

**PUBLIC OBSERVATIONS
ABOUT
BUILDING CODE ADMINISTRATION
AND ENFORCEMENT**

BENEFITS, NEEDS AND SHORTCOMINGS



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Benefits in Energy Efficiency, Hazard Mitigation and Community Values

Clean Energy-Environment *Guide to Action* Policies, Best Practices, and Action Steps for States Chapter 4.3 Building Codes for Energy Efficiency

Building energy codes establish a minimum level of energy efficiency for residential and commercial buildings. This can reduce the need for energy generation capacity and new infrastructure while reducing energy bills. States are also finding that energy codes lock in future energy savings during the building design and construction process. In contrast, achieving post-construction energy savings can be comparatively expensive and technically challenging. Codes become even more cost-effective during periods of high heating and cooling fuel prices.

From the Clean Energy-Environment *Guide to Action* Policies, Best Practices, and Action Steps for States Chapter 4.3
http://www.epa.gov/cleanrgy/pdf/gta/guide_action_chap4_s3.pdf

Residential Building Code Compliance: Implications for Evaluating the Performance of Utility Residential New Construction Programs

California, Oregon, and Washington have spent considerable resources on improving the expertise of builders and building code officials through training and educational programs. In addition, many jurisdictions in these states have had more than 15 years of experience with energy-efficiency codes, code support (by utilities, local government, and code officials), and code enforcement. In contrast, areas in the country with less experience and expertise will undoubtedly experience higher rates of noncompliance with state building codes. Accordingly, we believe utility RNC programs in other states could be more cost-effective if utility regulators recognized the role of RNC programs in increasing compliance with existing state building codes, or, conversely, if they recognize the general degree of noncompliance among nonparticipating builders. Finally, we expect the issue of building code compliance to continue to be an important research topic as utilities and governmental agencies promote energy efficiency through market transformation efforts. Market baselines (such as code compliance) are critical to evaluating the effectiveness of these efforts.

Environmental Energy Technologies Division, E.O. Lawrence Berkeley National Laboratory, University of California
http://eetd.lbl.gov/newsletter/cbs_nl/nl13/code.html

Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities.

This means that on average every \$1 of FEMA expenditures generates a present value of future savings to the federal treasury of \$3.65. This result indicates that the FEMA hazard mitigation program more than pays for itself in terms of cost to the federal treasury. Also, this is to a great extent separate from the benefits of avoided hazard losses to the American people.

Multihazard Mitigation Council. 2005. Natural Hazard Mitigation Saves: An Independent Study to Assess the Future Savings from Mitigation Activities. Volume 1 – Findings, Conclusions, and Recommendations. P. 141
<http://nibs.org/MMC/mmchome.html>.

Code enforcement runs down dilapidated structures

Star Community Newspapers, Plano, Texas April 20, 2007

Brenda Richardson has watched the Little Elm skyline change over the years. As a lifelong resident of the town, she has watched it transformed by new neighborhoods and businesses. . . . One of the next buildings to be gone is the house right next to hers. Designated a dangerous structure by Little Elm code enforcement, the sagging gray house is expected to be demolished in a couple of weeks. It will be one of more than 20 buildings demolished in Little Elm since Code Enforcement Officer Chip Matthews came to town a year and a half ago. Richardson couldn't be happier.

. . . In recent years, Richardson acquired a cat to chase away the rodents and snakes living in her neighbor's high weeds, and she restructured her lawn because of sewage that seeped through the fence. Richardson's problems will be over when the house is torn down in a couple weeks.

http://www.courier-gazette.com/articles/2007/04/23/little_elm_journal/news/a-newsle11.prt

National Symposium on Mitigating Severe Weather Impacts -- Design for Disaster Reduction

Susan Savage, Mayor of the City of Tulsa: More than 1000 buildings have been removed from the Tulsa floodplain since 1984 and strict zoning and building standards have been implemented and enforced. The result – no building built to flood standard has been flooded since 1984. Thus Tulsa has the best rating of any community in the NFIP CRS – 35% reduction.

Savage, Susan (Tulsa OK Mayor). 2001. Welcoming remarks, *National Symposium on Mitigating Severe Weather Impacts -- Design for Disaster Reduction*, Tulsa Convention Center, Tulsa OK, April 2, 2001.

Building Disaster Resilient and Sustainable Communities

Minimum building codes and construction standards...are important components of a sustainable community, as are minimum facilities for sheltering, and programs, policies, and actions for evacuation of residents from high-risk areas

<http://www.training.fema.gov/EMIWeb/edu/docs/hazdem/Trends-Building%20Disaster%20Resilient%20Communities.doc>

Natural Disaster Reduction: A Plan for the Nation

“Cost-effective, affordable opportunities for natural disaster reduction abound. Disaster reduction begins with risk assessment and care to stay out of harm’s way. Proper land use and management, especially in coastal and riverine environments, near fault zones, and in other geologically active sites, can result from good risk assessments. They can also lead to mitigation of disastrous consequences. Further opportunities for disaster reduction are afforded by good mitigation practices – adequate building codes and proper enforcement of these codes: careful attention to ensure the resilience of societal lifelines such as transportation systems, gas, water, and electrical power delivery, and communications; and appropriate agriculture and silviculture. Proper societal frameworks and policies, with respect to public awareness, cultural values, and financial and insurance institutional structure and behavior, are also essential components of any mitigation strategy.

NSTC (National Science and Technology Council, Committee on the Environment and Natural Resources, Subcommittee on Natural Disaster Reduction). 1996. *Natural Disaster Reduction: A Plan for the Nation*. Washington, DC: U.S. Government Printing Office, December.

Final Report Revitalization Strategy for the Fiesta Mall Super-Regional Retail District

The city began the process of implementing a code enforcement strategy several years ago, an important tool to maintain for neighborhood improvement. A good code enforcement program addresses issues such as rental and business registration, nuisances, weeds, trash, litter and general maintenance, and checks to see that residents and businesses are in compliance with these ordinances. It also addresses housing quality in regard to building, health and fire codes. Benefits of code enforcement include higher property values; a better city image; less crime; greater community pride; safer and more attractive neighborhoods, and fewer substandard housing units. The City should ensure that its program is comprehensive in its approach and continue strong code enforcement efforts.

<http://www.cityofmesa.org/economic/pdf/fiesta-report.pdf> p. 36

Public Hearing before the Assembly Education Committee “New Jersey School Construction Program: Problems in implementation and possible solutions” 7/31/2002

Our mission here is very simple. It's to make sure that all of these facilities are done in full compliance with our very high health and safety standards that are incorporated in our State's construction code and that all the work is done to the level of quality that code demands. Second, and equally important -- that we don't become part of the critical path. There is absolutely no reason why good code enforcement has to slow down or encumber the progress of the work. That's our second major objective.

<http://www.njleg.state.nj.us/legislativepub/Pubhear/073102rs.htm>

Needs in Hazard Mitigation, Code Enforcement and Community Values

Issues and Challenges in Vulnerability and Risk Indexing

"Ultimately the crux of national risk indexing may be the question of political will expressed as legal and planning frameworks, investment in professional and citizen based capacity and capabilities, and enforcement of codes and standards."

(Wisner, Ben. 2000. "Issues and Challenges in Vulnerability and Risk Indexing." 11-12 September 2000, Geneva)

Code Enforcement Burdens and Central City Decline

Bringing about the right kind of building code enforcement is more difficult than taking a meat axe to regulations and enforcement staffs, which has been the rallying cry of those who wail against regulatory burdens. The reforms we discuss require a fundamental reorientation in the way enforcement officials view their jobs. They also probably mean that cities must devote more, rather than less, resources to the enforcement function. To be practiced successfully, business-friendly enforcement requires a greater degree of sophistication from building officials. It also requires more highly trained and competent plan-checking and field-inspection staffs. They have to be able not only to detect violations of the law, but also to bring about corrections of violations in ways that do not threaten the success of regulated business.

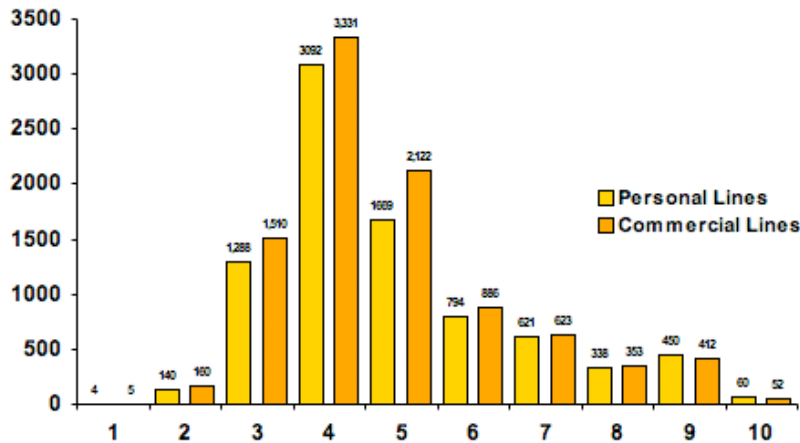
"Code Enforcement Burdens and Central City Decline," *Journal of the American Planning Association* , 66 (Spring 2000): 143-161. Raymond J. Burby, Peter J. May, Emil Malizia, and Joyce Levine.

The Benefits of Statewide Building Codes

Enforcement is Critical Good building codes have little value if they are not enforced. Independent studies of damage following Hurricane Andrew and the Northridge Earthquake revealed that lax code enforcement contributed to the total damage. Building codes are generally enforced by building departments at the local level. These departments are often funded by permit fees, which average less than one percent of construction costs. Plan reviewers and building inspectors are key to the success of building codes. Unless these functions are adequately funded and staffed with qualified, trained, tested and certified personnel, the full value of building codes will not be realized. It is important that all fees generated from building permits remain as revenue for the building department. The model codes have suggested permit fees at levels that will support the activities and training required for the building department.

Institute for Business and Home Safety, The Benefits of Statewide Building Codes, November 2005
http://www.ibhs.org/building_codes/downloads/20051110_153713_20651.pdf

Insurance Service Office (ISO) Building Code Effectiveness Grading Schedule (BCEGSTM) Distribution of Communities by Grade



What classifications does the BCEGS program apply to a community?
ISO evaluates communities on a scale of 1 to 10, with 1 representing exemplary enforcement of a model building code or local building code demonstrating equivalency to a model building code.

ISO's Building Code Effectiveness Grading Schedule <http://www.isomitigation.com/bcegs/1000/bcegs1002.html>

Beyond Sentiment and Place: The Tangible Ingredients of Community

No longer. The most striking difference between the two cities now and in the past is how anarchic they—and all modern cities—have become. The most visible sign of this anarchy is the explosion of street crime in both cities (another grimly familiar story). And in both cities, and in each kind of city neighborhood, crime was the most relentless enemy of collective action, even when it was also the motive for certain kinds of action (“neighborhood watches,” for example). The anarchy extends also to the social structure, with increasing numbers of children who are effectively orphans. And anarchy visible in the lack of building code enforcement—slum housing deteriorates because landlords ignore maintenance needs, and the city does nothing to interfere—as well as in the general deterioration public behavior. Drunks congregate on street corners; drug deals take place in broad daylight; prostitutes solicit customers in residential neighborhoods; unruly children trash the local swimming pool.

The City of Lowell Community Leader Interviews December 2001
The City of Lowell Department of Planning and Development
Lowell, Maine

A notable portion of those interviewed believe that the lack of a distinct housing policy will harm the long term health of the city. They desire specific codes for what the density in certain communities should be and then enforcement of those codes. Ultimately, they desire improvement and beautification at the neighborhood level. "Lack of housing policy right now. Need a long-term plan." "Need to address housing. This issue and the downtown issue go hand in hand." "To have economic development downtown, you need mix-income housing downtown." p.24

"Make each neighborhood more desirable to live in. Enhance home ownership opportunities, good code enforcement, a mix of incomes, commercial services in neighborhood business districts." p.32

www.lowellma.gov/depts/dpd/master_plan/public_opinion/CommunityLeaderInterviewReport.pdf p. 24

Internet Entry in Cyburbia Forums, September 2001

I have never done code enforcement but I did work in a (very large) city that had no code enforcement whatsoever. As a result, the work that the (200 or so) planners (or those who called themselves planners) did was, in essence, useless. We would require landowners to erect fences and plant trees, none of which was ever done. When they did, the fences were made of old garage doors and the trees were really just overgrown weeds. I wrote an excellent sign code, with a great deal of effort and research, which made absolutely no difference in the city because the residents knew that they could do whatever they wanted regardless of what the City required them to do. Also because of the lack of code enforcement, we had a serious illegal dumping problem. Many of the illegal dumps had been in operation for many years on public property because nobody checked up on them. I would consider code enforcement a very fulfilling and exciting career move; it would be a very good chance to make a real difference in the community. Laws are fine and dandy, but pretty useless unless somebody who cares about them is committed to enforcing them.

Entry by user 'Planasaurus': Cyburbia Forums, September 2001 <http://www.cyburbia.org/forums/showthread.php?t=419>

The Dallas Morning News Editorial Board

[The Board] asked a few Dallas leaders to read an executive summary of the Booz Allen Hamilton report and then to share their on-the-spot thoughts during a roundtable discussion about the report's conclusions and the future of Dallas. The following is a complete transcript of that conversation.

Miller: ...

The best thing I've seen so far is that we have a code compliance director who is new. Obviously every citizen knows we don't have very good code enforcement. If you look at any neighborhood, you see all the problems. So we have been railing about it forever. We get a new code compliance director who puts in performance standards and we get a headline in The Dallas Morning News two months later that said, "Code compliance inspectors are falsifying their reports because they can't keep up with the quotas." It was a headline that had everyone was saying, "Oh, how terrible." I was cheering, "Oh, yes. How wonderful. We finally identified the people who aren't performing. And those people are going to lose their jobs shortly."

<http://www.dallasnews.com/s/dws/spe/2004/dallas/roundtable.html>

Internet Posting Oct 09, 2006 Post subject: Ordinance Issues-Code enforcement

I have not seen action on these scofflaws and where is the Code Enforcement vehicle?

Who is in charge of code enforcement?

From earlier readings I have seen that the Village is understaffed. If this is the case, how are we going to do good code enforcement if we cannot even keep our supply of employees meeting the level of demand from the residents?

<http://s155787878.onlinehome.us/phpbb/viewtopic.php?t=137&sid=0209325e43aa7b6165b81c913fd32eae>

From the Minutes of the Chebeague Transition Committee December 20, 2006

Recommendations... Land Use Subcommittee: Beth Howe ... reviewed the charge of the subcommittee and said that it had started with the easy part of its task: researching what construction codes the town should adopt. This turned out not to be so simple. Cumberland has had plumbing, electrical and building codes for many years. The State requires that towns use the state internal and wastewater plumbing codes, but it does not require towns to adopt building or electrical codes. Many small towns including North Haven and Islesboro do not have building and electrical codes. This does not appear to pose problems with insurance or mortgage companies. The central issue is that while these codes insure safe and healthful construction they can involve costs to builders and owners in terms of inspections, permit fees and the need to hire design or construction professionals in order to be sure of meeting the code requirements. The subcommittee decided to survey the 18 builders who work regularly on Chebeague. Interviews with 11 indicated that one was not affected by the codes, one thought Chebeague should not adopt the building and electrical codes initially, and nine thought the Town should adopt all of the codes. This support did not preclude the builders from seeing problems with using the codes. They especially emphasized that a good code enforcement system depends as much on having a good and evenhanded inspector as on the codes themselves.

<http://www.chebeague.org/transition/Minutes%20Dec%2020%2006.htm>

City of Longmont Customer Survey Final Report of Results, July 2004 - Longmont, Colorado

SATISFACTION WITH CITY SERVICES City services which received average ratings of 67 points or higher - "good" or better on the 100-point scale – were: fire fighting and rescue services, weekly trash pick up, electric services, library services, twice a month recycling pick up, snow removal from major streets, sewer services, tap water, fire inspection and fire safety education and emergency dispatch. City services rated less positively were: emergency police services, utility billing, maintenance of park grounds and facilities, recreation facilities, street cleaning, street lighting, recreation programs and classes, services for seniors, animal control, museum, water conservation programs, maintaining landscaping along the public right of way, electric conservation programs, enforcing traffic laws, building and housing inspection, street repair and maintenance, youth services sponsored program, crime prevention, timing of traffic signals, planning and code enforcement. These services received ratings that were still between "good" and "fair" on the 100-point scale (between 67 and 33 points)

http://www.ci.longmont.co.us/city_council/reports/pdfs/customer_survey_2004.pdf

Hazard Mitigation/Comprehensive Plan Interface – Integration of Emergency Management Into The Community Planning Process

75% of US housing stock is susceptible to natural hazards:
10 million homes at risk from flooding
25 million homes at risk from wind hazards
2 million homes at risk from coastal storm surges
50 million homes in counties with significant earthquake risk.

Wagoner, William D. *Hazard Mitigation/Comprehensive Plan Interface – Integration of Emergency Management Into The Community Planning Process* (FEMA EMI Student Manual G626). Emmitsburg MD: FEMA Emergency Management Institute.

Shortcomings in Administration and Enforcement

Report of the Expert Group on Natural Disaster Prevention, Preparedness and Mitigation having bearing on Housing and Related Infrastructure

“Disasters don't kill people, buildings do.” Report noted that the problem in India is not a lack of construction standards, just an indifference to them.

Bearak, Barry. 2001 (Jan 31). "Too True, Buildings Kill: Will India Pay Heed Now?" *The New York Times*, p. A3.

Emergency Management Problems and Issues Points, 2005

“The California Seismic Safety Commission’s investigation of damage from the 1995 Northridge earthquake in southern California found there would have been far less damage had building codes been rigorously enforced.”

<http://training.fema.gov/EMIWeb/edu/docs/hazdem/Appendix%20-%20Notes%20on%20Emergency%20Management%20Problems%20and%20Issues.doc>

Mitigation Against Extreme Windstorms.

"In summary...studies show that recent hurricane wind damage has become more severe because of (1) infrequent use of reinforced concrete and masonry construction, (2) use of lightweight roof systems with inadequate connections, (3) gravel ballast on built-up roofs...(4) growing popularity of light-framed, poorly connected residential construction sited near shorelines, and (5) lack of code compliance and/or enforcement."

Golden, Joseph H. and John T. Snow. 1991. "Mitigation Against Extreme Windstorms." *Reviews of Geophysics*, Vol. 29, No. 4, November, p.501

Local Government Structure, Powers, and Limitations.

“Studies of the damage caused by Hurricane Andrew in 1992 attributed one-quarter of the storm’s total damages to a combination of shoddy workmanship and a lack of enforcement of the building codes.”

Plans, Code Enforcement, and Damage Reduction: Evidence from the Northridge Earthquake

...a particular weakness of public policy formulation is the failure to learn from experience with existing policy. Among U.S. states, California is noteworthy for the attention it has given to the use of building codes and local planning as a means of reduction damages to public and private property in earthquakes. The Northridge earthquake provided a laboratory in which the impacts of these policies on property damages could be evaluated.

Our analyses indicate that suburban local governments that paid more attention to enforcing the seismic provisions of the Uniform Building Code and incorporated a broader array of seismic safety goals and policies in their general plans for urban development and redevelopment, experienced fewer damaged structures in the Northridge earthquake. Thus, we now have evidence of the real payoffs of state requirements that local governments pay attention to seismic safety in planning for and managing urban development. However, we found that local government attention to these matters is not uniformly high. This slippage in local hazard mitigation efforts indicates that stronger state seismic safety mandates may be needed, together with enhances efforts to augment local capacity for seismic safety planning and building code enforcement.

"Plans, Code Enforcement, and Damage Reduction: Evidence from the Northridge Earthquake," Raymond J. Burby, Steven P. French, and Arthur C. Nelson. *Earthquake Spectra*, 14, 1 (February 1998): 59-74.

Evaluating Building Code Effectiveness – Answers to Your Questions.

Best's Review states that experts estimate losses from Hurricane Andrew could have been reduced by 30 percent to 40 percent if only building codes in place had been strictly enforced.

ISO (Insurance Services Office, Inc.). 1998. *Evaluating Building Code Effectiveness – Answers to Your Questions*. New York, NY: Insurance Services Office, Inc. p. 5

Fire Suppression Rating Schedule Handbook 2002

In a separate study by the Factory Mutual Insurance Group, it is reported that damage to a majority of the buildings inspected after Hurricane Andrew could have been reduced by 55% if jurisdictional building codes had been strictly enforced. Photos of Homestead, Florida taken after Hurricane Andrew depicted homes on one side of a street completely destroyed; homes were still standing on the other side of the street. The after event inspections determined and documented that the destroyed structures were, in fact, built well below building code requirements.

Fire Suppression Rating Schedule Handbook 2002, Hickey, H.E., p. 244

Internet Posting, February 2007

Your situation is different because don't have building code enforcement to deal with and the guys in your area might not think all that is necessary. They could very well be correct, but many times people build the way they know because it's been done that way forever not because it's the best way, and there is no code requirements to verify anything. In areas where there is no code enforcement, then Contractor licensing is generally lacking also. That's not to say that none of them know what they are doing, it's just much easier for the guys that don't to operate.

From February, 2007 online entry by 'flbuilder' in diyNetwork online forum.
<http://boards.diynetwork.com/eve/forums/a/tpc/f/6221916776/m/9481091703>

National Association of Realtors Support for Enforcement

NAR's Plan to Ensure Available and Affordable Insurance

On March 27, 2007, in testimony before a subcommittee of the House Financial Services Committee, Gary Thomas, Liaison to NAR's Public and Federal Issues Group, presented a set of core principles, reiterated during two subsequent Senate hearings, to ensure the availability and affordability of homeowners insurance that would:

- Protect property owners, by ensuring that transparent and comprehensive insurance coverage is available and affordable, with premiums that reflect risk
- Acknowledges the importance of personal responsibility of property owners in high-risk areas to protect their property with adequate insurance and safety enhancements
- Provides property owners with adequate incentives to undertake safety enhancements
- Acknowledges the importance of building codes and smart land use decisions while emphasizing the enforcement of both is the function of state and local governments
- Recognizes the role of States as the appropriate regulators of property insurance markets while identifying the proper role of the federal government intervention in "mega-catastrophes."
- Recognizes the responsibilities of the local, state and federal governments to invest in the building and maintenance of critical infrastructure including levees, dams and bridges.

National Association of Realtors "Eye on the Hill" April 2007 <http://www.sabor.com/images/upload/eyeonhill0407.doc>

Insurance Industry Support for Enforcement

Insurers Recognize the Critical Importance of Code Enforcement The code-enforcement problems discovered in the wake of Hurricane Andrew have prompted the insurance industry to initiate a code-effectiveness grading schedule, in order to identify communities with good enforcement practices. The new system will be phased in over a five year period beginning in 1995. Property owners in communities with good code-enforcement practices may be rewarded with reduced insurance premiums.

FEMA Publication 313, January 1998 Enforce Seismic Code Provisions for Earthquake Safety A Guide for Architects & Engineers <http://www.fema.gov/plan/prevent/earthquake/pdf/fema-313-app-i.pdf>

Insurance Industry Support for Enforcement

Eugene Lecomte President & CEO of Insurance Institute for Property Loss Reduction

The Insurance Services Office is implementing the Building Code Effectiveness Grading System, which will grade each community across the nation on its code enforcement effectiveness. This should be fully implemented by the year 2000. As you know, you can have the best codes in the world, but if they are not

enforced they mean nothing. Mexico City is a prime example of that: 10,000 people paid with their lives. Hurricane Andrew and the Northridge earthquake are also examples of poor code enforcement.

Does the American public want good code enforcement? Absolutely! In a survey undertaken by the Insurance Institute for Property Loss Reduction and reported in the publication *Homes and Hurricanes*, 93% of the respondents said they would pay \$5,000 more for a \$100,000 home if they had a guarantee that the codes were adequately enforced. So the American public is behind the effort, while they may have to be aroused, they are supportive of this kind of effort.

Information Technology and Its Impact on Catastrophic Risks A Report on the Conference sponsored by The Wharton School of the University of Pennsylvania, The Annenberg Public Policy Center of the University of Pennsylvania, and Risk Management Solutions, Inc. 12-13 June 1996 <http://didgood.com/social/REP8.pdf>
