities to ensure emergency personnel and employees can reach facilities in the event of a flood. Local governments can also require dry land access for residential properties. Applied to existing floodplain regulations, this strategy would further reduce risk and protect floodplain functions. Suggested code language would regulate access (ingress and egress) to decrease the likelihood that residents could become stranded in their elevated homes and reduce the need for water rescues that place emergency responders at risk.

To attain this strategy, a local government can amend its subdivision regulations using code language from the Model Laws to include a requirement to provide dryland access when it is readily achievable. Contiguous dryland access should be provided from a proposed principal structure on residential and commercial property to land outside of the flood hazard area, when it is readily achievable. Dryland Access means a vehicular access route that is above the base flood elevation and that connects land located in the flood hazard area to land outside the area, such as a road with its surface above base flood elevation and wide enough for wheeled rescue and relief vehicles.

MODEL LANGUAGE

Definition:
"Dryland access" means a vehicular access route which is above the regional flood elevation and which connects land located in the floodplain to land which is outside the floodplain, such as a road with its surface above the regional flood elevation and wide enough to accommodate wheeled vehicles.

City of Whitewater, Wis., Code of Ordinances: Title 19 – ZONING, Chapter 19.09
DEFINITIONS, 19.09.195 - Dryland access,
www.municode.com/library/wi/whitewater/codes/code_of_ordinances?nodeId=TIT19ZO_CH19.09_DE_19.09.195DRAC

Subdivision and Development Proposals
New development proposals will be designed, to the maximum extent practicable, so residential building sites, walkways, driveways, and roadways are located on land with a natural grade with elevation not less than the base flood elevation and with dry land access.

ASFPM Floodplain Regulations Committee, A Guide for Higher Standards in Floodplain Management (Revised March 2013), https://www.floods.org/ace-files/documentlibrary/committees/3-13_Higher_Standards_in_Floodplain_Management2.pdf

Non-Residential Structures

New development proposals will be designed, to the maximum extent practicable, so non-residential building sites, walkways, driveways, and roadways are located on land with a natural grade with elevation not less than the base flood elevation and with dry land access.

ASFPM Floodplain Regulations Committee, A Guide for Higher Standards in Floodplain Management (Revised March 2013), https://www.floods.org/ace-files/documentlibrary/committees/3-13_Higher_Standards_in_Floodplain_Management2.pdf

Community Resilience: Implementation and Strategic Enhancements (C-RISE) Local Assessment Tool Strategies

3.35	Policies are in place to address non-conforming uses, structures, and/or lots.* <i>*Policies may cover the allowable re-building of non-conforming structures following hazard damage, as well as, non-conforming uses or lots created because of zoning ordinance changes.</i>
7.13	The current inventory of non-conforming structures located in the regulatory floodplain is maintained and frequently updated to prevent rebuilding in hazard areas, in the event of significant damage

C-RISE Strategy 3.35 recommends that policies are in place to address non-conforming uses, structures, and/or lots. This Strategy works in coordination with C-RISE Strategy 7.13, which requires maintenance of a current local inventory of nonconforming structures located in the regulatory floodplain to prevent rebuilding in hazard areas in the event of significant damage. To update this inventory, a municipality can use FEMA floodplain maps, create a GIS shapefile of nonconforming structures, and conduct an analysis that overlays the nonconforming structures on the floodplain. For help creating this inventory, a municipality can access FEMA's guidance for hazard mitigation planning.¹² Once a municipality has an inventory of non-conforming uses, structures, and lots, it can adopt/amend code language to address non-conformance.

A nonconforming use is created when existing land uses, which were valid when established, are prohibited by a new or amended zoning law. Nonconforming land uses are not defined by state laws but are defined in most local zoning laws. A typical local ordinance may define a nonconforming use as "any use, whether of a building or tract of land or both, existing on the effective date of this chapter, which does not conform to the use regulations of the district in which it is located." Nonconforming use issues arise when the zoning law is first adopted. When a district is zoned residential, for example, all existing nonresidential uses in that district are rendered nonconforming. Later amendments to the zoning ordinance may have the same effect.

When property owners propose an improvement, expansion, rebuilding, or other change in their nonconforming property use, they must be certain to comply with local regulations governing those matters. Normally, these regulations are found in a discrete article of the local zoning law, entitled Nonconforming Uses. That article will prohibit or limit changes in buildings and lot uses that are nonconforming and will provide for the termination of nonconforming uses in a variety of ways, such as limiting their expansion or enlargement, prohibiting the reconstruction of damaged structures, disallowing the reestablishment of nonconforming uses after they have been

¹² Hazard Mitigation Planning, FEMA, www.fema.gov/hazard-mitigation-planning (last visited Sept. 26, 2018).

discontinued for a time, or simply terminating them after the passage of a stipulated amount of time.

The example below does not seek to actively phase out nonconforming uses or structures, but it limits expansion and prohibits substantial improvements. See discussion above regarding amendment to *Substantial Improvement* definition to include *Cumulative Substantial Improvement*. The example also requires flood hazard insurance.

MODEL LANGUAGE

- (1) Existing nonconforming uses and/or structures shall not be expanded.
- (2) Substantial improvements of nonconforming uses and/or structures will be not be allowed, irrespective of the cause for the need of the substantial improvements.
- (3) Uses and/or structures which continue to operate and/or exist within the boundaries of the one-hundred-year flood plain after nonconformance has been established will be required to obtain flood hazard insurance from the federal insurance administration. The City will simultaneously request a submission to rate on the structure to the Federal Emergency Management Agency. In the event the owners of structures or operations subject to this requirement fail to obtain such insurance within a reasonable period of time, the City shall secure such insurance and place the annual insurance premium costs as a lien against the title to the land and/or structure within the tax records of the City.

City of Utica, N.Y., Municipal Code: Chapter 2-29, Zoning, Article IV District Regulations, Division 6 Land Conservation District, Section 2-29-255 Uses and/or Structures Rendered Nonconforming by the Adoption

Community Resilience: Implementation and Strategic Enhancements (C-RISE) Local Assessment Tool Strategy

7.5	A post-disaster redevelopment ordinance is adopted
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C-RISE Strategy 7.5 recommends the adoption of a post-disaster redevelopment ordinance that prepares the community to efficiently manage recovery efforts after a declared disaster. To implement this strategy, a local government could adopt FEMA’s Model Pre-Event Recovery Ordinance, which authorizes the establishment and maintenance of a recovery management organization to plan, prepare for, direct, and coordinate orderly a post-disaster recovery. The Model Law would also direct the preparation of a pre-event recovery plan for short-term and long-term post-disaster recovery; grant emergency powers for staff action to ensure a timely and safe post-disaster recovery; identify ways local governments could work with other governmental entities to facilitate recovery; and specify how the local government could help citizens, businesses, and community organizations during recovery planning and implementation. Many local governments are particularly interested in planning for debris removal, as it creates a significant obstacle to post-storm recovery. There is a provision in the Model that addresses this issue.

MODEL LANGUAGE

MODEL PRE-EVENT RECOVERY ORDINANCE

One action a community can take to move toward better management of disaster mitigation, preparedness, response, and recovery is the adoption of an ordinance before or after a damaging event to serve as either a forerunner or supplement to a full-blown recovery plan. The Model Recovery Ordinance below outlines a foundation on which a community can organize to efficiently manage short- and long-term recovery, preferably in advance of a declared disaster, as well as after.

Purposes. The Model Recovery Ordinance focuses on actions found necessary to facilitate recovery, provides a structured format for capturing essential recovery requirements, and offers prototypical language adaptable to unique local circumstances. The concept reflects some essential elements. Among other things, the recovery ordinance should:

1. Be adopted by local governing body action, if possible, before a disaster happens, as well as periodically updated and amended, as needed
2. Authorize establishment and maintenance of a local recovery management organization, coordinated closely with the local emergency management organization
3. Direct the preparation of a pre-event short- and long-term recovery plan in concert with the local emergency management organization and community stakeholder organizations
4. Establish emergency powers by which the local government staff can take extraordinary action to protect public health, safety, and welfare during post-disaster recovery
5. Identify methods for local government to take cooperative action with other entities to assure full access to all external financing resources as well as to facilitate recovery
6. Specify the means for consulting with and assisting citizens, businesses, and community stakeholder organizations during recovery planning and implementation

Form of Government. For ease of use, the Model Recovery Ordinance is written to reflect a council-manager form of government used by many cities and counties. In this form, executive as well as policy-making authority resides with an elected governing body, such as a city council or county board of supervisors, and administrative powers are delegated to staff through a city manager or county administrative officer. Also in use is the mayor-council form of local government, characterized by a separately elected executive, such as a mayor or county executive. In this form, policy-making authority is shared by the elected executive and other governing body members in highly differentiated ways, depending upon location, with administrative powers delegated to staff through the executive. Although reflecting the mayor-council form, the Model Recovery Ordinance can be tailored to the mayor-council form through appropriate substitution of terms.

Recovery Management Emphasis. The Model Recovery Ordinance emphasizes a recovery management process operated in conjunction with administrative powers of local government under the policy-making and/or executive powers of the governing body. It acknowledges the distinction between the vast bulk of more routine administrative actions reflected in short-term recovery provisions and the policy process more common to long-term recovery, directed through formal action by the governing body, and often marked by public hearings and controversy.

Model Recovery Ordinance Language

An ordinance establishing a recovery organization, authorizing preparation of a recovery plan, and granting emergency powers for staff actions which can ensure timely and expeditious post-disaster recovery for the City (or equivalent), and amending Section(s) __ of the Municipal Code (or equivalent).

Chapter __. Disaster Recovery

[Insert here]: listing of all section and subsection titles]

WHEREAS, the City is vulnerable to various natural hazards such as earthquakes, flooding, landslides, wildfires, and severe storms causing substantial loss of life and property resulting in declared local, state, or federal level disasters;

WHEREAS, the city is authorized under state law to declare a state of local emergency and take actions necessary to ensure the public safety and well-being of its residents, visitors, business community, and property during and after such disasters;

WHEREAS, it is essential to the well-being of the City after disasters to expedite recovery, mitigate hazardous conditions threatening public safety, and improve the community;

WHEREAS, disaster recovery can be facilitated by establishment of an ongoing Recovery Management Organization within the city government to plan, coordinate, and expedite recovery activities;

WHEREAS, preparation of a pre-event Recovery Plan can help the city organize to expedite recovery in advance of a declared disaster and to mitigate hazardous conditions before and after such a disaster;

WHEREAS, post-disaster recovery can be facilitated by adoption of a pre-event ordinance authorizing certain extraordinary staff actions to be taken to expedite implementation of recovery;

WHEREAS, it is mutually beneficial to identify in advance of a declared disaster the necessity to establish and maintain cooperative relationships with other local, regional, state, and federal governmental agencies in order to facilitate post-disaster recovery;

WHEREAS, it is informative, productive, and necessary to consult with representatives of business, industry, citizens, and community stakeholder organizations regarding the most suitable and helpful means to facilitate post-disaster recovery;

The City Council [or equivalent] does hereby ordain:

Section

- 1. Authority.** This ordinance is adopted by the City Council [or equivalent] acting under authority of the [authorizing legislation], [State Emergency Management Act or equivalent], and all applicable federal laws and regulations.
- 2. Purposes.** It is the intent of the City Council [or equivalent] under this chapter to:

- a. Authorize, in advance of a disaster, the establishment and maintenance of an ongoing Recovery Management Organization within the City [or equivalent] to plan, prepare for, direct, and coordinate orderly and expeditious post-disaster recovery;
- b. Direct, in advance of a declared disaster, the preparation of a pre-event Recovery Plan for short-term and long-term post-disaster recovery, to be adopted by the City Council [or equivalent] and amended periodically, as necessary;
- c. Establish, in advance of a disaster, powers to be implemented upon declaration of a local emergency by which staff of building, planning, public works, and other departments can take extraordinary action to reasonably assure safe and healthy post-disaster recovery;
- d. Identify methods by which the City [or equivalent] may take cooperative action with other governmental entities to facilitate recovery;
- e. Specify means by which the City [or equivalent] may consult with and assist citizens, businesses and community organizations during the planning and implementation of recovery procedures.

3. Definitions. As used in this ordinance, the following definitions shall apply:

3.1 Development Moratorium shall mean a temporary hold, for a defined period of time, on the issuance of building permits, approval of land-use applications or other permits and entitlements related to the use, development, and occupancy of private property in the interests of protection of life and property.

3.2 Director shall mean the Director of the Recovery Management Organization or an authorized representative.

3.3 Disaster shall mean a locally declared emergency also proclaimed as a state of emergency by the Governor of the State and declared a disaster by the President of the United States.

3.4 Emergency shall mean a local emergency, as defined by the Municipal Code, which has been declared by the City Council for a specific disaster and has not been terminated.

3.5 Flood Insurance Rate Map (FIRM) shall mean an official map of a community on which the Federal Insurance Administrator has delineated both the special hazard areas and the risk premium zones applicable to the community. A FIRM that has been made available digitally is called a Digital Flood Insurance Rate Map (DFIRM).

3.6 Hazard Mitigation Grant Program. A program for assistance to federal, state, and local agencies whereby a grant is provided by FEMA as an incentive for implementing mutually desired mitigation programs, as authorized by the Stafford Act and related federal regulations, plans, and policies.

- 3.7 Historic Building or Structure** shall mean any building or structure included on the national, state, or municipal register of historic places, and structures having historic significance within a recognized historic district.
- 3.8 Individual Assistance Program.** A program for providing small grants to individuals and households affected by a disaster to offset loss of equipment, damage to homes, or the cost of relocation to another home, as authorized under the Stafford Act and related federal regulations.
- 3.9 In-Kind** shall mean the same as the prior building or structure in size, height and shape, type of construction, number of units, general location, and appearance.
- 3.10 Interim Recovery Strategy** shall mean a post-disaster strategic program identifying major recovery initiatives and critical action priorities either in the Recovery Plan or necessitated by specific post-disaster conditions.
- 3.11 Local Hazard Mitigation Plan.** A plan prepared for governing board adoption and FEMA approval, which, among other things, assesses the type, location, and extent of natural hazards affecting the City; describes vulnerability of people, structures, and infrastructure facilities to such hazards and estimates potential losses, and includes a mitigation strategy that provides the City's blueprint for reducing potential losses identified.
- 3.12 Multi-Agency Hazard Mitigation Team.** A team of representatives from FEMA, other federal agencies, state emergency management agencies, and related state and local agencies, formed to identify, evaluate, and report on post-disaster mitigation needs.
- 3.13 Natural Hazards/ Safety Element [or equivalent]** shall mean an element of the comprehensive plan that addresses protection of the community from unreasonable risks associated with earthquakes, landslides, flooding, wildland fires, wind, coastal erosion, and other natural, technological, and human-caused hazards.
- 3.14 Public Assistance Program.** A program for providing reimbursement to federal, state, and local agencies and non-profit organizations for repair and replacement of facilities lost or damaged in a disaster, as authorized under the Stafford Act and related federal regulations, plans, and policies.
- 3.15 Redevelopment** shall mean the rebuilding or replacement of permanent residential, commercial, or industrial facilities damaged or destroyed in a major disaster, as well as construction of large-scale public or private infrastructure, addition of community improvements, and/or restoration of a healthy economy.

- 3.16 Recovery** shall mean the restoration of housing, transportation, public services, and/or economic activity to levels equal to or better than their pre-disaster states through a series of short-term, intermediate, and long-term strategies and actions.
- 3.17 Recovery Management Organization** shall mean an interdepartmental organization that coordinates city staff actions in planning and implementing disaster recovery and reconstruction functions.
- 3.18 Recovery Plan** shall mean a pre- or post-disaster plan for recovery, comprising policies, plans, implementation actions, and designated responsibilities related to expeditious and orderly post-disaster recovery and redevelopment, as well as long-term mitigation.
- 3.19 "Stafford Act"** shall mean the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended).

Commentary. The preceding definitions are based on terms frequently used in this Model Recovery Ordinance. As other language is added or substituted within specific sections of a local ordinance customized along the lines of this model ordinance, other definitions will need to be added. For example, the term "disaster" is defined to reflect the Stafford Act interpretation in which a local emergency leads to a state-proclaimed emergency and a federally declared disaster. However, in a customized local ordinance, the term might be applied to any level, including local or state-proclaimed emergency. In such cases, the application of the term in a local ordinance would need to be modified, as necessary, to reflect the differing meaning. Additionally, definitions are for the most part written in general terms to allow flexibility of local adaptation and interpretation. More specific definitions, however, can be found in a variety of existing sources. To avoid confusion, in this Model Recovery Ordinance the definition of Flood Insurance Rate Map reflects the specific definition found in 44 CFR 59.1. However, under Model Recovery Ordinance Section 3.7 the term Historic Building or Structure is defined in general language, although a more specific definition can be found in the previously mentioned federal code reference.

- 4. Recovery Management Organization.** There is hereby created the Recovery Management Organization [or equivalent] for the purpose of planning, organizing, coordinating, and implementing pre-event and post-disaster disaster recovery actions.

Commentary. This ordinance is written with a council-manager form of city government for a small to medium-sized community in mind. The overall concept here is for the City Manager to run the recovery management organization on behalf of the City Council, reserving the presence of a Mayor for critical junctures following a disaster or for times when policy matters come up needing City Council involvement. In actuality, the City Manager inevitably becomes the pivotal party for informing and advising the City Council on recovery matters, interpreting Council policy and coordinating staff functions.

In a big-city environment, presence and availability of the Mayor or a Deputy Mayor may be important from a leadership standpoint, even though recovery in many instances is largely a staff-driven process with the City Manager as the primary coordinator. Either way, the intent of the following language is to assure an ongoing communications connection between staff and the City Council.

4.1 Powers and Duties. The Recovery Management Organization shall have such powers as needed to carry out the purposes, provisions, and procedures of this chapter.

4.2 Officers and Members. The Recovery Management Organization shall be comprised of the following officers and members:

- a. The City Manager [or equivalent]] who shall be Director;
- b. The Assistant City Manager [or equivalent] who shall be Deputy Director in the absence of the City Manager;
- c. The City Attorney [or equivalent] who shall be Legal Adviser;
- d. Other members include [list titles or functions, such as chief building official, city engineer, director of community development or planning, fire chief, emergency management or disaster preparedness coordinator, general services director, historic preservation director, police chief, director of public works, director of utilities, floodplain manager, hazard mitigation specialist], and representatives from such other departments as deemed necessary by the Director for effective operations;

Commentary. The formal structure of a recovery organization will vary from community to community. Department manager and officer titles used locally vary widely. The important thing is inclusion of the widest array of functions having a direct or indirect role in recovery.

4.3 Relation to Emergency Management Organization. The Recovery Management Organization shall include all members of the Emergency Management Organization [or equivalent] as follows: [list titles, such as emergency management coordinator, fire chief, police chief, etc.]

Commentary. A Recovery Management Organization should encompass all members of the Emergency Management Organization because of inherent interrelationships between hazard mitigation, emergency preparedness, response, and recovery functions. A close formal relationship should be maintained before, during, and after the state of emergency. When the emergency formally ends, recovery management should continue under the umbrella of the Recovery Management Organization to coordinate short-term recovery operations. At this juncture, the Recovery Management Organization should continue as an important source of coordination of staff inputs on complex long-term recovery planning and redevelopment issues, community workshops that may involve controversy, and City Council hearings to determine preferred policy outcomes.

4.4 Operations and Meetings. The Director shall be responsible for overseeing Recovery Management Organization operations and for calling meetings, as needed. After a declaration of an emergency, and for the duration of the emergency period, the Recovery Management Organization shall meet daily, or as frequently as determined by the Director.

4.5 Succession. In the absence of the Director, the Deputy Director shall serve as Acting Director and shall be empowered to carry out the duties and responsibilities of the Director. The Director shall name a succession of department managers to carry on the duties of the Director and Deputy Director, and to serve as Acting Director in the event of the unavailability of the Director and Deputy Director.

4.6 Organization. The Recovery Management Organization may create such standing or ad hoc committees as determined necessary by the Director.

5. Recovery Plan. The Recovery Management Organization shall prepare a Recovery Plan addressing pre-event and post-disaster recovery policies, strategies, and actions; if possible, the Recovery Plan shall be adopted by the City Council [or equivalent] before a disaster, and amended after a disaster, as needed.

5.1 Plan Content. The Pre-Disaster Recovery Plan shall be composed of pre- and post-event policies, strategies, and actions needed to facilitate post-disaster recovery. The Recovery Plan will designate lead and back-up departmental action responsibilities to facilitate expeditious post-disaster recovery as well as hazard mitigation actions. The Recovery Plan shall address short-term and long-term recovery subjects, including but not limited to: business resumption, damage assessment, demolitions, debris removal, expedited repair permitting, hazards evaluation and mitigation, historical buildings, moratorium procedures, nonconforming buildings and uses, rebuilding plans, restoration of infrastructure, temporary and replacement housing, and such other subjects as may be appropriate to expeditious and wise recovery. To the extent possible, the Pre-Disaster Recovery Plan should reflect a holistic approach (where everyone in the Recovery Management Organization team is working toward common objectives, and roles are defined within a general consensus regarding those roles); include language about constructing a mutually agreed-upon vision of community resilience; and also include language regarding local perspectives on sustainability and climate adaptation.

5.2 Coordination with Other Organizations. The Recovery Plan shall identify relationships of planned recovery actions with those of local, regional, state, federal, mutual aid, and nonprofit organizations involved with disaster recovery, including but not limited to: the Federal Emergency Management Agency (FEMA), the American Red Cross, the Department of Housing and Urban Development (HUD), the Small Business Administration (SBA), the Environmental Protection Agency (EPA), the Department of Transportation (DOT), the State Emergency Management Agency [or equivalent] and other organizations that may provide disaster assistance. Prior to adoption or amendment of the Recovery Plan by the City Council [or equivalent], such organizations

shall be notified of its proposed content, and comments shall be solicited in a timely manner.

Commentary. In contrast to most local emergency management organizations, FEMA has substantial recovery and reconstruction responsibilities. To provide direction for handling of emergency response, relief, and recovery in relation to major disasters, Congress enacted in 1988 the Robert T. Stafford Disaster Relief and Emergency Assistance Act (a.k.a. the Stafford Act), Public Law 93-288, as amended. For most communities, this is an important source of external funding to compensate for certain disaster losses. Since FEMA is an important source of post-disaster infrastructure and other funding, it is important to solicit advice from that agency before the disaster on the Recovery Plan.

5.3 Consultation with Citizens. During the initial and intermediate stages of Recovery Plan formulation as well as prior to its adoption or amendment by the City Council [or equivalent], the Recovery Management Organization shall conduct outreach to community stakeholder groups, organize and distribute public announcements, schedule and conduct community workshops and meetings, and/or convene advisory committees composed of representatives of homeowner, business, and community organizations, or implement other means to provide information and consult with members of the public regarding preparation, adoption, or amendment of the Recovery Plan. Public comments shall be solicited in a timely manner during Recovery Plan formulation, adoption, and amendment processes.

Commentary. Direct outreach to the community should be established in advance of a major disaster with the assistance of neighborhood safety or similar programs, such as local Community Emergency Response Team (CERT) organizations. Such outreach should ideally be conducted in conjunction with preparation of the Recovery Plan. Following a major disaster, proactive outreach is critical to establishing a two-way flow of information, without which controversy inherent in post-disaster settings can become severe. A critically important mechanism in establishing a successful post-disaster relationship between local government, victims, and other community stakeholders has been conduct of weekly meetings between city staff and disaster victims in disaster-impacted areas. As an example of such outreach, regular meetings were sponsored by the City of Oakland following the 1991 Oakland Hills Firestorm with beneficial results.

5.4 Adoption. Following preparation, update, or revision, the Recovery Plan shall be transmitted to the City Council [or equivalent] for review and approval. The City Council shall hold at least one legally noticed public hearing to receive comments from the public on the Recovery Plan. Following public hearing(s), the City Council may adopt or amend the Recovery Plan by resolution, or transmit the plan back to the Recovery Management Organization for further modification prior to final action.

Commentary. City Council adoption of this ordinance in conjunction with a pre-event recovery plan is extremely important for successful post-disaster recovery. The Council needs to become comfortable with the concept of a pre-event plan and ordinance adoption in order to feel confident in staff during post-disaster recovery operations. If

Council adoption is not possible immediately because of the press of other business, then timely opportunities should be sought for bringing the recovery plan and ordinance forward, such as when a catastrophic disaster has struck in another jurisdiction.

5.5 Amendments. The Recovery Management Organization shall address key issues, strategies, and information bearing on the orderly maintenance and periodic amendment of the plan. In preparing amendments, the Recovery Management Organization shall consult in a timely manner with the City Council [or equivalent], City departments, businesses and community organizations, and other government entities to obtain information pertinent to possible Recovery Plan amendments.

5.6 Implementation. Under policy direction from the [Mayor and/or] City Council [or equivalent] the Recovery Management Organization shall be responsible for Recovery Plan implementation. Before a declaration of emergency, the Director shall prepare and submit reports at least annually to fully advise the City Council [or equivalent] on the progress of preparation, update, or implementation of the Recovery Plan. After a declaration of emergency, the Director shall report to the City Council [or equivalent] as often as necessary on actions taken to implement the plan in the post-disaster setting, identify policy issues needing City Council [or equivalent] direction, and receive authorization to proceed with interim plan modifications necessitated by specific circumstances.

5.7 Training and Exercises. The Recovery Management Organization shall organize and conduct periodic training and exercises annually, or more often as necessary, in order to develop, communicate, and update the contents of the Recovery Plan. Such training and exercises will be conducted in coordination with similar training and exercises related to the Emergency Operations Plan.

Commentary. Recovery training and exercises should happen on a joint, ongoing basis between the Recovery Management Organization and the Emergency Management Organization, as well as with community stakeholder groups such as Community Emergency Response Team (CERT) organizations. For greatest value, recovery training and exercises should include careful attention to critical relationships between early post-disaster emergency response and recovery actions that condition long-term reconstruction, such as street closings and re-openings, demolitions, debris removal, damage assessment, and hazards evaluation.

5.8 Coordination with Related Plans. The Recovery Plan shall be coordinated with the Comprehensive General Plan, the Emergency Operations Plan, the Local Hazard Mitigation Plan, and such other related plans as may be pertinent, to avoid inconsistencies between plans. Such related plans shall be periodically amended by the City Council to be consistent with key provisions of the Recovery Plan, and vice versa.

6. Interim Recovery Strategy. At the earliest possible time following a declaration of local emergency, the Recovery Management Organization shall prepare an Interim Recovery Strategy.

6.1 Content. The Interim Recovery Strategy shall identify and describe recovery initiatives and action priorities anticipated or underway that are necessitated by specific post-disaster circumstances.

6.2 Critical Action Priorities. The Interim Recovery Strategy shall identify critical action priorities, including but not limited to those actions identified under Section 9.0 Temporary Regulations of this chapter, describing for each action its objective, urgency, affected individuals and organizations, funding sources, department responsible, and likely duration. The Interim Recovery Strategy shall separately identify those recovery initiatives and action priorities that are not covered or insufficiently covered by the adopted Recovery Plan, but which in the judgment of the Director are essential to expeditious fulfillment of victims' needs, hazard mitigation imperatives, critical infrastructure restoration, and rebuilding needs, and without which public health, safety, and welfare might otherwise be impeded.

6.3 Short-Term Hazard Mitigation Program. The Interim Recovery Strategy shall include a short-term hazard mitigation program comprised of high-priority actions. Such measures may include urgency ordinances dealing with mitigation and abatement priorities identified under Section 9. Temporary Regulations, or requiring special land-use and development restrictions or structural measures in areas affected by flooding, urban/wildland fire, wind, seismic, or other natural hazards, or remediation of known human-induced or technological hazards such as toxic contamination.

6.4 Review and Consultation. The Interim Recovery Strategy shall be forwarded to the City Council [or equivalent] for review and approval following consultation with FEMA, other governmental agencies, businesses, infrastructure operators, and other citizen and stakeholder representatives. The Director shall periodically report to the City Council regarding Interim Recovery Strategy implementation, and any adjustments that may be required by changing circumstances.

6.5 Coordination with Pre-Disaster Recovery Plan and Other Plans. The Interim Recovery Strategy shall form the basis for periodic amendments to the Recovery Plan, and such other related plans as may be pertinent. It shall identify needed post-disaster amendments to the Pre-Disaster Recovery, Comprehensive Plan, Emergency Operations Plan, or other plans, codes, or ordinances.

Commentary. The purpose of the Interim Recovery Strategy is to structure the flow of local post-disaster short- and long-term recovery actions around a unifying concept that: 1) acknowledges real damage and loss conditions experienced, 2) modifies scenarios underlying the Pre-Disaster Recovery Plan, and 3) translates the new reality into short-term actions pending revision of the Recovery Plan. This may be essential because damage conditions are often likely to be different from those anticipated in the Pre-Disaster Recovery Plan. Preparation of such an interim strategy in the early days of recovery has the benefit of incorporating a positive, proactive emphasis to counter what

can be an overwhelmingly reactive and negative context. The Interim Recovery Strategy can be updated as recovery experience is gained and new issues emerge. It also provides a source from which the Pre-Disaster Recovery Plan and related plans can be updated.

- 7. Hazard Mitigation Program.** Prior to a major disaster, the Recovery Management Organization, with City Council concurrence, shall establish a hazard mitigation program by which natural hazards, risks, and vulnerability are addressed for prioritized short-term and long-term mitigation actions leading to reduced disaster losses. The hazard mitigation program shall include preparation and adoption of a Local Hazard Mitigation Plan, amendment of the Comprehensive Plan to include a Natural Hazard/Safety Element [or equivalent], together with emergency actions dealing with immediate hazards abatement, including hazardous materials management.

7.1 Local Hazard Mitigation Plan. The Recovery Management Organization shall prepare for City Council adoption and FEMA approval a Local Hazard Mitigation Plan qualifying the City for receipt of federal Hazard Mitigation Grant Program (HMGP), Flood Mitigation Assistance (FMA), Pre-Disaster Mitigation (PDM), and Severe Repetitive Loss (SRL) grants, under the provisions of the Stafford Act, National Flood Insurance Act, and Disaster Mitigation Act of 2000, as amended. The Local Hazard Mitigation Plan shall include, among other items specified in federal regulations (44 CFR 201.6): a risk assessment describing the type, location, and extent of all natural hazards that can affect the City, vulnerability to such hazards, the types and numbers of existing and future buildings, infrastructure, and critical facilities located in identified hazard areas, and an estimate of the potential dollar losses to vulnerable structures; and a mitigation strategy that provides the City's blueprint for reducing the potential losses identified in the risk assessment. The Local Hazard Mitigation Plan, or its mitigation strategy and other contents, shall be adopted as part of the Natural Hazard/Safety Element [or equivalent] of the Comprehensive Plan.

7.2 Natural Hazard/Safety Element [or equivalent]. The Recovery Management Organization shall prepare for City Council adoption an amendment to the Comprehensive Plan known as the Natural Hazards/Safety Element [or equivalent] including proposed long- and short-term hazard mitigation goals, policies, and actions enhancing long-term safety against future disasters. The Natural Hazard/Safety Element [or equivalent] shall determine and assess the community's vulnerability to known hazards, including climate change impacts, such as: severe flooding; wildland fires; seismic hazards, such as ground shaking and deformation, fault rupture, liquefaction, and tsunamis; dam failure; slope instability, mudslides, landslides, and subsidence; sea level rise, coastal surge and erosion; hurricanes, tornadoes, and other high winds; and human-induced or technological hazards, such as oil spills, natural gas leakage and fires, hazardous and toxic materials contamination, and nuclear power plant and radiological accidents.

Commentary. About a dozen states require inclusion of natural hazards as a mandated subject within their comprehensive plans. For example, a Natural Hazards Element is a

required or suggested part of comprehensive plans of Colorado, Idaho, Illinois, and Iowa, and a Safety Element is a required part of comprehensive plans in Arizona, California, and Nevada. Such requirements may have encouraged disaster loss reduction. For example, per capita flood losses were found in one study to be lower for those states which required natural hazards as a subject of the comprehensive plan than for those without such a requirement. Moreover, such comprehensive plan elements provide a context into which communities can fit their Local Hazard Mitigation Plan (LHMP) required under the Disaster Mitigation Act of 2000 as a precondition for eligibility for federal hazard mitigation grants. California provides financial incentives to local jurisdictions that adopt their LHMP as part of the safety element. To the extent that hazard mitigation reduces disaster losses and facilitates recovery, communities stand to benefit from integrating such plans with the Pre-Disaster Recovery Plan.

7.3 New Information. As new information is obtained regarding the presence, location, extent, location, and severity of natural and human-induced or technological hazards, or regarding new mitigation techniques, such information shall be made available to the public, and shall be incorporated as soon as possible as amendments to the Local Hazard Mitigation Plan and the Comprehensive Plan through City Council action.

8. General Provisions. The following general provisions shall be applicable to implementation of this chapter:

8.1 Emergency Powers and Procedures. Following a declaration of local emergency and while such declaration is in force, the Recovery Management Organization shall have authority to exercise powers and procedures authorized by this chapter, including temporary regulations identified below, subject to extension, modification or replacement of all or portions of these provisions by separate ordinances adopted by the City Council [or equivalent].

8.2 Post-Disaster Operations. The Recovery Management Organization shall coordinate post-disaster recovery operations, including but not limited to: business resumption, damage assessment, demolitions, debris removal, expedited repair permitting, hazards evaluation and mitigation, historical buildings, moratorium procedures, nonconforming buildings and uses, rebuilding plans, restoration of infrastructure, temporary and replacement housing, and such other subjects as may be appropriate, as further specified below.

8.3 Coordination with FEMA and Other Agencies. The Recovery Management Organization shall coordinate recovery actions identified under this and following sections with those of state, federal, local, or other mutual organizations involved in disaster recovery, including but not limited to the Federal Emergency Management Agency (FEMA), the American Red Cross, the Department of Housing and Urban Development (HUD), the Small Business Administration (SBA), the State Emergency Management Agency [or equivalent], and other organizations that provide disaster assistance. Intergovernmental coordination tasks include but are not limited to the following: local compliance with all

applicable federal and state laws and regulations; provision of information and logistical support; participation in the Multi-Agency Hazard Mitigation Team; cooperation in joint establishment of one-stop service centers for victim support and assistance; and such other coordination tasks as may be required under the specific circumstances of the disaster.

Commentary. A substantial portion of the Stafford Act is devoted to the means by which federal funds are distributed to persons, businesses, local governments, and state governments for disaster relief and recovery. For most communities, this is an important external source from which certain disaster losses can be compensated. Although insurance may be instrumental in personal, household, or business recovery, it has little value for compensating losses incurred from disasters for which insurance is too costly or difficult to obtain, such as earthquake insurance. In addition, some federal assistance is in the form of grants and loans, involving other federal agencies such as HUD and SBA. The federal government has become increasingly interested in coordinating post-disaster victim services and mitigating hazards affecting land use and building construction. Consequently, federal assistance to localities in many instances is contingent upon the adjustment of local recovery and hazard mitigation policies and practices to conform to federal standards, such as elevation of rebuilt structures in floodplain areas.

9.0 Temporary Regulations. The Recovery Management Organization shall have the authority to administer the provisions of this section temporarily modifying provisions of the Municipal Code [or equivalent] dealing with building permits, demolition permits, and restrictions on the use, development, or occupancy of private property, provided that such action, in the opinion of the Director, is reasonably justifiable for protection of life and property, mitigation of hazardous conditions, avoidance of undue displacement of households or businesses, or prompt restoration of public infrastructure.

Commentary. The following temporary regulations are at the heart of the recovery process. Although state law or city ordinances may authorize some of these functions, it is preferable to have a source of locally adopted regulation which provides direct authority for staff actions taken on behalf of the City Council in line with the Recovery Plan, and provides a rationale for intervention in matters dealing with private property. Among these temporary regulations are provisions dealing with their duration, environmental clearances, debris clearance and hazard abatement, damage assessment and placarding, development moratoria, temporary use permits, temporary repair permits, deferral of fees for repair and rebuilding permits, nonconforming buildings and uses, one-stop service centers, and demolition of damaged historic buildings. Each of these topics needs careful adaptation to local conditions. It is not possible to fully anticipate in advance the magnitude and distribution of disaster damages, but these pre-adopted temporary regulations provide a basis for more efficient action substantially less subject to uncertainties found in cities which have not prepared in this manner. Also, it is important to remember that although temporary regulatory modifications outlined here are associated with the municipal code, disaster assistance from federal agencies will be contingent upon compliance with requirements of federal laws and programs, such as the National Flood Insurance Program (NFIP); the National Environmental Policy Act

(NEPA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), and others as applicable. Changes in local ordinance/municipal code, though temporary, will not change these federal requirements.

- 9.1 **Duration.** The provisions of this section shall be in effect subject to review by the City Council for a period of 90 days from the date of a local emergency declaration leading to a state-proclaimed emergency and federally declared disaster, or until such time as the local emergency is extended, modified, replaced, or terminated in whole or in part by action of the City Council through separate ordinance.

Commentary. This provision allows for flexibility in the duration of application of the temporary regulations, so that any portion can be terminated, modified, or extended depending upon local circumstances. It also reflects a recognition that "temporary" regulations may be in effect for an extended period of time beyond either termination of the local state of emergency or the 90-day period. Depending upon the severity of disaster damage, it may be necessary for temporary provisions to remain in effect for several years after the disaster.

- 9.2 **Environmental Clearances.** The provisions of this section enable actions that in the judgment of the Director are justifiable for protection of public health and safety and, therefore, can be reasonably declared to qualify under statutory exemptions of environmental regulations contained in other chapters of the Municipal Code, and within state and federal law. The Director shall provide ongoing monitoring reports to the City Council on environmental issues arising in relation to the Interim Recovery Strategy, the Recovery Plan, and the statutory exemptions.

- 9.3 **Debris Clearance and Hazard Abatement.** The Director shall have the emergency authority to undertake the following actions:

- a. **Debris Removal**—Remove from public rights-of-way and/or private property adjoining such rights-of-way any debris, rubble, trees, damaged or destroyed cars, trailers, equipment, or other items of private property, posing a threat to public health or safety;
- b. **Hazardous Materials**—Remove and/or abate hazardous and toxic substances threatening public health and safety;
- c. **Setbacks of Temporary Buildings**—Create and maintain such additional setbacks for temporary buildings as to assure emergency and through movement of vehicles and pedestrians essential for recovery management;
- d. **Prohibition of Access**—Prohibit public access to areas damaged and/or hazardous to public health;
- e. **Other**—Take such other actions, which, in the judgment of the Director, are reasonably justified for protection of public health and safety, provision of

emergency ingress and egress, assurance of firefighting or ambulance access, restoration of infrastructure, and mitigation of hazardous conditions.

Commentary. Although clearance of privately owned debris is routinely considered a function of local government, it can become very controversial where owners take the position that such property is salvageable and has value (e.g., used brick after an earthquake). Pre-event adoption of such a provision reinforces the expectation that debris clearance functions will be carried out decisively, thus minimizing a problem otherwise compounded by hesitation or ambiguity of intention on the part of the city.

- 9.4 **Damage Assessment and Placarding.** The Director shall direct damage assessment teams having authority to conduct field surveys of damaged structures and post placards designating the condition and permitted occupancy of such structures as follows:

Commentary. Damage assessment and the placement of placards identifying whether buildings are safe or unsafe to occupy are two functions having perhaps more profound effects on life, property, and recovery than any other within the post-disaster decision sequence towards which provisions of these temporary regulations are directed.

Damage assessment is undertaken by various entities following a major disaster, usually the city and FEMA. There is at least a twofold purpose for these inspections. One purpose is to determine the degree of structural damage of each building and notify the public about the relative safety of entry and occupancy. This has been a long-standing duty under local government health and safety responsibilities with which building departments are familiar. The other purpose is to quickly estimate the approximate replacement costs of damaged buildings and other property in order to inform the state and federal governments of dollar amounts needed for emergency legislative authorizations. The latter purpose is fraught with difficulty to the extent that hurriedly conducted damage assessments can miss substantial elements of damage and corresponding costs. Moreover, local expertise tends to be limited in the area of deploying common standards and procedures for determining structural damage in order to assess damage in a truly comparable manner.

*The most important element of all these concerns is the establishment of standard identification of structural damage both in gross general terms reflected in the red, yellow, and green tag placard systems. The placard language below is adapted from **Model Ordinances for Post-Disaster Recovery and Reconstruction** initially published by the California Governor's Office of Emergency Services. The procedures used to make these basic safety distinctions in the California model ordinance are based on detailed post-disaster inspection methods described by the Applied Technology Council in **ATC-20, Procedures for Postearthquake Safety Evaluation of Buildings** and **ATC-20-2***

Addendum:

- a. **Inspected—Lawful Occupancy Permitted** is to be posted on any building in which no apparent structural hazard has been found. This does not mean other forms of damage that may not temporarily affect occupancy.

Commentary. This is commonly known as the "green tag" placard.

- b. **Restricted Use** is to be posted on any building in which damage has resulted in some form of restriction to continued occupancy. The individual posting this placard shall note in general terms the type of damage encountered and shall clearly and concisely note the restrictions on continued occupancy.

Commentary. This is commonly known as the "yellow tag" placard.

- c. **Unsafe—Do Not Enter or Occupy** is to be posted on any building that has been damaged to the extent that continued occupancy poses a threat to life safety. Buildings posted with this placard shall not be entered under any circumstances except as authorized in writing by the department that posted the building or by authorized members of damage assessment teams. The individual posting this placard shall note in general terms the type of damage encountered. This placard is not to be considered a demolition order. This chapter and section number, the name of the department, its address, and phone number shall be permanently affixed to each placard. Once a placard has been attached to a building, it shall not be removed, altered, or covered until done so by an authorized representative of the department or upon written notification from the department. Failure to comply with this prohibition will be considered a misdemeanor punishable by a \$500 fine.

Commentary. This is commonly known as the "red tag" placard.

<https://www.atcouncil.org/vmchk/Postearthquake-Damage-and-Safety-Evaluation-of-Buildings/Procedures-for-Postearthquake-Safety-Evaluation-of-Buildings-Addendum/flypage.tpl.html>

- 9.5 **Development Moratorium.** The Director shall have the authority to establish a moratorium on the issuance of building permits, approval of land use applications or other permits and entitlements related to the use, development, and occupancy of private property authorized under other chapters and sections of the Municipal Code and related ordinances, provided that, in the opinion of the Director, such action is reasonably justifiable for protection of life and property and subject to the following:

- a. **Posting**—Notice of the moratorium shall be posted in a public place and on the Internet, and shall clearly identify the boundaries of the area(s) in which moratorium provisions are in effect, and shall specify the exact nature of the development permits or entitlements that are temporarily held in abeyance;
- b. **Duration**—The moratorium shall be in effect subject to review by the City Council at the earliest possible time, but no later than 90 days, at which time the Council shall take action to extend, modify, replace, or terminate such moratorium through separate ordinance.

Commentary. After disasters, a prevailing sentiment may often be to act quickly to replicate pre-disaster building patterns in an effort to "restore normalcy." In many

instances, this sentiment prevails as public policy despite the presence of a severe natural hazard condition, thereby reinforcing the chances of repetitive losses. Many examples exist of communities which have allowed rebuilding in a manner that ignored known hazardous conditions, whereas intervention was needed to create greater safety.

To prevent or reduce repetitive losses, a city may choose to interrupt and forestall rebuilding long enough to assess options for avoiding placing buildings and people back in harm's way. This can be done by establishing an emergency moratorium on issuance of repair and rebuilding permits or on land-use approvals in areas where severely hazardous conditions are identified. The hazard may be newly detected, as in a post-earthquake circumstance where the pattern of structural damage, recent flooding, fresh landslides, or ground subsidence may indicate the need for engineering studies to clearly identify hazards and determine proper solutions.

A moratorium on development may be important for a city to undertake from the standpoint of informed public policy. However, such actions tend to be controversial and unpopular, so it is important to lay the groundwork with the community in advance, if possible. This subsection provides prior authorization through adoption of this ordinance before a major disaster, enabling city staff to act expeditiously in a post-disaster setting to forestall premature issuance of permits in areas shown to be hazardous. Such action is necessarily subject to Council review, ratification, modification, or termination.

9.6 Temporary Use Permits. The Director shall have the authority to issue permits in any zone for the temporary use of property that will aid in the immediate restoration of an area adversely impacted by a major disaster, subject to the following provisions:

1. **Critical Facilities**--Any police, fire, emergency medical, or emergency communications facility that will aid in the immediate restoration of the area may be permitted in any zone for the duration of the declared emergency.
2. **Other Temporary Uses**--Temporary use permits may be issued in any zone, with conditions, as necessary, provided written findings are made establishing a factual basis that the proposed temporary use: 1) will not be detrimental to the immediate neighborhood; 2) will not adversely affect the Comprehensive General Plan or any applicable specific plan; and 3) will contribute in a positive fashion to the reconstruction and recovery of areas adversely impacted by the disaster. Temporary use permits may be issued for a period of one year following the declaration of local emergency and may be extended for an additional year, to a maximum of two years from the declaration of emergency, provided such findings are determined to be still applicable by the end of the first year. If, during the first or the second year, substantial evidence contradicting one or more of the required findings comes to the attention of the Director, then the temporary use permit shall be revoked.

Commentary. Most zoning ordinances have no provisions for temporary use of property following a disaster. A few allow temporary placement of mobile homes on residentially zoned sites pending reconstruction of a residence. Time limits vary, but are usually for a

two-year period. After a disaster, special latitude may be needed, however, to support various recovery needs. Care must be taken not to set precedents that will erode or destroy a pre-existing pattern of zoning that the city may wish to protect. The language within this section is modeled after provisions of the Los Angeles recovery ordinance adopted after the Northridge earthquake, titled **Temporary Regulations Relating to Land Use Approvals for Properties Damaged in a Local Emergency**. That ordinance was geared toward the needs of a large and diverse city. Smaller communities may wish to restrict temporary uses to those already allowed by existing zoning, limiting the provision to temporary structures such as tents, domes, or mobile units.

- 9.7 Temporary Waiver of Repair Permit Requirements for Emergency Repairs.** Following a disaster, temporary emergency repairs to secure structures and property damaged in the disaster against further damage or to protect adjoining structures or property may be made without fee or permit where such repairs are not already exempt under other chapters of the Municipal Code. The building official must be notified of such repairs within 10 working days, and regular permits with fees may then be required.

*Commentary. This provision is specifically written for repairs which may not be exempt under standard building code permit exemptions but which are justifiable from a public health and safety standpoint to avoid further damage to property after a disaster. It is modeled after a provision of a post-disaster rebuilding ordinance adopted in 1992 by the County of San Bernardino shortly after the Landers-Big Bear earthquake. Written before the earthquake, the ordinance was based on a pre-event study titled **Post-Disaster Rebuilding Ordinance and Procedures**, which included a survey of top managers and elected officials regarding various post-disaster rebuilding provisions, such as for nonconforming buildings and uses. Because of the pre-event involvement of top managers and elected officials, it was adopted after the earthquake with no controversy.*

- 9.8 Deferral of Fees for Repair and Rebuilding Permits.** Except for temporary repairs issued under provisions of this chapter, all other repairs, restoration, and reconstruction of buildings damaged or destroyed in the disaster shall be approved through permit under the provisions of other chapters of this Code. Fees for such repair and reconstruction permits may be deferred until issuance of certificates of occupancy.

Commentary. Pressure to waive processing fees frequently arises after a disaster when victims are unsure of their sources of financing for rebuilding. It may be inadvisable to succumb to pressures to waive fees due to the ongoing need for cost recovery for disaster-related services at a time revenue flows are uncertain. As an alternative, local governments can buy time by deferring fees to determine the degree to which funds will be found at a later time to help offset victims' fee costs. For example, sometimes the cost of processing fees may be covered by insurance or by federal funds. Deferral of fees until occupancy permit issuance buys time during which to ascertain possible alternate sources without injuring necessary revenue flows to the city treasury. This provision is modeled after similar language in the Los Angeles temporary regulations.

- 9.9 Nonconforming Buildings and Uses.** Buildings damaged or destroyed in the disaster that are legally nonconforming as to use, yards, height, number of stories, lot area, floor

area, residential density, parking, or other provisions of the Municipal Code specified herein may be repaired and reconstructed in-kind, provided that:

- a. The building is damaged in such a manner that the structural strength or stability of the building is appreciably lessened by the disaster and is less than the minimum requirements of the Municipal Code for a new building;
- b. The cost of repair is greater than 50 percent of the replacement cost of the building;
- c. All structural, plumbing, electrical, and related requirements of the Municipal Code, as well as any rebuilding requirements imposed by a higher level of government, such as building elevation or basement removal if required under NFIP, are met at current standards;
- d. All natural hazard mitigation requirements of the Municipal Code are met;
- e. Reestablishment of the use or building is in conformance with the National Flood Insurance Program requirements and procedures, or higher community standards;
- f. The building is reconstructed to the same configuration, floor area, height, and occupancy as the original building or structure;
- g. No portion of the building or structure encroaches into an area planned for widening or extension of existing or future streets as determined by the comprehensive general plan or applicable specific plan;
- h. Repair or reconstruction shall commence within two years of the date of the declaration of local emergency in a major disaster and shall be completed within two years of the date on which permits are issued; damaged structures must be secured in accordance with the community's provisions for abandoned structures in order to ensure the health and safety of the public;
- i. Nothing herein shall be interpreted as authorizing the continuation of a nonconforming use beyond the time limits set forth under other sections of the Municipal Code that were applicable to the site prior to the disaster.

Commentary. No recovery issue can be more vexing to planners than whether or not to encourage reestablishment of nonconforming uses and buildings after a disaster. Planners have sought for decades to write strict provisions in zoning ordinances designed to gradually eliminate nonconforming uses or buildings as they were abandoned, changed owners, or were damaged by fire, wind, or water. Such provisions normally prohibit reestablishment of nonconforming uses and buildings where damage exceeds a certain percentage of replacement cost, most often 50 percent. This approach is logical, orderly, and normally equitable when weighing community interests balanced with those of the property owner. However, the thinking behind such provisions has been geared to

incremental adjustments or termination of such uses over time, not to sudden circumstances forcing disposition of such uses as a class at a single point in time.

In theory, disasters are seen as an opportunity to eliminate uses that conflict with the prevailing pattern in a neighborhood but that remain because of legal nonconforming status—for example, scattered industrial uses in a residentially zoned neighborhood. In reality, local governments are beset after a disaster by pressures from property owners and other interests to reestablish the previous development pattern, including nonconforming buildings and uses. Such pressures extend beyond the demand to reestablish nonconforming buildings or uses to include waiver of current building, plumbing, and electrical code provisions to the standards in place at the time of construction.

From a risk management, liability exposure, or public safety standpoint, acquiescence to the reduction of such basic health and safety standards in the face of a known hazard can be seen as unacceptable. However, zoning provisions hindering reestablishment of nonconforming buildings or uses tend to be more arguable and are more likely to be modified by city councils under pressures of the moment to restore the status quo. In recognition of such pressures, this model ordinance language offers a straightforward tradeoff approach allowing reestablishment of a nonconforming use or building in return for strict adherence to current structural, plumbing, and electrical code and hazard mitigation requirements. The language assumes existence of a provision commonly found in the Municipal Code authorizing repair or reestablishment of a nonconforming use or building where damage is less than 50% of the replacement cost. It also assumes the building was substantially weakened by the disaster and is below code requirements. This compromise approach recognizes that its application may require the unwelcome decision to accept continuation of disorderly land-use patterns, unless a solution can be found through redevelopment or rezoning. Instead, it places a high value on life safety.

It is important to note, however, that the language of these provisions includes the following important limitations on the economic incentive to reestablish the nonconforming use or building.

- 1) It does not extend any previously stipulated life of the nonconforming use—this is an important disincentive if the costs of replacement cannot be offset by insurance, FEMA assistance, SBA loans or other sources of financial support.*
- 2) It does not allow the extent of nonconformance to be increased over that which existed prior to the disaster, thwarting another common pressure.*
- 3) It requires strict adherence to current structural, plumbing, electrical, and other requirements of the Municipal Code, any street setbacks stipulated within the comprehensive plan circulation element and related ordinances, as well as any rebuilding requirements imposed by a higher level of government, such as building elevations or basement removals where required by FEMA under the National Flood Insurance Program (NFIP). Note: within NFIP there is no grandfathering for substantially damaged structures (i.e., those damaged in excess of 50% of their pre-*

event value). Such local, state or federal requirements, though potentially costly, are necessary from a public safety standpoint.

- 4) *It recognizes that compliance with more stringent hazard mitigation requirements may be needed, for example, moving a structure to a less hazardous area on the lot, especially in cases involving increased on-site hazards because of fault rupture, landsliding, coastal erosion, or severe flooding where upgrading to current structural, plumbing, and electrical code requirements may not assure safe occupancy. Compliance with such provisions may reduce or eliminate the possibility of rebuilding, or be sufficiently costly to discourage reestablishment of the use or other nonconforming feature.*

The relative importance of post-disaster reestablishment of nonconforming uses and buildings may vary from one jurisdiction to another. Therefore, the most useful time to assess this aspect of post-disaster recovery is before a major disaster, in the course of pre-event planning. Education of the city council in advance can help lessen post-disaster tendencies to compromise critical hazard mitigation and public safety requirements, notwithstanding the outcome on nonconforming use and building requirements.

- 10.0 **One-Stop Service Center for Permit, Economic, and Housing Assistance.** The Recovery Management Organization shall coordinate the establishment of a one-stop center, staffed by representatives of pertinent City departments, and staff of cooperating organizations, for the purpose of providing coordinated services and assistance to disaster victims for purposes including but not limited to: permit processing to expedite repair of buildings, provision of housing assistance, and encouragement of business resumption and industrial recovery. The Director shall establish such center and procedures in coordination with other governmental entities that may provide services and support, such as FEMA, SBA, HUD, or the State Emergency Management Agency (or equivalent).

Commentary. One-stop service centers have become more common with recent disasters, often combining the presence of multiple agencies to provide better coordination of information needed by disaster victims to obtain essential public and insurance services and to rebuild. A prime example was the Community Restoration and Development Center established by the City of Oakland shortly after the 1991 Oakland Hills Firestorm and operated until mid-1994 with financial support from FEMA. Benefits to be gained for establishing a special one-stop center include accelerated information, integration of services, and expedited permitting. Setting up a specialist team working exclusively on repair and rebuilding permit issues has the added advantage of insulating normal development review from disruption by the recovery process and vice versa.

- 11.0 **Emergency Contractor and Volunteer Certification.** The Recovery Management Organization shall have authority to establish a standard certification process for all contractors and volunteers seeking to provide clean-up, repair, or construction services within areas that have experienced disaster damage. In order to be eligible, contractors and volunteers must obtain the proper certification using the following process.

1. **Application for Contractor Certification.** Contractors must apply for Contractor Certification at a one-stop center with the location and hours identified by the City. An application processing fee of \$25.00 is required for each contractor firm and may be paid in cash or by check made payable to the City.
2. **Application Requirements.** Contractors seeking certification must meet the following minimum insurance and background check requirements.
 - a. Staff will verify that contractors are properly registered and/or licensed with the state contractors' licensing agency of the state within which their business is headquartered.
 - b. The Police Department will conduct a criminal background check on each worker that will be performing services for the contractor's firm.
 - c. Contractors must be licensed for their respective trades through the state contractors' licensing agency within which their business is headquartered and meet minimum insurance required by that state. All other contractor firms seeking to perform projects with a scope of work that exceeds a cost of \$2,000 must provide proof of a general liability insurance policy for an amount not less than \$1,000,000.
3. **Certification Enforcement.** Contractors are subject to the following certification enforcement requirements.
 - a. Proof of certification will be a City-issued photo identification badge for each worker performing clean-up, repair, or construction services within disaster-damaged areas. This must be displayed by each worker at all times within the designated area. Replacement badges will be issued at a cost of \$10.00.
 - b. Individuals without an identification badge will not be permitted to perform clean-up, repair, or construction services.
 - c. Contractors failing to register will be subject to a fine of \$100.00 per day or be subject to imprisonment for not more than 30 days. Each day a violation occurs will constitute a separate offense.
 - d. The City retains the right to suspend or revoke the Contractor Certification.
4. **Volunteer Certification.** Persons volunteering their efforts without compensation for disaster clean-up repair, or construction services must also apply for emergency certification as a volunteer at a one-stop center and receive a photo identification badge. No application processing fee is required for a Volunteer Certification. However, volunteers certified to assist with clean-up, repair, or construction services must be affiliated with a charitable, non-profit organization meeting all preceding Contractor Certification insurance and enforcement requirements.

Commentary. The phenomenon of unscrupulous actions by contractors or persons posing as contractors after a disaster by which advantage is taken of helpless disaster victims is a widely recognized and repetitive problem for which there is little guidance in the professional recovery management literature. The preceding emergency contractor certification provisions have been adapted from a program established by the City of Cedar Rapids, Iowa, following a severe flood in 2008. Through implementation of this program, the City of Cedar Rapids turned down over 200 applications for emergency contractor certifications, and made over 30 arrests for program violations. Through notification of over 10,000 contractors, the program also had a substantial preventive effect, discouraging otherwise unscrupulous persons from attempting to take advantage of the post-flood recovery situation.

Although volunteers were certified and issued badges without charge by the City of Cedar Rapids, their program did not explicitly address volunteer certification. Therefore, language is included that addresses this need. Since many cities do not wish to discourage volunteer assistance by the imposition of a seemingly unnecessary requirement, it is a sensitive provision and should be thought through carefully as to how it might work without posing needless barriers to volunteer efforts before inclusion in a local ordinance.

- 12.0 Temporary and Permanent Housing.** The Director shall assign staff to work with FEMA, SBA, HUD, the State Emergency Management Agency (or equivalent), and other appropriate governmental and private entities to identify special programs by which provisions can be made for temporary or permanent replacement housing which will help avoid undue displacement of people and businesses. Such programs may include deployment of mobile homes and mobile home parks under the temporary use permit procedures provided in Section 9.6 of this chapter, use of SBA loans and available Section 8 and Community Development Block Grant funds to offset repair and replacement housing costs, and other initiatives appropriate to the conditions found after a major disaster.

Commentary. The issue of post-disaster temporary and permanent replacement housing has grown to one of critical dimensions since Hurricane Katrina. After that event, thousands of households were temporarily housed in trailers for periods far longer than anticipated, under unhealthy conditions due to faulty mobile home design. Relatively little progress has been made since then in finding effective ways by which to handle this issue on a broad scale. This section is essentially a placeholder for language that preferably should be made more specific on the basis of a pre-event plan that anticipates the local levels of housing vulnerability and identifies potential solutions. A great deal more research is needed to find satisfactory solutions for prompt, efficient provision of both interim and replacement housing. With possible downsizing of federal budgets in future years, this issue will become more critical. Also needed is research on feasible incentives for retrofitting a substantial portion of the existing housing stock to reduce vulnerability and risk. This is true in western states susceptible to heightened earthquake risk and for Midwestern and southeastern states under continuing threats of hurricane, tornado, and severe storm damage.

13.0 Demolition of Damaged Historic Buildings. The Director shall have authority to order the condemnation and demolition of buildings and structures damaged in the disaster under the standard provisions of the Municipal Code, except as otherwise indicated below:

13.1 Condemnation and Demolition. Within ___ days after the disaster, the building official [or equivalent] shall notify the State Historic Preservation Officer that one of the following actions will be taken with respect to any building or structure determined by the building official to represent an imminent hazard to public health and safety, or to pose an imminent threat to the public right of way:

- a. Where possible, within reasonable limits as determined by the building official, the building or structure shall be braced or shored in such a manner as to mitigate the hazard to public health and safety or the hazard to the public right-of-way;
- b. Whenever bracing or shoring is determined not to be reasonable, the building official shall cause the building or structure to be condemned and immediately demolished. Such condemnation and demolition shall be performed in the interest of public health and safety without a condemnation hearing as otherwise required by the Municipal Code. Prior to commencing demolition, the building official shall photographically record the entire building or structure.

13.2 Notice of Condemnation. If, after the specified time frame noted in Subsection 8.1 of this chapter and less than 30 days after the disaster, a historic building or structure is determined by the building official to represent a hazard to the health and safety of the public or to pose a threat to the public right of way, the building official shall duly notify the building owner of the intent to proceed with a condemnation hearing within business days of the notice in accordance with Municipal Code Section ____; the building official shall also notify FEMA, in accordance with the National Historic Preservation Act of 1966, as amended, of the intent to hold a condemnation hearing.

13.3 Request to FEMA to Demolish. Within 30 days after the disaster, for any historic building or structure that the building official and the owner have agreed to demolish, the building official shall submit to FEMA, in accordance with the National Historic Preservation Act of 1966, as amended, a request to demolish. Such request shall include all substantiating data.

13.4 Historic Building Demolition Review. If after 30 days from the event, the building official and the owner of a historic building or structure agree that the building or structure should be demolished, such action will be subject to the review process established by the National Historic Preservation Act of 1966, as amended.

Commentary. A difficult aspect of recovery in older communities is dealing with damaged historic structures. Since these can be very old, measures needed to make them structurally sound may be more difficult and costly than normal. Because of the controversy frequently associated with this issue, vocal opposition may emerge when a

badly damaged historical structure is considered for demolition. Therefore, it is wise to have language already in place to guide planning and building officials who may be involved. The National Historic Preservation Act of 1966, as amended, identifies steps that must be taken by a jurisdiction or owner to mitigate public health and safety hazards resulting from disaster-caused damage. The intent is to establish predictable rules by which proposed demolitions, except in extreme cases of danger to the public, can be reviewed by state and federal officials in order to provide time to identify preservation options. The review process is intended to discourage hasty demolition action by local officials when such action may not be justified.

*The preceding language is adapted from provisions of the **Uniform Code for the Abatement of Dangerous Buildings**. It provides specific time frames and actions for abatement of hazards created by damage to historic buildings. The important element of judgment here is the establishment of a specific time frame for declaring a structure an imminent hazard to public health and safety justifying immediate demolition without a condemnation hearing. Such time frames are generally from three to five days, though sometimes stretched to ten. After the established time frame, the threat may no longer be justified as imminent and, therefore, the remaining procedures kick in.*

- 14.0 **Severability.** If any provision of this chapter is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect the remaining provisions, which can be implemented without the invalid provision, and, to this end, the provisions of this ordinance are declared to be severable.