

2015 SC HMP Update	
Approaches and Tools	
Tool/Approach/Incentive	Description
FEMA (Five Mitigation Grant Programs)	<p>FEMA Mitigation Grant Programs include:</p> <ol style="list-style-type: none"> 1. Hazard Mitigation Grant Program 2. Flood Mitigation Assistance 3. Pre-Disaster Mitigation Grant, 4. Repetitive Flood Claims, 5. Severe Repetitive Loss,
FEMA (Public Assistance Program)	<p>FEMA Public Assistance in the wake of disasters is coordinated by the Federal Emergency Management Agency (FEMA), a component of the Department of Homeland Security. Under the Public Assistance (PA) Program, FEMA provides supplemental aid to States¹, communities, and certain private nonprofit organizations (PNPs) to help them recover from disasters as quickly as possible.</p> <p>Assistance is usually limited to that function damaged during a Federally Declared Disaster, however, assistance can contribute to improvements, and can include cost effective mitigation.</p> <p>Assistance is not restricted to the specific damaged item, but to the function performed. For instance, if a bridge is damaged, but the bridge function can be duplicated by an other form of transit, assistance would be eligible.</p>
Acquisition (fee simple...)	<p>Fee simple Acquisition of Undeveloped Land: Fee-simple acquisition of undeveloped land includes the purchase of the full "bundle of rights" contained in real property. Fee-simple acquisition of undeveloped land is important for two reasons. First, it can involve removal of hazardous sites from the private market, thereby reducing potential threat to the public. Second, fee-simple acquisition can act as a development management tool for guiding the location of development.</p> <p>There are many other forms of acquisition that are bundled differently. For instance property can be purchased where possession will be taken until an owner dies or a property is substantially damaged.</p>
Acquisition (life estate...)	<p>A life estate is a concept used in common law and statutory law to designate the ownership of land for the duration of a person's life. In legal terms it is an estate in real property that ends at death when there is a "reversion" to the original owner. The owner of a life estate is called a "life tenant".</p> <p>Although the ownership of a life estate is of limited duration because it ends at the death of the person who is the "measuring life," the owner has the right to enjoy the benefits of ownership of the property, including income derived from rent or other uses of the property, during his or her possession. Because a life estate ceases to exist at the death of the measuring person's life, this temporary ownership agreement cannot be left to heirs (intestate) or devisees (testate), and the life estate cannot normally be inherited. At death, the property involved in a life estate typically falls into the ownership of the remainder man named in the life estate agreement.</p>
Advance site acquisition (Land Banking)	<p>Advance Site Acquisition (Land Banking): This technique involves the purchase of land by the government for eventual use or resale to the private sector in order to influence the character and/or timing of growth.</p>
Buyouts	<p>Property Acquisition Projects (Buyouts): Since 1993, participating communities have purchased more than 20,000 properties as to prevent future damages. FEMA encourages all homeowners in affected communities to be sure they get all the information they need about buyouts so they can make the best decision for their families and their communities.</p>

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Build movable structures	<p>Movable Structures: Movable structures were the norm for many cultures. Athabascan people of Alaska often built homes on skids that could be pulled away from flooding rivers. American plains Indians built mobile towns that could be moved to follow food supplies and there are mobile villages of friends traveling by motor home from trailer camp to trailer camp.</p> <p>During summer months, Dutch beaches are serviced by 100s of restaurants and shelters on sited in front of protective dikes and dunes each of which is removed when the storm season approaches.</p> <p>The town of Hamilton Washington is located in the Floodway of the river. When a flood is forecasted, residents are expected to move off the floodplain. This approach has not proven successful however. The once mobile homes have been made permanent and susceptible to flood damage.</p>
Community Relocation	<p>General Comprehensive Planning: Comprehensive plans and land use plans identify how a community should be developed and where development should not occur. They govern the rate, intensity, form, and quality of physical development. A thorough comprehensive plan will also address economic development, environmental, social, and hazard mitigation concerns. Uses of the land can be tailored to match the land's hazards, typically by reserving hazard areas for parks, golf courses, backyards, wildlife refuges, natural areas, or similar compatible uses.</p> <p>Generally, comprehensive plans have limited authority, even where they are required by the state. They reflect what the community would like to see happen. Comprehensive plans are useful for creating a body of information about local hazard risks. On the one hand, they help identify hazard areas. The appropriate land uses and building (or retrofitting) standards can then be applied to these areas. On the other hand, they identify areas that are less vulnerable, where development should be directed. Their main advantage as a planning tool is that they guide other local measures, such as capital improvement programs, zoning ordinances, and subdivision ordinances</p>
Elevating Structures	Structures can be elevated above flood levels. This approach is required under the NFIP.
Low Impact Development	<p>Low impact development (LID) is a term used to describe a land planning and engineering design approach to managing stormwater runoff. LID emphasizes conservation and use of on-site natural features to protect water quality. This approach implements engineered small-scale hydrologic controls to replicate the pre-development hydrologic regime of watersheds through infiltrating, filtering, storing, evaporating, and detaining runoff close to its source.</p> <p>LID is similar to sustainable urban drainage systems (SUDS), a term used in the United Kingdom, water sensitive urban design (WSUD), a term used in Australia, natural drainage systems a term used in Seattle, Washington and "Onsite Stormwater Management", a term used by the Washington State Department of Ecology.</p> <p>LID typically refers to upland development, but could be applied to coastal development that has a reduce impact.</p>
Retrofitting	<p>Retrofitting: Retrofitting refers to changing existing buildings to withstand a hazard. These changes can be structural or non-structural. Non structural measures could include anchoring book cases to structural members to survive earthquakes and the elevating electrical elements to avoid flood damage. Structural measures could include anchoring the above ground structure to the foundation to better withstand seismic forces or raising the entire structure above the level of expected flooding.</p> <p>Structural retrofits are usually the result of some trigger.</p> <ul style="list-style-type: none"> • Codes requiring substantial improvements to meet a high standard • Insurance premiums or availability tied to higher standards • Substantial damage of a structure rendering reconstruction to higher standard • Availability of low cost loans or grants
Building codes (General)	Building Codes: Building codes are laws, ordinances, or governmental regulations setting forth standards and requirements for the construction, maintenance, operation, occupancy, use or appearance of buildings, premises, and dwelling units. Building codes should be designed to ensure that development is built to withstand natural hazards.

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Community Awareness Programs	<p>Community Awareness Programs: Community awareness programs may be used in conjunction with and/or in place of real estate disclosure requirements to directly educate the potential homebuyer and the community of hazard risks. Information can be presented in a number of ways, including information pamphlets, brochures, literature, and workshops. Topics may include identification of hazards, things to consider in purchasing a home or business, and ways to limit exposure and reduce future property damages.</p> <p>Critique: General awareness programs have a mixed record of building public support for mitigation. More successful are self-help programs with a narrow scope, such as residential floodproofing or earthquake mitigation drives.</p>
Community Rating System (CRS)	<p>COMMUNITY RATING SYSTEM: The CRS is a program that provides a flood insurance premium rate reduction from 5% to 45% based on a community's floodplain management activities.</p> <p>FEMA, 2004a also provides contact information for the State NFIP Coordinating Agency. (FEMA, 2004a)</p>
Contract or Conditional Zoning	<p>Contract or Conditional Zoning: Under both approaches, the landowner agrees to previously unstated conditions (which can be in the form of deed restrictions) in exchange for some government action (such as a rezoning) or an exemption from other conditions. The difference between the two is that with contract zoning the government is contractually obligated to allow the use.</p> <p>Critique: The purpose of these techniques is to provide flexibility in dealing with a small number of land parcels, but they can nevertheless be unpopular with developers. Contract zoning is vulnerable to an ultra vires challenge (the government has impermissibly delegated its authority), and both can be challenged under uniformity provisions (that all land in zoning district be subject to the same restrictions) as spot zoning or as contradicting a comprehensive plan.</p>
Bonus and Incentive Zoning	<p>Bonus and Incentive Zoning: In exchange for concessions from a developer, some governments allow developers to exceed limitations imposed by current regulations, such as building height or dwelling unit density.</p> <p>Critique: This technique has not seen much use outside of non-metropolitan (i.e., rural) areas. While similar to the accepted practice of dedication, bonuses and incentives may be vulnerable in the same ways that contract zoning is and where the extent of the connection needed between the concession and the government purpose is not clear. At the very least, the public benefit must be clearly defined. The technique can be counterproductive in some locations, such as coastal areas, if it encourages higher densities at the fringe of the hazard zone.</p>
Cumulative Substantial Improvement	<p>Cumulative Substantial Improvement: For FEMA and the NFIP any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:</p> <ol style="list-style-type: none"> 1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or 2. Any alterations of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure." <p>Cumulative substantial improvements would include all improvements undertaken over a given time period.</p>

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Density Transfers/Average Density/Cluster	<p>Density Transfers/Average Density/Cluster: This type of regulation allows flexible design of large or small scale developments that are constructed as a unit; the actual design is a matter of negotiation, but the basic premise is that some areas are developed more intensively than would normally be allowed, while others are used less than what the market would determine. The type of development usually has to conform to zoning, but there is a trend toward allowing mixed use.</p> <p>Critique: The government’s goal for this designation is to create open space, protect sensitive features, and/or allow farming to continue; the developer benefits for the higher dwelling unit density or floor area ratios. One consequence can be a form of leapfrog development with its more expensive public services. Some farm-related uses may be incompatible with residential development, and development can lower farming activity below a critical mass.</p>
Transfer of Development Rights (TDR)	<p>Transfer of development rights (TDR) programs use the market to implement and pay for development density and location decisions. TDR programs allow landowners to sever development rights from properties in government-designated “sending areas” (areas of vulnerability), and sell them to purchasers who want to increase the density of development in areas that local governments have selected as “receiving areas”.</p> <p>TDR programs appear to offer many advantages to local governments that want to control land use but also compensate landowners for restrictions on the development potential of their properties. TDR programs can be easier to implement than typical zoning programs; they make development more predictable and use the market to compensate landowners for lost property value. TDR programs are also more permanent than traditional zoning regulations.</p>
Developer Exactions	<p>Developer Exactions: Fees to offset the burdens of new development on the community. Exactions contribute to regional equity by ensuring that a new development pays a fair share of the public costs that they generate. Exactions consist of a developer's payment of "impact fees." These fees are used to fund new schools and parks; construction or maintenance of public infrastructure directly connected to the new development; and off-site improvements and services. Exactions are levied on developers in exchange for the approvals to proceed with a project.</p>
Development Impact Tax/Improvement Tax	<p>Development Impact Tax/Improvement Tax: These are taxes on new construction, including alterations to existing structures, usually paid while applying for building permit.</p> <p>Critique: Unlike a fee, this charge does not need to be based on the cost of improvements needed to serve the new development, and there are no restrictions on how the revenues can be spent.</p>
Special Assessments Districts (Local Improvement Districts)	<p>Special Assessments Districts: Special assessment districts include property owners who benefit from a specific public improvement. These owners are charged a fee, which can be based on an attribute(s) of the property that is proportional to the benefits received from the improvement, and which is charged to both new and existing development.</p> <p>There are numerous possibilities, from temporary creations designed simply to raise revenue for a specific improvement to independent, special purpose governmental entities. A commonly used example is the transportation utility fee. While exactions, bonds, impact fees, and other methods are used to pay for transportation improvements, the utility fee covers the maintenance/operation cost of the system(s).</p> <p>Critique: Since this is not a tax, special assessment districts are free from constitutional requirements of uniformity, equality, and double taxation. This technique shifts the financial burden from the general public to those directly benefiting. The revenues are more predictable than sources which depend on development cycles, which makes issuing bonds easier.</p>

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Historic and Rehabilitation Federal Income Tax Credits	Tax credit of 10% of construction costs for non-residential buildings, built before 1936; ii) 20% tax credit for certified historic structures
Tax Increment Financing	Tax Increment Financing: TIF is a public financing method, which has been used as a subsidy for redevelopment and community improvement projects in many countries including the United States for more than 50 years. It is a method that exploits future gains in taxes to finance current improvements (which theoretically will create the conditions for those future gains). When a development or public project is carried out, there is often an increase in the value of surrounding real estate, and perhaps new investment that will generate additional tax revenue to pay for the initial improvements. State enabling legislation gives local governments the authority to designate tax increment financing districts. The district usually lasts 20 years, or enough time to pay back the bonds issued to fund the improvements. While arrangements vary, it is common to have a city government assuming the administrative role, making decisions about how and where the tool is applied.
Disclosure Requirements	<p>Real Estate Disclosure Requirements: Real estate disclosure requirements require notification that the property to be purchased is located in a hazard-prone area. Currently, federally regulated lending institutions must advise applicants for a mortgage or other loan that it is to be secured on a building which is in a floodplain as shown on the Flood Insurance Rate Map (FIRM). California law requires explicit disclosure of six hazard zone maps (including FIRM) and any other information that is pertinent to the sale. Since the buyer can back out of the purchase without penalty, the disclosures are usually comprehensive and made shortly after the offer is accepted, if not before.</p> <p>Critique: Since this requirement has to be met only five days before closing, often the applicant is already committed to purchasing the property when he or she first learns of the flood hazard. State laws and local practices by local real estate boards can overcome this deficiency by advising newcomers about the hazard earlier. They may also require disclosure of past disaster events, regardless of whether the property is in a mapped high-risk zone. Terms and maps of hazardous areas used for disclosure of hazard risk should be meaningful to homebuyers as well as planners and professional/technical people.</p>

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Many of the definitions provided are taken from the FEMA Higher Education Program Course "Principles and Practice of Hazard Mitigation" (David J. Brower and Charles C. Bohl), Mitigation: Integrating Best Practices into Planning (James C. Schwab, Edit) and the Environmental Protection (EPA) "Nonpoint Source Outreach Toolbox Upgrade)