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UPON WELL-COORDINATED LOCAL LAND USE
PLANNING AND ZONING**

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Zoning and Land Use Planning

PATRICIA E. SALKIN*

Effective Disaster Mitigation Depends Upon Well-Coordinated Local Land Use Planning and Zoning

I. Introduction

Although local land use planning and natural disaster mitigation have always been

inextricably intertwined, the role of municipal planning has recently gained prominence as a result of the Disaster Mitigation Act of 2000 (hereinafter referred to as the DMA).¹ The DMA emphasizes, among other things, “the need for State, Tribal, and local entities to closely coordinate mitigation planning and implementation efforts,”² to establish “a national program for pre-disaster mitigation, and to streamline administration of disaster relief.”³

The DMA is intended to “alleviate the suffering and damage that results from disasters by . . . encouraging hazard mitigation measures . . . in-

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¹114 Stat. 1522, P.L. 106-390. This amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act and emphasizes the importance of planning for disasters before they occur at all levels of government.

²Federal Emergency Management Agency, Multi-Hazard Mitigation Planning Guidance, Under the Disaster Mitigation Act of 2000, at v (March 2004). Available at: <http://www.fema.gov/fima/guidance.shtm> (site visited March 2005).

³FEMA, *Disaster Mitigation Act of 2000 – Highlights & Impacts*, April 18, 2001, available at: http://www.fema.gov/regions/v/newsletter/news_n3.htm, last visited 12/30/04.

cluding development of land use and construction regulations.”⁴ This encouragement comes in the form of pre- and post-disaster aid and assistance.⁵ States and local governments that have an approved mitigation plan are eligible to receive increased financial assistance under the Hazard Mitigation Grant Program,⁶ and funding may be increased depending on whether the mitigation plan meets a standard or enhanced set of requirements.⁷ Plans must be approved by the Federal Emergency Management Agency (FEMA) prior to the receipt of federal funds for hazard mitigation measures.⁸ In February 2002, FEMA published an Interim Final Rule providing information on the policies and procedures to be used in mitigation planning.⁹ While mitigation plans are required to ac-

count for natural disasters only, FEMA “supports those jurisdictions that choose to consider technological and manmade hazards in their respective mitigation plans.”¹⁰

A. State Mitigation Plans

State mitigation plan requirements vary depending on the type of plan developed. A standard mitigation plan allows the state to qualify for funding based on 7.5% of the total eligible disaster assistance funds available,¹¹ whereas an enhanced mitigation plan will allow a state to qualify for up to 20% of these funds at the time a disaster is declared.¹² Both types of state plans require significant public involvement and have specific content requirements but differ on the level of preparedness, and both require the state to provide technical

⁴42 U.S.C.A. 5121(b) (2005).

⁵See e.g. 42 U.S.C.A. 5121(6), 5131(c), 5133(c).

⁶FEMA, Multi-Hazard Mitigation Planning Guidance, ix March 2004. Available at: www.fema.gov/doc/fima/introduction_031904.doc (site visited April 2005).

⁷*Id.*

⁸42 U.S.C.A. 5165 (2005).

⁹44 CFR 201.1(a) FEMA has stated that these rules should be followed until a final rule is published. *Id.* The regulations were valid until January 1, 2005, and nothing further has been published to date.

¹⁰FEMA, Multi-Hazard Mitigation Planning Guidance, pg. vii March 2004.

¹¹*Id.* at ix.

¹²*Id.*

assistance and training to local governments.¹³ Every mitigation plan must include five basic elements: a description of the planning process; assessment of the risks faced; a strategy for reducing risks; a section on coordination; and a maintenance section.¹⁴

1. The Standard Mitigation Plan

The standard state mitigation plan requires a section on: “how input was sought from individuals or other agencies, and how the plan was prepared.”¹⁵ FEMA notes that “the planning process should include coordination with other State agencies, appropriate Federal agencies, interested groups, and be integrated to the extent possible with other ongoing State planning efforts”¹⁶ To satisfy the “ongoing state planning efforts” requirement, FEMA recommends having mitigation

planners or specialists serve on the planning team, as well as a description of ongoing planning efforts such as comprehensive plans or emergency improvement plans along with building codes, floodplain ordinances, and land use regulations that have been integrated into the planning efforts.¹⁷ The standard plan has multiple requirements that focus on identifying possible natural hazards within the state, including discussing previous hazards, and the assessment of the probability of future events.¹⁸ When identifying the location of natural hazards, FEMA requires using maps and GIS software when it is appropriate.¹⁹

The mitigation strategy must provide a “blueprint for reducing losses identified in the risk assessment,”²⁰ a list of goals the state wishes to achieve, and mitigation actions and activities the state is considering.²¹ The standard plan also requires

¹³44 CFR 201.3(C)(5).

¹⁴44 CFR 201.4-6.

¹⁵FEMA, Multi-Hazard Mitigation Planning Guidance, 1-5 March 2004; see 44 C.F.R. 201.4.

¹⁶44 C.F.R. 201.4(b).

¹⁷FEMA, Multi-Hazard Mitigation Planning Guidance, 1-11 March 2004.

¹⁸44 C.F.R. 201.4(c).

¹⁹44 CFR 201.4.

²⁰44 C.F.R. 201.4(c).

²¹44 C.F.R. 201.4.

the state to identify the “time-frame by which local plans will be reviewed and linked to the State Mitigation Plan.”²² The last requirement under the Standard Plan is a description of the Maintenance Process. This section is designed to ensure that the plan will have an established procedure to monitor and update the state’s mitigation strategy as appropriate.

2. The Enhanced State Mitigation Plan

The Enhanced State Mitigation Plan requires, among other things, that prior to acceptance, the state must demonstrate “that the plan is integrated to the extent practicable with other State and/or regional planning initiatives, [such as] comprehensive, growth management, economic development, land development, and/or emergency plans.”²³ The state must either require or encourage “local governments to use a current version of a nationally applicable model building code or standard that addresses natural hazards as a

basis for design and construction of State sponsored mitigation projects.”²⁴ The Enhanced Plans must also demonstrate “a systematic and effective administration and implementation of existing mitigation programs.”²⁵

B. Local Requirements and Responsibilities under the DMA

A local mitigation plan acts as a guide “for decision makers as they commit resources to reducing the effects of natural hazards.”²⁶ Local governments are required to review their plan at least every 5 years and to update it when necessary as a condition to receiving continuing funding.²⁷

Local mitigation requirements are similar to those for the state mitigation plans. A significant difference lies in the development of multi-jurisdictional plans. Multi-jurisdictional plans allow local governments to work with other communities to develop a plan that will combat a large

²²*Id.*

²³44 CFR 201.5(b)(1).

²⁴44 CFR 201.5(b)(4)(iv).

²⁵FEMA, Multi-Hazard Mitigation Planning Guidance, pg. ix March 2004.

²⁶44 CFR 201.6.

²⁷44 CFR 201.3(d)(2).

hazard.²⁸ The actual planning process for local and multi-jurisdictional plans requires community involvement including representatives from neighboring communities, businesses, academia, and agencies involved in regional hazard mitigation, as well as private and non-profit agencies.²⁹ “Existing plans, studies, reports, and technical information” are required to be reviewed and incorporated into local plans.

The local plans are required to identify hazards that may affect the community, along with the community’s vulnerability to those hazards.³⁰ The number and types of buildings in the hazard areas need to be identified. “The plan must also include a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.”³¹

Local governments are also required to set forth a process by which the mitigation plan

will be incorporated into “other planning mechanisms such as comprehensive or capital improvement plans when appropriate.”³²

II. Local Planning and Zoning Techniques Aid in Natural Disaster Mitigation

There are many local land development tools and techniques that can be employed as excellent disaster mitigation techniques. The Pennsylvania Emergency Management Agency explains that, “A disaster resistant community should have in place a number of safeguards that control where and how development can occur . . .”³³ using as examples, local policy and regulatory documents including: building codes; land use, zoning and subdivision regulations; comprehensive, capital improvement and transportation plans; facilities needs studies; population growth and future development studies; and

²⁸44 CFR 201.6(a)(4).

²⁹44 CFR 201.6.

³⁰FEMA, Multi-Hazard Mitigation Planning Guidance, 3-9 March 2004.

³¹44 CFR 201.6.

³²*Id.*

³³PA Emergency Management Agency, Hazard Mitigation Planning – An On-Line Introduction, available at <http://www.pema.state.pa.us/pema/CWP/view.asp?A=198&Q=179238&pp=12&n=1> (site visited March 2005).

economic development plans.³⁴ The North Carolina Division of Emergency Management advises local governments that included in the process of mitigation planning is a local capability assessment that contains an examination of the local zoning ordinance, subdivision ordinance, comprehensive plan/land use plan, capital improvements plan/capital facilities plan, floodplain management plan, building code, open space, stormwater management plan, transportation plan, conservation and natural resources protection policies, historic preservation plans and regional plans.³⁵ Effective comprehensive planning coupled with land use regulations designed to produce reasonable development patterns can work together to ensure safer homes, businesses and communities.³⁶

1. The Comprehensive Land Use Plan

States provide varying levels of guidance in their enabling legislation as to the subject matter that should be or must be addressed in a local comprehensive land use plan. The American Planning Association's 2002 Growing Smart Legislative Guidebook provides a list of recommended, required and optional elements of a plan, including a natural hazards element.³⁷ The commentary contained in the Guidebook explains that "States and communities across the country are slowly, but increasingly, realizing that simply responding to natural disasters, without addressing ways to minimize their potential effect, is no longer an adequate role for government. Striving to prevent unnecessary damage from natural disasters

³⁴*Id.*

³⁵North Carolina Division of Emergency Management, Hazard Mitigation Section, Keeping Natural Hazards from Becoming Disasters: A Mitigation Planning Guidebook for Local Governments at 58-60 (May 2003). Available at <http://www.p2pays.org/ref/14/13618.pdf> (site visited March 2005).

³⁶See, Washington Military Department, Emergency Management Division, KEEPING HAZARDS FROM BECOMING DISASTERS: A MITIGATION WORKBOOK FOR LOCAL JURISDICTIONS at 4 (March 2003). Available at: www.metrokc.gov/prepare/docs/RHMP_LocalMitigationWkbkFinal.pdf (site visited April 2005).

³⁷Stuart Meck, FAICP, gen. ed., Growing Smart Legislative Guidebook: Model Statutes for Planning and the Management of Change, vol. 1, Chap. 7 (2002 edition).

through proactive planning that characterizes the hazard, assesses the community's vulnerability, and designs appropriate land-use policies and building code requirements is a more effective and fiscally sound approach to achieving public safety goals related to natural hazards."³⁸

The Pennsylvania Emergency Management Agency explains that the benefits of incorporating natural disaster mitigation into local land use plans include: managing and controlling development of land that is subject to natural and technological hazards in a way that is compatible with their frequency and damage potential; balancing property owner's rights with the social, economic, aesthetic and ecological costs of development across the community; requiring landowners to accept greater responsibility for the risks they assume for structures built in harm's way; and limiting the consequences of natu-

ral disasters or avoiding them altogether.³⁹

Some states have mandated that local comprehensive plans contain a mitigation element. For example, Oregon's statewide planning goals require local governments to, among other things, adopt comprehensive land use plans that "reduce risk to people and property from natural hazards."⁴⁰ And in Idaho, local comprehensive land use plans must include a component on hazardous areas that contains "an analysis of known hazards as may result from susceptibility to surface ruptures from faulting, ground shaking, ground failure, landslides or mudslides; avalanche hazards resulting from development in the known or probable path of snowslides and avalanches, and floodplain hazards."⁴¹ In California, local comprehensive plans are required to include a "safety element" "for the protection of the community from any unreasonable risks associated with the effects of seismici-

³⁸*Id.* at 7-142 and 7-143. Citing also to, Roger A. Nazwadowsky, "Lawyering Your Municipality Through a Natural Disaster or Emergency," 72 *The Urban Lawyer* 9 (Winter 1995).

³⁹<http://www.pema.state.pa.us/pema/CWP/view.asp?a=198&Q=207959&pemaNavDLTEST=%7C4715%7C4749%7C4752%7C> (site visited April 2005).

⁴⁰Goal 7 of Oregon's Statewide Planning Goals and Guidelines, available at <http://www.oregon.gov/LCD/goals.shtml> (site visited March 2005).

⁴¹Idaho Code sec. 67-6508(g).

cally induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction and other seismic hazards . . . and other geologic hazards known to the legislative body; flooding and wild land and urban fires.’’⁴²

2. The Zoning Ordinance and Land Use Regulations

Zoning, and other land development regulations, control the location, type and density of new development within the jurisdictional boundaries of the implementing locality. Examples of development regulations that may be employed as effective disaster mitigation techniques include: limitations on how property may be developed in flood-zones; setbacks from fault lines (and shorelines and other areas prone to natural disasters), steep slopes and coastal erosion areas; and over-

lay zones that introduce additional requirements over sensitive environmental areas such as wetlands, dunes and hillsides.⁴³ In Alabama, municipalities have specifically incorporated the state’s Coastal Construction Control Line into their zoning ordinance as part of their mitigation strategy.⁴⁴ What follows are examples of various zoning techniques and other land use controls that can be used by local governments to implement disaster mitigation strategies identified in local plans.

a. Nonconforming Uses

While there are many regulatory techniques that municipalities may choose from to effectively control the use of land so as to minimize negative effects of natural disasters, the fact remains that significant amounts of land within a municipality may have already been developed without adequate measures in place to ac-

⁴²Ca. Gov’t Code sec. 65302(g).

⁴³Federal Emergency Management Agency, *PLANNING FOR A SUSTAINABLE FUTURE: THE LINK BETWEEN HAZARD MITIGATION AND SUSTAINABILITY* at 15 (February 2003).

⁴⁴See Alabama Coastal Hazards Assessment, Hazard Mitigation Strategies, Town of Dauphin Island Zoning Ordinance Summary (<http://www.csc.noaa.gov/products/alabama/htm/dizoning.htm>) (site visited March 2005) and Alabama Coastal Hazards Assessment, Hazard Mitigation Strategies, City of Gulf Shores Zoning Ordinance Summary (<http://www.csc.noaa.gov/products/alabama/htm/gszoning.htm>) (site visited March 2005).

comply with disaster mitigation goals. When local governments adopt or amend zoning laws, it often means that uses that were once allowed are no longer permitted under the new regime. As an early method of ensuring the acceptability of zoning, given this potentially harsh result, local governments began to grandfather in prior existing legal uses by identifying them as nonconforming uses. The early expectation was that eventually nonconforming uses would become conforming, especially since zoning ordinances typically contain provisions that limit a landowner's ability to enlarge, reconstruct or repair nonconforming uses, even where the structure suffered damage due to a natural disaster.⁴⁵ Unfortunately, bringing all uses into conformity with changes in zoning proved to take longer than anticipated. To further facilitate the conversion of nonconforming uses to conforming uses, some municipalities have

enacted amortization periods by the end of which the nonconforming use must cease. Amortization is an option for local governments to use, especially in severely disaster-prone areas, so long as the regulating municipality can adequately address the economic balancing required to enable the property owner to recoup their investment.

b. Overlay Zones

An overlay zone is a flexible zoning technique that enables a municipality to essentially layer an additional set of regulations on top of existing requirements in a particular zoning district, often for the purpose of conserving open space and natural resources or promoting certain types of development in specific designated areas.⁴⁶ The overlay zone is a mapped overlay district that is superimposed over one or more designated districts in

⁴⁵“Ironically, the time immediately following a natural disaster provides a community with a unique window of opportunity for inserting an ethic of sustainability in guiding development and redevelopment in high-risk areas. With forethought and planning, communities that are rebuilt in the aftermath of a natural hazard can be built back so that they are more resilient to future hazards” Anna K. Schwab and David J. Brower with Mitigation Planning Initiative Group, Division of Emergency Management, North Carolina Department of Crime Control and Public Safety, “Sustainable Development and Natural Hazards Mitigation” at 19 (January 1999).

⁴⁶Sacramento Transportation Authority, *Glossary of Land-Use Terms*, at http://www.sactaqc.org/Resources/primers/Glossary_Land_Use.htm.

the zoning ordinance.⁴⁷ Local legislatures may utilize overlay zones when an area requires special protection or is vulnerable to some specific hazard,⁴⁸ making them another effective regulatory tool for implementing a local Hazard Mitigation Plan.

The American Planning Association (APA) recommends the use of overlay districts as a natural hazard mitigation technique and advises communities to include “procedures and criteria for the designation of . . . natural hazard area overlay districts” when drafting ordinances for areas that are prone to natural hazards.⁴⁹ Furthermore, the APA encourages local governments to develop a list of uses and activities that should be prohibited in the overlay zone, therefore allowing local governments to implement their mitigation

strategies in a manner that is specifically tailored to address the effects of natural hazards that pose the biggest threat to their community.⁵⁰

In response to impermeable ground making some areas prone to flooding when there is excessive rainfall, or snowmelt, Coconino County, Arizona adopted a Floodplain Management Overlay Zone as a means of mitigating the effects of flooding in the area.⁵¹ Although the overlay zone does not totally prohibit or prevent development in areas that are known to be prone to floods, it does prohibit new construction in the “floodway” (a main channel required for the discharge of flood waters). In addition to offering protection from flooding, overlay zones can be used to mitigate damage from potential disasters in watersheds, tidal basins, hillsides

⁴⁷John R. Nolon, *OPEN GROUND: EFFECTIVE LOCAL STRATEGIES FOR PROTECTING NATURAL RESOURCES* at 19 (Environmental Law Institute 2003).

⁴⁸See Sacramento Transportation Authority, *Glossary of Land-Use Terms*, at http://www.sactaqc.org/Resources/primers/Glossary_Land_Use.htm.

⁴⁹Stuart Meck, FAICP, gen. ed., *GROWING SMART LEGISLATIVE GUIDEBOOK: MODEL STATUTES FOR THE PLANNING AND THE MANAGEMENT OF CHANGE*, vol. 2, Ch. 9 (2002 edition).

⁵⁰*Id.*

⁵¹Coconino County Comprehensive Plan, Public Safety Element, at <http://co.coconino.az.us/commdevelopment/ComprehensivePlan/PUBLICSAFETY.asp> (site visited April 2005).

and other sensitive environmental areas.⁵²

c. Subdivision Regulations

Local governments may adopt subdivision laws to regulate the division of land into one or more parcels. Local governments have wide discretion in creatively regulating subdivisions to simultaneously accomplish disaster mitigation goals. For example, municipalities can prohibit the subdivision of land in areas located within mapped floodplains.⁵³ In Colorado, local governments are specifically authorized by statute to require subdivision applicants to submit proper drainage plans to prevent erosion problems and flooding.⁵⁴ In California, the State recommends that as a condition of ap-

proving development and subdivisions, local governments should require that applicant include appropriate facilities to assist and support wildfire suppression.⁵⁵

Local governments in a number of states may choose to require developers to cluster development on one portion of the proposed subdivided parcel, with the remaining land saved for open space and/or serving to protect critical natural resources. This technique can be an effective disaster mitigation tool restricting development in higher hazard prone areas while still allowing property owners to realize full development density of the parcel.

d. Site Plan Review

A site plan is a scaled drawing or plan that shows the ar-

⁵²John R. Nolon, *OPEN GROUND: EFFECTIVE LOCAL STRATEGIES FOR PROTECTING NATURAL RESOURCES* at 19 (Environmental Law Institute 2003). This Chapter contains a model Hillside Management Overlay District from the Town of Putnam Valley, New York that was enacted to, among other things, protect certain ridgelines and steeply sloped areas from erosion.

⁵³Anna K. Schwab and David J. Brower with Mitigation Planning Initiative Group, Division of Emergency Management, North Carolina Department of Crime Control and Public Safety, "Sustainable Development and Natural Hazards Mitigation" at 14 (January 1999).

⁵⁴John R. Nolon, *NEW GROUND: THE ADVENT OF LOCAL ENVIRONMENTAL LAW* at 23 (Environmental Law Institute 2003) citing Colo. Rev. Stat. secs. 30-28-133, 31-23-214 (2001).

⁵⁵State of California, Governor's Office of Planning and Research, "Fire Hazard Planning: General Plan Technical Advice Series," (November 2003) available at: http://www.opr.ca.gov/publications/pdfs/Fire_Hazard_Planning_Final_Report.pdf (site visited March 2005).

rangement and layout of proposed structures, open space designations, or other public improvements, on a specific parcel or lot. In many cases, a site plan review of some kind is required before a zoning permit will be granted for development projects that involve new construction or the expansion of existing structures.⁵⁶ The site plan review process provides local governments an opportunity to review the relationships between the proposed development and other on-site features.⁵⁷

Site plan review can be a useful tool for local governments seeking to implement natural hazard mitigation plans. Although it cannot be used to determine whether or not a particular use is appropriate in a specific location, a matter that should be resolved by the zoning ordinance itself, the review process does allow local governments to exercise a limited degree of discretion when determining how well the proposal fits the characteristics of the site itself and to impose

conditions on the development if necessary to meet statutory standards.⁵⁸ In this respect, local governments can use the site review process to examine the proposed development in relation to other on-site conditions, such as fault lines, steep slopes, shorelines, or other areas that are prone to natural disasters, and make a decision to grant or deny a permit and/or add conditions to an approval based on the objectives of the local hazard mitigation plan. For example, local governments may consider as part of site plan review the extent to which the proposed development adequately addresses storm water and surface water drainage to properly drain the site and to minimize downstream downstream flooding and non-point pollution.⁵⁹

e. Performance Standards

Local governments can also require, as part of their zoning ordinance or site plan and/or subdivision reviews, perfor-

⁵⁶*Id.*

⁵⁷*Id.*

⁵⁸*Id.*

⁵⁹John R. Nolon, OPEN GROUND: EFFECTIVE LOCAL STRATEGIES FOR PROTECTING NATURAL RESOURCES at 23 (Environmental Law Institute 2003), citing an excerpt from the site plan regulations of the Town of Somers, New York.

mance measures.⁶⁰ For example, vegetation requirements such as tree ordinances can help to minimize flooding by preventing removal and destruction or by requiring replacement. In areas that are prone to wildfires, local governments can help to mitigate the impact of fires on homes by requiring buffer areas that eliminate natural fuels around residences such as requiring a clearing of small trees, fallen leaves, branches, pine needles and the like for approximately 30 feet around a home.⁶¹

f. Critical Environmental Areas

Critical and sensitive environmental areas exist in every region of the country. Critical areas have been defined as areas that “contain or constitute natural resources sensitive to

excessive or inappropriate development.”⁶² These areas may also be prone to natural hazards.⁶³ The APA model ordinance suggests prohibiting particular uses, activities, and structures within critical or sensitive areas or areas that are prone to natural disasters.⁶⁴ Many local governments have chosen to regulate areas that are prone to natural disaster, and critical or sensitive areas, using the same zoning ordinance.⁶⁵ For example, in King County, Washington, critical areas are defined as “lands with natural hazards or lands that support certain unique, fragile or valuable resource areas” and could include, “areas at high risk of erosion, landslides, earthquakes or flooding; those above coal mines; or wetlands or lands adjoining streams, rivers,

⁶⁰See Marya Morris, *SUBDIVISION DESIGN IN FLOOD HAZARD AREAS* (American Planning Association PAS Report 1997).

⁶¹See Reda M. Dennis-Parks, “Healthy Forests Restoration Act – Will It Really Protect Homes and Communities?,” 31 *Ecology L.Q.* 639 (2004).

⁶²Critical areas could include a particular land or water resource that protects or provides habitat for rare and endangered animals or plants, or they could be considered natural resources in themselves which are in need of protection, such as wetlands or aquifer systems. Stuart Meck, FAIPC, gen. ed., *GROWING SMART LEGISLATIVE GUIDEBOOK: MODEL STATUTES FOR THE PLANNING AND THE MANAGEMENT OF CHANGE*, vol. 2, Ch. 9 at 9-3 (2002 edition).

⁶³Stuart Meck, FAIPC, gen. ed., *GROWING SMART LEGISLATIVE GUIDEBOOK: MODEL STATUTES FOR THE PLANNING AND THE MANAGEMENT OF CHANGE*, vol. 2, Ch. 9 at 9-3 (2002 edition).

⁶⁴*Id.* at 9-8.

⁶⁵*Id.* at 9-3.

and other water bodies.’’⁶⁶ Similarly, when the City of Mill Creek updated its critical area ordinance in December 2004, it added a section on ‘‘Geological Hazards’’ which included areas susceptible to landslides, erosion, and seismic activity.⁶⁷

g. Steep Slope Ordinances

Local governments may enact, as part of their zoning or other land use Controls, restrictions on the development of lands located within steep slope areas. These laws can assist with erosion control and minimize the consequences of landslides. Development activities such as construction, excavation, grading, cutting, and filling can all work independently to undermine the stability of the land and create the

potential for a landslide.⁶⁸ A steep slope ordinance is a law that is designed to, among other things, protect property from landslides by restricting development on land of a certain grade.⁶⁹

h. Incentive Zoning

Incentive zoning is a system by which the local government provides zoning incentives to developers in exchange for the creation of some form of community benefit.⁷⁰ The system allows the legislature to keep the existing zoning laws ‘‘in place, but permits more intensive development of the land in exchange for certain community benefits.’’⁷¹ The ‘‘intensive development’’ often takes the form of an increased density, a larger building footprint than would otherwise be allowed, or adjustments to height or use

⁶⁶King County Department of Environmental Services, Critical Areas Review: Frequently Asked Questions <http://www.metrokc.gov/ddes/acrobat/cib/21.pdf> (site visited April 2005).

⁶⁷Mill Creek Municipal Code Update, Title 18.06 (December 2004), available at <http://www.cityofmillcreek.com/community%20development/Code%20MPA/New%20Title%2018.06.pdf> (site visited April 2005).

⁶⁸John Nolon, ‘‘In Praise of Parochialism: The Advent of Environmental Law,’’ 26 Harv. Envtl. L. Rev. 365 at 403-04 (2002).

⁶⁹*Id.*

⁷⁰Pace Law School, Incentive Zoning, available at www.law.pace.edu/landuse/bincent.html (site visited April 2005).

⁷¹*Id.*

requirements.⁷² In exchange, the developers would provide benefits such as parks or open space which would prohibit development in flood plains and could successfully be used as a disaster mitigation technique.

3. Land Preservation and/or Acquisition Techniques

There are a host of local land preservation/acquisition techniques that can be coordinated with local land use planning and zoning. For example, local governments may use transfer of development rights, purchase of development rights and incentive zoning tools to protect certain lands from development. While these measures are often thought of primarily to protect green space, when coordinated with sound local mitigation planning, they are integral tools for steering development away from sensitive lands that may not be as suitable for development.

Where local governments prefer not to employ regulatory techniques to protect certain

lands from development, they may use public funds to purchase property either voluntarily or through the use of eminent domain. For example, in the Town of Boone, North Carolina, after the town's flood mitigation hazard plan called for the acquisition and relocation of 30 homes and 86 residents from one neighborhood, the town used the newly vacated land to meet another community need, the shortage of recreational facilities, and they planned for a multi-purpose park with a flood-resistant pavilion for concerts and festivals, flood-resistant restrooms, and other athletic facilities.⁷³ In an effort to integrate water quality into flood plain management, Mecklenburg County, North Carolina secured state funding to leverage its local financial commitment to acquire 116 flood-prone properties that would create open space enabling the county to maximize floodplain benefits.⁷⁴

In addition, states provide generous conservation easement programs whereby pri-

⁷²*Id.*

⁷³North Carolina Department of Emergency Management, Case Study – Boone, available at http://www.dem.dcc.state.nc.us/mitigation/case_boone.htm (site visited March 2005).

⁷⁴Through the purchase of parcels, the county would “preserve and reclaim natural floodplains to improve water quality, protect wildlife habitat and open

vate landowners may voluntarily place restrictive easements on their property prohibiting development – for a fixed period of time or permanently – in exchange for federal, state and sometimes local tax breaks.

Another form of land use regulation that is relevant to disaster mitigation is the conservation easement. A conservation easement is a restriction placed on the development rights of a parcel of land. These restrictions can prevent the owner from engaging in some or all development on the property and can also create an affirmative duty to maintain the land.⁷⁵ States provide generous conservation easement programs to landowners who voluntarily place restrictive easements on their property – for a fixed period of time or permanently – in exchange for federal, state, and sometimes local tax breaks.⁷⁶ These “tax breaks may be significant enough for an owner who wishes to con-

tinue using the property in its present state to give a conservation easement, rather than sell one, solely in order to take advantage of the lower property taxes and income tax deduction.”⁷⁷ Conservation easements can provide a safe method of restricting development in flood plains to restrict development. For example, farmers along the Mississippi River have received “buyouts, which put their land in a conservation easement, meaning they would still own it, but it was given to flood control, as a natural wetland.”⁷⁸

III. Conclusion

Although the federal and state governments may require local governments to develop disaster mitigation plans, these plans in and of themselves will be ineffective without the coordinated implementation of plan goals and strategies through local land use planning and zon-

space, and provide recreational opportunities.” *See* State of North Carolina, Department of Emergency Management, “Case Study – Mecklenburg County Water Quality,” available at http://www.dem.dcc.state.nc.us/mitigation/case_mecklenburg1.htm (site visited March 2005).

⁷⁵Stuart Meck, FAIPC, gen. ed., *GROWING SMART LEGISLATIVE GUIDEBOOK: MODEL STATUTES FOR THE PLANNING AND THE MANAGEMENT OF CHANGE*, vol. 2 Ch. 9 at 9-67 (2002 edition).

⁷⁶*Id.* at 9-66.

⁷⁷*Id.*

⁷⁸Timothy Egan, “California Storm Brings Rethinking of Development,” *NEW YORK TIMES* 1, 15 Jan. 1995.

ing techniques. Good preventive law strategies by real estate and land use attorneys suggest that comprehensive plans should be modified, where necessary, to address natural disaster mitigation goals. Furthermore, appropriate land use controls, including the tools discussed in this column, should be employed to assist local governments in meeting mitigation policies and goals.