

# Fifteen Steps to Effective Code Enforcement

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Raymond J. Burby and Peter J. May

Few would argue with the assertion that urban crime is out of control in cities across the United States. The less-told story is the crisis in another type of crime: violations of building, environmental and land-use regulations. Yet here the evidence of system failure is equally stark. In North Carolina, recent reviews of compliance with erosion and sedimentation control permits (Burby et al. 1990) and coastal permits (Brower and Ballenger 1991) revealed rates of violation in excess of 50 percent. Reports from other states are equally distressing and the consequences especially tragic. In south Florida following Hurricane Andrew, fully a quarter of the more than \$20 billion in property losses was attributed to shoddy construction not in compliance with the building code (Building Performance Assessment Team 1992). In Kansas City in 1980, 113 people were killed and 200 others injured when the skywalk in the Hyatt Regency Hotel collapsed, due to design faults, according to some reports, that were not caught by the code enforcement system (Waugh and Hy 1995).

Twenty-three years ago, Jeffrey Pressman and Aaron Wildavsky wrote in their classic book, *Implementation* (famous for its subtitle: *How Great Expectations in Washington Are Dashed in Oakland Or Why It's Amazing Federal Programs Work at All This Being a Saga of the Economic Development Administration as Told by Two Sympathetic Observers Who Seek to Build Morals on the*

*Foundations of Dashed Hopes*) that even the most carefully thought out programs often failed to accomplish their ends because of glitches in the way they were carried out. Planners, who spend untold hours crafting new land-use regulations and ever more detailed development permit conditions, have yet to learn this lesson, since they spend little time thinking about whether permit conditions will ever be fulfilled. In part, this neglect may stem from ignorance of what to do to make enforcement more effective. Some attention has been given to the use of financial performance guarantees to assure compliance (e.g., Feiden et al. 1989), but key texts such as *The Practice of Local Government Planning* (So and Getzels 1988), *Urban Land Use Planning* (Kaiser et al. 1995), *Managing Community Growth* (Kelly 1993), and *Growth Management Principles and Practice* (Nelson and Duncan 1995) make no mention of enforcement, and only one Planning Advisory Service (PAS) Memo has been prepared on this subject (see Kelly 1988).

This article has two purposes. One is to urge planners to pay more attention to code enforcement. The other is to suggest concrete steps local governments can take to improve the chances that building and development regulations will be followed by developers and building contractors. These suggestions are based on the results of a national survey of city and county building departments and an analysis of the code enforcement practices of thirty-three North Carolina local governments.

## About the Data

In 1995 we surveyed a national sample of 995 city and county building departments to identify methods they were using to enforce building codes and to learn about the successes and failures they had

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experienced. In addition, the survey probed for information on a number of governmental characteristics and situational factors that might affect code enforcement practices and outcomes. Responses were received from 819 local governments (an 83 percent response rate).

The survey data were analyzed using multivariate statistical techniques to isolate factors associated with higher and lower rates of compliance by the private sector. Based on the multiple regression results, an "effects analysis" was performed to see how compliance would likely change if a local government changed the value of each of the significant predictors of compliance from the level of the lowest quartile (25<sup>th</sup> percentile) in the sample to the level of the highest quartile (75<sup>th</sup> percentile), while holding constant all of the other factors that affect compliance (see Burby et al. 1996). This analysis produced a list of fifteen key factors, ordered by the strength of the likely effect a change in their value would have on improving compliance.

To make these data more relevant to North Carolina planners and code administrators, we calculated the mean values of the key effects variables for North Carolina local governments and compared them to the mean values for local governments in other states that have attained the highest rates of compliance. This comparison helped isolate enforcement practices in North Carolina that fall farthest short of the most successful enforcement programs. The North Carolina local governments studied are listed in the appendix.

### **Fifteen Steps to Effective Enforcement**

Table I lists fifteen ways to improve compliance with building codes and indicates the approximate percentage improvement in compliance that could be accomplished when a local government implements one of the steps listed in the table. Because the effects measures are based on statistical analysis of subjective

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indicators (such as units of estimated staff adequacy on a five-point scale), the steps are less precise than those one would find in a cookbook, and planners and code administrators will have to experiment with exact amounts of each ingredient in concocting their own "Effective Enforcement Stew."

A quick glance at Table I shows there are no quick fixes that are likely to produce large improvements in compliance with codes. Instead, most steps will result in incremental progress and will be used

in combination with other similar steps. As we note below, local governments can bring about a marked improvement in code compliance by implementing sets of related actions.

#### *Staffing*

A number of reviews of code enforcement have singled out shortfalls in staffing as the single most important barrier to effective enforcement (e.g., National Commission on Urban Problems 1968; Southern Building Code Congress International 1992). Our analysis reinforces this conclusion. By improving the adequacy of staffing from the level of the lowest quartile to the level of the highest quartile in the sample of localities studied, compliance could improve by 15 percent. Further gains in compliance could occur if other aspects of capacity are enhanced similarly: improved staff technical expertise could raise compliance levels by 3 percent; improved legal support could produce a 1 percent gain; and reducing the workload of field inspectors could result in about a 0.5 percent improvement. In combination, these enhancements in capacity might lead to as much as a 20 percent gain in compliance with code requirements.

#### *Effort to Enforce*

Having adequate staff on board is important, but unless enforcement agencies use their personnel to

**Table 1. Fifteen Steps to Effective Enforcement of Building Codes**Steps Producing a 10% to 20% Improvement in Compliance

Improve adequacy of staffing  
Increase effort devoted to on-site inspections

Steps Producing a 5% to 10% Improvement in Compliance

Institute state requirement of local code enforcement  
Increase technical assistance to developers, builders, contractors

Steps Producing a 1% to 5% Improvement in Compliance

Reduce degree of coercion employed in enforcement  
Reduce surveillance to detect building without a permit  
Improve staff technical expertise  
Increase effort devoted to checking building plans  
Develop proactive enforcement goals  
Increase level of legal support of code enforcement  
Employ flexible enforcement strategies  
Improve competence of contractors

Steps Producing Less than 1% Improvement in Compliance

Reduce effort devoted to legal prosecution  
Increase effort devoted to public relations  
Reduce number of inspections per day required by each field inspector

Note: Each estimated effect is based on change from the level of the 25<sup>th</sup> percentile of all jurisdictions to the level of the 75<sup>th</sup> percentile of jurisdictions. Effects are predicted from multiple regression analyses reported in Burby et al., 1996.

mount a strong, proactive enforcement effort, code violations are likely to continue to be excessive. Like capacity shortfalls, the lack of aggressive enforcement is thought by many experts to undermine government regulatory programs (e.g., see Kagan 1994). Our data lend support to this conclusion. By taking steps to increase the level of enforcement effort from the lowest to the highest quartile of local governments, compliance rates could be improved significantly. Specifically, an increase in the effort devoted to field inspections could raise compliance levels by just under 10 percent; increasing effort devoted to technical assistance could raise compliance levels by over 5 percent; increasing the effort devoted to plan checking could result in a 3 percent increase in compliance; and the formulation and active pursuit of enforcement goals could lead to a 1 percent

increase. Together, these enhancements in enforcement effort might lead to as much as a 20 percent improvement in compliance levels.

*Style of Enforcement*

Increasing the effort devoted to enforcement does *not* mean that local governments should be more coercive in their dealings with the private sector. In fact, contrary to conventional wisdom (for example, see Bressi 1988), just the opposite is true. Our data show that what regulatory theorists term a “flexible” or “cooperative” style of enforcement will pay dividends in enhanced compliance, while coercion will actually reduce compliance (for evidence of a similar effect for other types of regulation, see Ahlbrandt 1976; Bardach and Kagan 1982;



Braithwaite 1982; and Scholz 1984). Steps to take in enhancing cooperation with the private sector include: reducing the degree of coercion employed in enforcement (that is, making less use of stop work orders and fines when violations are detected); reducing the effort expended in prosecuting violators; and reducing surveillance to detect buildings without a permit.

At the same time, enforcement agencies should take positive steps to build good working relationships with contractors. These include: spending more effort on public relations; instituting flexible enforcement procedures (explanation of provisions violated, advice on how to fix them, bargaining to agree on a schedule to correct infractions, and relaxation of standards when costs of compliance exceed benefits to the public); and incentives such as relaxed inspection schedules and leniency when violations are detected to reward those who make a sincere effort to comply. In combination, these measures can enhance compliance by as much as 5 percent. Moreover, since cooperation will not be successful unless staff capacity and competence also are adequate, if a cooperative strategy is undertaken in conjunction with enhancements in enforcement capacity, compliance levels could be increased by over 25 percent.

### *Role of the State*

North Carolina is one of twenty-seven states that have adopted statewide building code requirements and mandated local enforcement (May et al. 1995). Eight states have legislation which enables but does not require local building code enforcement, and fifteen states leave code enforcement solely to the discretion of local governments. Our data indicate that state mandates such as North Carolina's have a marked effect in promoting compliance with building regulations. We think this occurs because state mandates cause local officials to give code enforcement more priority in budget allocations and deter them from undermining compliance by meddling excessively in enforcement cases in order to reward key constituents.

### **Improving Code Enforcement in North Carolina**

North Carolina local governments have attained rates of compliance with the state building code that are similar to those of cities and counties nationwide. On a scale of 1 (low) to 10 (high), the mean North

Carolina local government has a compliance score of 8.2; the national average is 7.9. Nationwide, 8 percent of the governments we surveyed reported compliance levels of 5 or below on the 10-point scale, indicative of a serious failure of the enforcement system. In North Carolina, 6 percent reported similar difficulty in attaining compliance.

Two North Carolina localities we surveyed and 45 others nationally were much more successful than average in gaining compliance (they scored a 10 on the 10-point scale). Comparison of the enforcement practices of high-compliance places with the practices of other local governments provides a way to isolate enforcement practices that are lagging and might be focused upon first to improve performance (see Table 2).

North Carolina localities fall short of localities in other states that have attained the highest rates of code compliance in five of the fifteen steps to effective enforcement: staff technical expertise, technical assistance effort, plan checking effort, legal support, and contractor competence. These deficiencies are interrelated. For example, a technically competent staff is needed to offer technical assistance and to check building and site plans for compliance with code requirements. Low rates of contractor competence probably reflects, in part, lack of technical assistance from local building code agencies. Legal support also tends to be far less adequate in North Carolina localities, as does staff adequacy in general, although this latter difference is not statistically significant at the .05 level.

These data suggest that enforcement results in North Carolina would be enhanced significantly if local governments allocated more resources for the code enforcement function, particularly for additional staff, staff training, and legal support. With added staff, it would be possible for agencies to review building plans more carefully, offer technical aid to the private sector, and to work in other ways to improve the competence of building contractors.

North Carolina localities are more likely than high ranking localities in other states to use flexible enforcement strategies, and they devote less effort to legal prosecution. With adequate staff resources, this relatively cooperative stance toward the private sector would enhance compliance. Without adequate staff resources, however, flexibility is likely to simply result in lax enforcement and a weak level of commitment to comply among developers, builders and contractors. Thus, by enhancing the capacity of the enforcement staff, local governments will improve

**Table 2. Progress in North Carolina with the Fifteen Actions for More Effective Enforcement in Comparison with Local Governments with the Highest Compliance Rates**

<u>Enforcement Improvement Action<sup>a</sup></u>	<u>Mean Values on Actions</u>	
	<u>High Compliance Localities<sup>b</sup></u>	<u>North Carolina Localities<sup>c</sup></u>
Staff adequacy (1-5)	3.6	3.0
On-site inspection effort (1-5)	4.9	4.9
<b>State mandate (1-3)</b>	<b>2.6</b>	<b>3.0</b>
<b>Technical assistance effort (1-5)</b>	<b>4.4</b>	<b>3.8</b>
Degree of coercion (-2.5 - +2.8)	0.1	-0.08
Surveillance effort (1-5)	3.5	3.0
<b>Staff technical expertise (1-5)</b>	<b>4.7</b>	<b>4.2</b>
<b>Plan checking effort (1-5)</b>	<b>4.8</b>	<b>3.9</b>
Proactive enforcement goals (1-3)	2.8	2.5
<b>Legal support of enforcement (1-5)</b>	<b>2.3</b>	<b>1.9</b>
<b>Flexible enforcement (-2.4 - +3.3)</b>	<b>-0.7</b>	<b>-0.1</b>
<b>Contractor competence (1-4)</b>	<b>1.5</b>	<b>1.1</b>
<b>Legal prosecution effort (1-5)</b>	<b>2.8</b>	<b>2.0</b>
Public relations effort (1-5)	3.7	3.9
Inspector workload (0-50)	12.3	11.4

<sup>a</sup>Table entries show mean values for scores on different enforcement actions. The range of possible scores for each item is shown in parentheses. Actions in boldface type indicate the difference between North Carolina local governments and local governments in other states that have attained the highest compliance with building code regulations is statistically significant at the  $p < .05$  level.

<sup>b</sup>Local governments in states other than North Carolina where compliance with building codes is rated 10 on a scale of 0 (low) to 10 (high).  $N = 45$


<sup>c</sup>North Carolina local governments.  $N = 33$  (includes 2 governments which scored 10 on the 10-point compliance scale)

compliance both directly and, by making flexible enforcement strategies more effective, indirectly as well.

## Conclusion

Catastrophic failures of buildings are a hard way to learn that the specification of rules governing building and development mean little if corresponding steps are not taken to ensure that rules are subsequently followed in the urban development process. In this article, we have shown that breakdowns in enforcement have occurred in local governments in North Carolina and other states. But, we also have demonstrated that there are clearly marked steps to achieving high rates of compliance with regulations. Individually, each of the fifteen steps

we have identified will produce only a small increment of improvement. If used in combination with each other, however, significant gains can be made. In particular, our research points to the importance of improving staff capacity to enforce regulations coupled with an aggressive effort to use available capacity in working with, not against, the private sector. With a cooperative approach to enforcement that includes adequate inspection and plan checking undertaken by competent personnel with sufficient legal support in interpreting regulatory requirements, technical assistance, and the use of incentives and flexibility in addressing enforcement issues, compliance can be assured. Planners, we believe, can do much to promote effective code enforcement in North Carolina and elsewhere. In this article, we have pointed the way for undertaking this

important task. 

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## Appendix: North Carolina Local Governments Included in the Study

Albemarle, Alexander County, Anson County, Asheville, Black Mountain, Boone, Buncombe County, Catawba County, Chapel Hill, Concord, Durham, Elizabeth City, Forest, Gaston County, Gastonia, Greensboro, Henderson County, Hickory, High Point, Jackson County, Lenoir, Lincoln County, Marion, Mecklenburg County, Orange County, Rockingham, Rocky Mount, Shelby, Statesville, Union County, Waynesville, Wilmington, Winston-Salem