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Public Administration Review, Vol. 45, Special Issue: Emergency Management: A Challenge for Public Administration. (Jan., 1985), pp. 57-63.

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Disaster Recovery and Hazard Mitigation: Bridging the Intergovernmental Gap

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Significant progress has been made in the last few decades in the United States in terms of local capability to deal with and recover from major disasters. In the United States, communities do recover, even if slowly and painfully in some instances. Although no communities have been lost involuntarily, occasionally public officials decide to relocate all or part of a community to avoid the likelihood of a repeat disaster.

As recently as 15 years ago, Allen Barton summarized what little research existed at that time about the disaster recovery process. One pattern he noted was that "Local government is unable to cope with the overload of problems and is replaced by an improvised emergency government such as a Citizens' Committee, or by authorities from state or national agencies."¹ No longer are local governments rendered ineffective, nor are they supplanted by either public or private organizations. In recent years, the growing capability of local public officials together with the experience and resources of emergency management personnel at the state and federal levels, have contributed to the improved ability to recover from a major disaster.

The focus of this article is on communities recovering from a major disaster, i.e., an event that is large and damaging enough to warrant receiving a presidential declaration. After a major disaster, local officials are involved in complex intergovernmental processes and in key public policy choices that affect the future of the community. Nevertheless, our knowledge of the role of community officials in recovery and post-disaster mitigation activities is limited. In a recent article Kartez states, "There is . . . a tendency in social science disaster research to treat the implementing agents—public officials—as a kind of black box."² Researchers have not yet fully examined the strategic options and choices open to local officials, the decision-making processes local officials use, and the capabilities required to expedite community recovery and maximize community values.

In a major contribution to the recent research about the post-disaster period, *Reconstruction Following Disaster*, the authors state

Disaster recovery is ordered, knowable, and predictable. The central issues and decisions are value choices that give varying emphasis to the

The authors gratefully acknowledge the assistance and critical review of this article by their research colleague, Dr. Martin Saperstein, Saperstein Associates, Columbus, Ohio.

early return to normalcy, the reduction of future vulnerability, or opportunities for improved efficiency, equity, and amenity. Over-ambitious plans to accomplish these goals tend to be counter-productive. Major opportunities to improve the reconstruction process lie in early recognition of overlooked problems, people, functions, and areas; the reduction of uncertainty about the future for those who live and work in the city; and the preparation for reconstruction before the disaster comes.³

The role of local officials in shaping the value dimension of community recovery will be described. Within the government context, the strategic choices embedded in local decision-making processes and the local government's management capacity can promote efficient, expeditious recovery and post-disaster mitigation.

Disaster Recovery Research Background

The research base for this article is a series of actual local public policy and public management decision-making processes in communities that were recovering from a major natural disaster during the last five years. Since 1979, research has been under way in a small number of U.S. communities that have experienced a major natural disaster to document the recovery process at the community level.⁴ The project, currently housed at George Washington University, is documenting and analyzing the recovery process; it focuses on local public planning and management decisions during recovery.

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To date, 14 localities representing a wide array of disasters, have been examined. In this article our references are illustrative rather than exhaustive.

Field research visits were made to each of the 14 sites, some cities and some counties. Sensitive to the fact that the definitions and conceptual framework the team used were not necessarily those held by persons being interviewed, the following definition was used:

Long-term recovery (i.e., the reconstruction process) is characterized by attention to rebuilding and new construction; restoration of major urban services; and review of pre-disaster land uses, especially insofar as they include consideration of local hazards in the recovery plans for the affected area.

The research team identified the characteristics of local planning and management and strategic choices that result in an expeditious recovery; examined the extent to which recovering communities adopted and used mitigation measures; and studied efforts during the recovery process to achieve community betterment in light of future hazard risk. For each of the 14 places visited, the research team examined and documented a variety of official and unofficial records of the disaster recovery activities in the community. Key federal, state, and local officials and community leaders from the private sector were interviewed employing a semistructured format.

Intergovernmental Context: Relations and Limitations

In the last 10 years, the amount of federal assistance provided to local governments following disasters has increased. Indeed, as Friesema and his associates put it: "most of the economic costs of natural disasters are externalized to the larger, carrying society."⁵ With assistance comes increased interaction among officials at all levels of government. Because of the considerable involvement of other levels of government in a disaster that essentially is a localized event, the quality of intergovernmental relations has a major influence on the efficiency of the local recovery.

As is the case in other public policy arenas, intergovernmental relations in post-disaster settings often are characterized by limited coordination, uncertainty, problem complexity, and conflict among key actors.⁶ Recent federal policies and executive orders promote the integration or coordination of post-disaster mitigation efforts with recovery. Other federal requirements, such as the 75 percent federal/25 percent local match for public assistance, require local governments to assume greater financial and administrative responsibilities for recovery actions. Consequently, the intergovernmental context provides both problems and opportunities for the exercise of local strategic choice in the communities studied. Local assessments of the intergovernmental context varied across the communities studied. More positive assessments came from officials who had found at least one special relationship that seemed to expedite recovery, although in only a few cases did an overall

positive assessment, both of state and federal relationships, occur.

Each of the communities studied was in an area that had received a presidential disaster declaration. The processes set in motion by this type of determination and the specific activities that reflect the regulations of disaster (e.g., riverine flood, hurricane flooding, earthquake, tornado) were observed to establish the administrative, political, and, to some extent, the economic context within which the recovery took place. Local officials experience a major disaster infrequently; consequently, they are relatively inexperienced in dealing with disasters compared with their counterparts in federal and state government. Research has shown that local officials tend to be less concerned over disasters as a public policy issue than actors at other governmental levels.⁷ In virtually all of the cases, local, state, and federal officials tended to have differing and sometimes competing perceptions of: (a) their roles in recovery; (b) their priorities during recovery; (c) the importance of post-disaster mitigation efforts; and (d) the proper location of recovery planning and decision making. Indeed, the cases studied exhibited the full continuum of intergovernmental relations from cooperative to highly conflictive.

Intergovernmental Relations—State. Relations with state government officials varied widely among the sites studied. Because these relationships tended to improve or sour over time, no general characterization holds true for the duration of the recovery process. Generally, the negative assessments of state relations by local government stemmed from the perception of the state's inability to provide technical advice and assistance and significant financial assistance. Also, the heavy local dependence on federal programs for funding led to a direct local-federal relationship which was intensified when local officials wanted quick decisions and ready cash flow for major, expensive projects. Under these circumstances, the state often was perceived as another layer, one that does not yield substantial assistance.

Intergovernmental Relations—Federal. Federal disaster assistance is provided under the Disaster Relief Act of 1974, P.L. 93-288, which is implemented by the Federal Emergency Management Administration (FEMA) following a presidential declaration of a major disaster. FEMA administers grants to the states from the President's Disaster Relief Fund and directly coordinates disaster assistance functions of all federal agencies. When a community receives a presidential disaster declaration, it deals with FEMA during the recovery process. Both public assistance under P.L. 93-288 and payments by the National Flood Insurance Program (in flood disasters) are usually available, yet each program has significant requirements that must be met by local officials. A certain amount of difficulty in federal-local interaction appeared to stem from local inexperience—for example, not knowing ahead of time the limitations of individual and public assistance. By comparison, familiarity in normal times with the intricacies of various program requirements, as well as benefits and

limitations, paid off during the turmoil of the recovery phase for some of the communities studied.

In addition, great local displeasure was expressed with regard to the requirement for local 25-percent match for public assistance and with what local officials viewed as the complex and onerous administrative process for payment of the public projects described in the Damage Survey Reports (DSRs).

Even after receiving a presidential disaster declaration and identifying available federal programs, a community still may face difficulty in obtaining federal aid to assist with reconstruction. Prior to 1973, many federal agencies had categorical grant programs available to localities that had experienced a serious disaster. Since then, however, the block grant and revenue-sharing programs have left little discretionary federal funding available for long-range disaster recovery.⁸ This circumstance contributed to less favorable local perceptions of the federal role in recovery.

Intergovernmental Relations—Bridging the Gap. On the positive side, federal officials have been working to improve at least federal interagency cooperation after a disaster is declared. For more than two years, there has been a process at work for flood-related disasters which is contributing to improved intergovernmental coordination and cooperation. A number of the case study analyses reflected this significant federal initiative—the Federal Interagency Hazard Mitigation Team (HMT) process. After a presidentially declared disaster, the FEMA regional director appoints a team comprised of key federal agency representatives and also representatives of state and local government.⁹ An HMT may make recommendations, but it has neither enforcement nor regulatory powers.

The HMT usually functions as a regional, interagency, and intergovernmental team. Creation of the teams was designed to promote a comprehensive approach to flood hazard mitigation during the post-flood recovery process. The directive requires that the team prepare a report within 15 days of a presidential disaster declaration, that the mitigation activities recommended in the report emphasize nonstructural measures, and that federal agencies conform their recovery actions to the recommendations in the report to the fullest extent practicable. The activities of the team, including preparation of the report required 15 days after the declaration date, appear to have had a significant effect on the identification and implementation of mitigative measures at the city and county levels soon after a major flood-related disaster.

Although designed primarily to coordinate federal response and recovery assistance efforts, the HMTs have had several secondary benefits. One has been to improve federal, state, and local relations, via the participation of state and local representatives in all HMTs. The second benefit is prompt attention. Given the 15-day deadline for the first report, the HMT process fosters a sense of immediacy for attention to mitigation measures early in the recovery period. A third benefit observed is that the HMT process has led to the forma-

tion of a small cadre of experts on recovery and mitigation among the federal agencies usually involved in the aftermath of a local disaster. For example, in California, state officials have developed their own, informal interagency team. In all cases for which an HMT was present, greater local interest and emphasis on flood hazard mitigation was observed.

Generally, public officials at all levels commented favorably on the HMT process, which they consider useful and effective. The process puts pressure on public officials to pay prompt attention to mitigation during recovery. Local officials appreciated professional attention at an early date; state officials valued the formal mechanism through which they can participate in mitigation planning; and federal officials (other than FEMA officials) became better informed about disaster needs and programs and, hence, were more effective in delivering needed programs and services.

While these intergovernmental processes did much to establish the turbulent post-disaster environments of local governments, we found that a significant variety of management and strategic options remained open to them.¹⁰ In a preliminary fashion, we were able to identify local planning and management characteristics and actions that did or did not contribute to more productive intergovernmental relations and an effective local role in expediting disaster recovery.

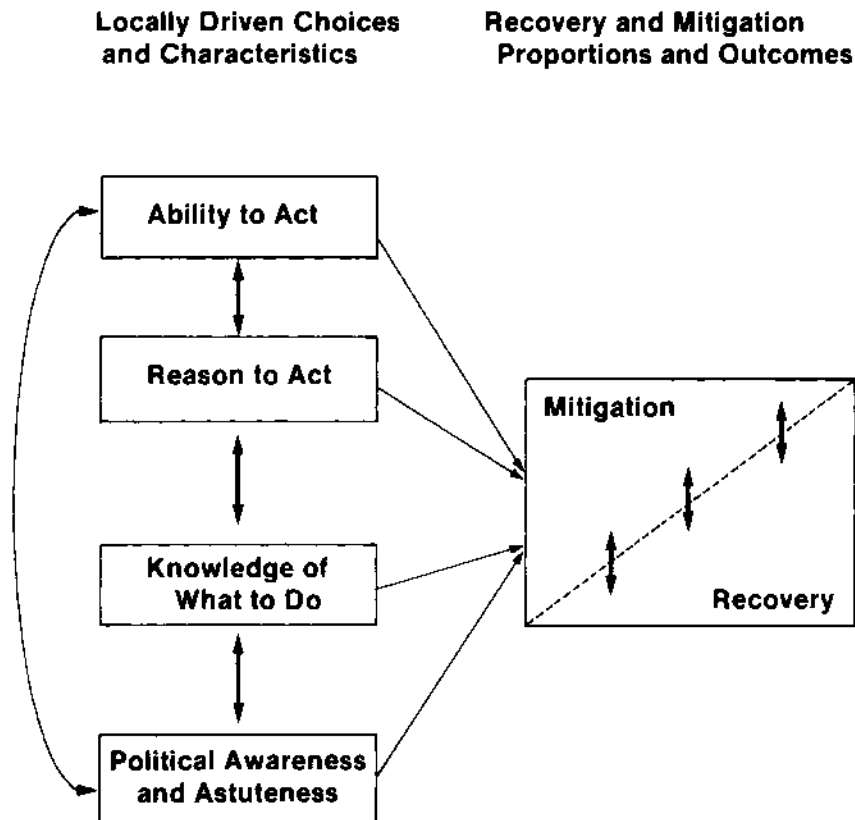
Local Strategic Choices During Recovery

Local officials, in a number of cases among those studied, systematically developed and exercised strategic options to produce expeditious recovery and to promote long-term mitigation.¹¹ With the diminishing level of external assistance that can be provided to any disaster-stricken community, a number of local officials felt it was advantageous to base their actions on systematic, long-range, politically acceptable decision criteria.

It may be, as some recent research has reported, that community level recovery *per se* is virtually a given, except for the most catastrophic of events.¹² Even so, the speed and quality of recovery for communities still are major policy issues. To achieve a greater role in improving the speed and quality of recovery, local officials must find ways to ensure more productive intergovernmental relationships in post-disaster recovery, to compete for scarce resources, and to enhance community level decision-making. These are among the practical reasons for considering the options described in Figure 1, Strategic Choices for Guiding Local Recovery.

The characteristics and actions found in the recovery processes of the 14 study jurisdictions can be roughly organized around the three sets of factors described by Mileti in his recent work on organizational response to earthquake prediction.¹³ The presence or absence and the extent of use of these elements in recovery decisions and actions provide an emerging set of locally determined strategic choices that can guide local recovery. We have added a fourth set of factors that cover the

Figure 1
Strategic Choices for Guiding Local Recovery



political aspects of post-disaster intergovernmental relations.¹⁴ The four are as follows:

1. *Ability to Act.* The development and use of a strategic approach to recovery reflects the local government's ability to act—related to its technical capability, resources, and organizational flexibility and adaptiveness. Several of the communities studied rate very low in all these categories. In one small mountain community whose local economic base was coal mining, the combination of a lack of local technical knowledge and resources, lack of flexibility for undertaking nonstructural mitigation, and a history of chronic flooding, meant that the results of the most recent major flood were devastating. Future economic prospects for this community appear poor, given the likelihood of additional future events of serious flooding.

Because of its low ability to act, the town's effort to obtain needed technical capability and other resources in achieving recovery from its latest disaster was neither expeditious nor high in quality. Now this town is very dependent on externally supplied technical assistance and resources. If it experienced another major flood, it

could be expected to recover even more slowly and painfully.

In contrast, the city of Fort Wayne, Indiana, displayed significantly greater ability *and willingness* to act and to utilize fully all technical capabilities and local resources following its last major flood. For instance, the city was able to assess systematically the federal assistance it received, and then effectively deploy its top level policy and technical resources. Flexibility, adaptiveness, and creative leadership were key characteristics of Fort Wayne's team-oriented recovery efforts. In addition, the city created its own local equivalent of the Federal Coordinating Officer and Federal Interagency Hazard Mitigation Team. The strategic choices made by local officials greatly enhanced the coordination among governmental officials and appear to have substantially shortened Fort Wayne's recovery.

These examples are outliers in the range of actions possible after a major disaster. The other dozen cases fall between these two, with the ability to act regarding recovery generally conforming to the level of technical and administrative competence of the local government

and its available resources. In a few cases, such as Cardington, Ohio, it appears that a strategic choice made at the political level, i.e., a strong local-state relationship, made up for relatively low local standing on this set of factors. We suspect that in places like Cardington, where an unusual and unexpected set of ad hoc actions lead to a reasonably effective recovery following one disaster, the same positive outcome after another disaster may not occur.

2. *Reason to Act.* An effective recovery results from local officials' awareness and knowledge of community-based reasons to act. Two specific types of criteria emerged from the empirical research that related to the quality and speed of recovery: (a) upholding community values, and (b) protecting or expanding the community's economic base.

Upholding community values in the post-disaster setting was observed to be a difficult task. As an example, we found that one community split into two politically active factions, each clinging to a different image of the community's post-recovery future.¹⁵ One faction was pro-change, the other favored the *status quo ante*. Eventually, the latter faction prevailed, which meant that both the quality and the speed of recovery were affected. Lack of community goals, lack of commitment to a redevelopment plan, delay in its preparation, and lack of land-use and building code ordinances, all contributed to delays in the recovery process. Further, future prospects for this community to recover expeditiously from another major disaster appear bleak.

In several other cases, community officials apparently understood community values, and found means of developing organizations to advocate them and procedures for protecting them. A policy level neighborhood advocacy unit was launched as part of the recovery effort almost before the flood waters subsided. The administration of external private assistance and some federal assistance for individuals was coordinated with the neighborhood service unit. This strategic choice had the effect of accelerating the distribution of assistance and making the *local* government appear more responsive to its citizens' needs. The same community quickly undertook a major recovery planning initiative, which representatives of other levels of government were virtually compelled to consider. The result in this case was an increased role for the community officials in inter-governmental coordination of the recovery process. More than half of the communities we studied organized less ambitious but similar locally driven *ad hoc* organizations. In all such instances, the effects were to increase the local influence over recovery and make it more consistent with community values. Such actions led to more expeditious recovery, because they promoted intergovernmental coordination.

Protecting the community's economic base is a major reason to act in those places where the base is threatened.¹⁶ Disaster recovery and economic development activities have many parallels, and when community policy makers explicitly decided to integrate them, they became sensitive and complex issues. We found that

communities that have local leaders with some pre-disaster vision about the future economic development of the community can be expected to fare better during recovery. They usually have set goals and achieved local consensus for them; have made plans for modernization and change; have a network of interested persons; and may have taken some preliminary steps, such as forming an urban renewal authority. In contrast, communities that were in a slowdown or decline phase of their life cycle and did not have action plans for growth and development recovered more slowly.

We found that in Salt Lake City, Utah, Fort Wayne, and Estes Park, Colorado, the speed of recovery and, to a lesser degree, its quality were enhanced by the local governments' efforts to be responsive to businesses and to protect the existing economic base—both values important to local citizens. The need to protect and be responsive to these values appears to be a very important strategic choice in recovery. Fort Wayne hired an industrial development professional to assist in attracting new business. Estes Park responded promptly and favorably to a private business group interested in promoting and developing the economic base of the area.

Another important outcome of the recovery case studies is that local officials who are knowledgeable about disaster assistance programs *and* major community and economic development programs have better strategic options and are more able to obtain inter-governmental assistance.

3. *Knowledge of What to Do.* The cases represent a wide range of disaster experience and competence. Generally, experience affects strategic choices in two ways: First, experienced local officials tended to be quite adept at short-term recovery management and its related administrative policy tasks. Tasks such as documenting damages and disaster-related local expenditures are performed more systematically and routinely by experienced local staff. In cases of chronic and frequent flooding, for example, functional arrangements were readily changed to meet the specific needs of short-term recovery.

Second, the case studies show that experience may expedite recovery of a second disaster caused by the same agent; but it may reduce flexibility in recovery, including the willingness to develop longer term recovery strategies that include relatively new or innovative mitigation efforts. Externally developed policies and programs, such as the National Flood Insurance Program (NFIP) and the Interagency Hazard Mitigation Teams, in some cases may improve mitigation choices. Nevertheless, a significant factor in many of the locations we studied was the strength of economic interests working against certain types of innovative mitigation efforts. This was especially true of nonstructural flood hazard mitigation measures.

The strategic importance of local officials' access to and utilization of recovery and mitigation information is demonstrated by several of the cases where such information accelerated or enhanced recovery. Following the flood in Estes Park, the community hired a former

FEMA official as its disaster recovery manager, thereby obtaining access to a wealth of information and knowledge about recovery and mitigation assistance sources. In Paris, Texas, following a devastating tornado, immediate access to useful recovery information came from officials of Wichita Falls, Texas, who had recent tornado recovery experience. For example, one of the major instrumentalities of the recovery effort, Interfaith, Inc., was recommended by the Wichita Falls representative.

Long-term recovery and mitigation information has been disseminated by the Hazard Mitigation Teams in disaster impacted areas and more indirectly by organizations like the Southern California Earthquake Preparedness Project (for Coalinga). Fort Wayne was able to obtain needed information quickly by hiring an experienced professional grantsperson. While there are advantages to having local public staffers with disaster recovery and mitigation knowledge and information, the lack of in-house experience and information was offset partially by use of outside experts.

4. *Political Awareness and Astuteness.* This is the final set of strategic factors affecting the speed and quality of recovery. These factors proved difficult to identify and isolate, but they may be the most critical strategic options potentially available to local officials. Some illustrations of the more clear-cut of these characteristics are offered here.

In Fort Wayne, a political choice was made to identify publicly the mitigation and recovery values represented by 14 systematically assessed recovery and mitigation options. Explicit consideration of the different solution options and of the planning process through which the options were considered gave Fort Wayne officials additional leverage in negotiations for recovery and mitigation assistance with state and federal officials. In the community, the strategic choices ultimately made were more acceptable to the various community interests because the recovery/mitigation trade-offs, costs, and benefits had been made known to

them at the beginning of the recovery effort.

Officials in Salt Lake City took a calculated chance of using city streets as flood channels to avert damage to downtown commercial and other structures during the heavy snowmelt and flooding in the spring of 1983. They estimate that by using streets as canals about \$100 million in damages to private property was avoided. This strategic choice—which was carefully documented by local officials—accelerated recovery and clearly protected community economic values.

Like Fort Wayne, Salt Lake City officials made strategic choices regarding the balancing of recovery and mitigation investments. These cases, along with others, suggest that in most post-disaster settings both types of investments will be made. However, the trade-offs between recovery from the present disaster and protecting the community from the next event reflect basic community values. Consequently, the *strategic* determination of the "trade-off" is politically important, but we think quite rare.

To make this choice—one which enhances the long-term future security of the community—requires astute political and administrative leadership. To develop a pre-disaster political awareness of this strategic option requires a major investment by local government and by other levels of government, as well. The study of communities that recovered most expeditiously suggests this investment is a sound one, particularly for communities chronically at risk. Guiding recovery strategically on the basis of a future image of the community rather than simply on the basis of near-term expediency, appears to produce better long-term results; but it also appears to involve political costs for local leaders. Helping local leaders to select better ways to guide community recovery, including attention to mitigation, is a desirable goal for federal and state emergency management officials. To accomplish it, a careful examination of state and federal policies and programs would be warranted in order to be sure they help and not hinder effective local recovery.

Notes

1. Allen H. Barton, *Communities in Disasters* (New York: Doubleday Anchor, 1969), p. 284.
2. Jack D. Kartez, "Crisis Response Planning: Toward a Contingent Analysis," *APA Journal* (Winter 1984), p. 9.
3. J. Eugene Haas, Robert W. Kates, and Martyn J. Bowden, *Reconstruction Following Disaster* (Cambridge, Mass.: MIT Press, 1977), p. xxvi.
4. The project "Recovery From Natural Disasters: Case Studies in Local Public Planning and Management" is being carried out at the George Washington University by Claire B. Rubin, principal investigator. It is supported by the National Science Foundation.

Site visits were made to the impacted communities to interview key decision makers and to analyze, in particular, local public planning and management processes as well as intergovernmental relations. Special efforts were made to monitor and assess key

public policies and actions aimed at taking mitigative measures during the recovery period.

The selection of case study sites was based on such criteria as the nature of the disaster incident, geographic location, size, social and economic characteristics, general interest in the event and in the recovery process, and replicability of mitigation or recovery activities. Individual accounts of each community studied and the preliminary analysis are contained in "Case Studies of Communities Recovering From Natural Disasters, Year II Final Report," November 1982. Available from the principal investigator at George Washington University, Washington, D.C. 20052. The final report for the three project segments will be available from the principal investigator in October 1984.

5. Paul Friesema *et al.*, *Aftermath: Communities After Natural Disasters* (Beverly Hills, Calif.: Sage Publications, 1979), p. 262.

6. See for example, Robert D. Thomas, "Intergovernmental Coordination in the Implementation of National Air and Water Pollution Policies," in Charles O. Jones and Robert D. Thomas, eds., *Public Policy Making in a Federal System* (Beverly Hills, Calif.: Sage Publications, 1976), pp. 129-148.
7. This research is reported and critiqued in James D. Wright and Peter H. Rossi, eds., *Social Science and Natural Hazards* (Cambridge, Mass.: Abt Books, 1981).
8. A *Digest of Disaster Assistance Programs* that state and local government officials may use to facilitate their long-range recovery and mitigation efforts is available from FEMA.
9. The Hazard Mitigation Teams are designated in accordance with the "Interagency Agreement for Nonstructural Flood Damage Reduction Measures as Applied to Common Flood Disaster Planning and Post-Flood Recovery Practices," Office of Management and Budget, Executive Order No. 11988, 1982.
10. An important early assessment of how organizations can cope with environmental turbulence and uncertainty is found in James D. Thompson, *Organizations in Action* (New York: McGraw Hill, 1968).
11. For a useful account of the concept of strategic choice, see J. K. Friend and W. N. Jessup, *Local Government and Strategic Choice* (Beverly Hills, Calif.: Sage Publications, 1969). A more practical version of "strategy" is developed in Thomas J. Mikulecky, "Intergovernmental Relations Strategies for the Local Manager," *Public Administration Review* 40 (July-August 1980), pp. 379-381.
12. See Friesema, *op. cit.*; and James D. Wright *et al.*, *After the Clean-Up: Long-Range Effects of Natural Disasters* (Beverly Hills, Calif.: Sage Publications, 1979).
13. Dennis S. Mileti, "Societal Comparisons of Organizational Response to Earthquake Predictions: Japan vs. United States," *International Journal of Mass Emergencies* 1 (November 1983), pp. 399-414 at p. 403.
14. For extensive consideration of public policy and political issues related to mitigation, see William J. Petak and Arthur A. Atkisson, *Natural Hazard Risk Assessment and Public Policy: Anticipating the Unexpected*, Part III (New York: Springer-Verlag, 1982).
15. The range of stockholder interests in recovery and mitigation can be large. See *ibid.*, pp. 384-385. Also see National Science Foundation, *A Report on Flood Hazard Mitigation* (Washington, D.C.: U.S. Government Printing Office, 1980), pp. 111-120.
16. For an excellent description of the economic base protection issue, see H. D. Foster, *Disaster Mitigation for Planners: The Preservation of Life and Property* (New York: Springer-Verlag, 1980), pp. 237-254. Also, a recent case study that addresses this issue is Sandra Sutphen, "Lake Elsinore Disaster: The Slings and Arrows of Outrageous Fortune," *Disasters* 7, No. 3 (1983), pp. 194-201.

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Public Administration Review, Vol. 45, Special Issue: Emergency Management: A Challenge for Public Administration. (Jan., 1985), pp. 57-63.

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Notes

¹¹ **Intergovernmental Relations Strategies for the Local Manager**

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Public Administration Review, Vol. 40, No. 4. (Jul. - Aug., 1980), pp. 379-381.

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